Governor's Advisory Council on Connected and Automated Vehicles

January 13, 2020 Meeting Summary

Connectivity, Data, Privacy and Cybersecurity: Minnesota's CAV Data Principles

Attendees (see last page).

1. **Welcome -** *Phil Magney, Council Co-Chair welcomed the first meeting of 2021. A lot of exciting committee work has been taking place the last year.* Bret Weiss motioned to approve the minutes and Emily Smoak seconded. December 16th minutes were approved.

2. **Council Mission and Values – Tara Olds of the** CAV-X Office reviewed the Council's mission, values, and priorities, established by the Council in 2020 vision, mission, and values.
   - The Vision is to build a future transportation system that is safe, equitable accessible, efficient, healthy and sustainable.
   - The Council mission is to collaborate with stakeholders, partners with academic institutions and private industry, and engage communities to prepare Minnesota for a future with emerging transportation technologies
   - The Council values are safety, equity, innovation, reliability, and livability

3. **Overview of CAV Data Opportunities and Challenges** – Connectivity and Data Committee Chair Damien Riehl overviewed the reason for this work. The purpose of this committee is to determine what, if anything, this Committee should do with this data. The Committee Co-Chairs noted that with their backgrounds in technology and technology policy they have worked with a lot of government folks, and MnDOT is more thoughtful and considerate of how we manage CAV data than other folks Damien has worked with.

Industry perspective on CAV data, cybersecurity and privacy – Phil Magney, VSI Labs, gave a background on vehicle connectivity, including his role in the world's leading expert on telematics. There is a reason there is a "c" in CAV because without connectivity, these vehicles couldn't operate autonomously. Nearly 50% of cars have cell modems, known as 'telematics'. Data is harvested from vehicles and data is distributed/sent to vehicles. Sensor data coming from vehicles can be used for applications including developing software and road use fees. Examples of data going into vehicles include software updates (like smartphones), updated maps, road surface conditions.

Members noted that in the State of Utah, Tesla is using direct telematics to collect distance-traveled data from the Tesla Model 3 & Y to support the State's mileage-based user fee/road user charge mileage research project. The Society of Automotive Engineers (SAE) standard J3217 is specifying toll and requirements for direct-from-vehicle payments for road use tolls and charges. Both telematics and vehicle-to-anything (V2X) technologies are good uses for road user fee and toll payments.

Industry perspective - Suzanne Murtha, National Lead for CAV, AECOM. AECOM uses the terms "CV" and "AV" to help clients understand that these are different skillsets and technologies. CVs can communicate to other vehicles, pedestrians, infrastructure like traffic signals, other others. CVs are the ability for the vehicle to communicate with something outside itself. Automated vehicles (AVs) address

some or all of the ability for a machine to do the work of a human. We've seen a huge change in the market for data. There are many CV deployments across the country. Recently there's been a shift since the FCC decided there will be less bandwidth to do this kind of direct vehicle to infrastructure communication.

- Suzanne noted that there are no formal national cyber security standards for ITS or CAV. The biggest thing we can do to secure data is to lock traffic signal cabinets, which is more of a physical risk than a cyber risk. Privacy is important but most of this burden is placed on auto manufacturers. For the infrastructure to vehicle relationship, none of them have personally identifiable information. Suzanne chairs the SAE committee to standardize over-the-air updates. One of the ways organizations process CAV data is through edge processing, where the computers filter out irrelevant data. Examples of where we're looking at testing this is transit.
- *Jay Hietpas asked about the 'shift in data' where now OEMs will be sending data directly. What is the state DOT role?* That question is still unresolved. We need to know what data we need in sub-second increments, versus higher latency data. Wejo, Ford re-sell telematics data from OEMs. It's likely that information will be shared over cellular-vehicle-to-communications (CV2X) or LTE2X technologies. Ford claims they will have full deployment by 2022-23.
- *Will government and OEMs trade data in real time?* Sort of. The OEMs have most or all of the data they need. At best, there may be an opportunity to barter.

***Government data and privacy issues* – Frank Douma, University of Minnesota.** Frank is a member of TRB's Emerging Technology Law Committee. They really like Minnesota's CAV Strategic Plan, so Minnesota starting from a position of strength. Data privacy and data security are similar, but different. There is no comprehensive privacy law. The Supreme Court has held that there's no reasonable expectation of privacy on public roads; similar to a public park. If someone sees you and identifies you in a vehicle, it's fair use. However that court decision was decided in 1983 long before CAV existed. It remains open whether car/CAV data is more protected.

- Federal law is the source for personal information protections. Minnesota's Chapter 13 is less robust, but they have protections for personal information related to data breaches. The Minnesota Government Data Practices Act presumes government data is public, but has classifications for not public data. The state law provides rights for public and data subjects. Security information includes GPS data.
- Frank Douma created a 'data privacy' toolbox that asks questions about how to handle anonymous information versus identifiable information. Do vehicle owners truly understand these tradeoffs? Need to understand the reason we need the data and the privacy expectation. Co-chairs gave examples of different types of data and the privacy expectations.
- *The U.S. DOT released its AV Comprehensive Plan was released January 11th - https://www.transportation.gov/av/avcp. MnDOT has reviewed it to ensure the Council's work aligns with US DOT priorities.*
- *Regarding a federal "right to privacy": Apple, Facebook, and other tech giants have called for Congress to pass a federal regulatory scheme. California's state laws may create "de facto" privacy standard with which OEMs might comply, but that law has some noticeable gaps.*
- Rep. Elkins shared the Washington Consumer Data Privacy Bill may be a better national model. Their new bill is found here: http://lawfilesext.leg.wa.gov/biennium/2021-22/Pdf/Bills/Senate%20Bills/5062.pdf?q=20210113085406. Elkins will be introducing a bill similar to this Washington Consumer Privacy Act.

MnDOT's CAV data pilots – **Cory Johnson and Brian Kary, MnDOT.** MnDOT's Regional Transportation Management Center (RTMC) is a shared facility for MnDOT and State Patrol in Roseville, Minn. They manage freeway operations, cameras, signals and other network devices. RTMC manages a statewide fiber network that connects all these technologies. They manage network cybersecurity thru network and physical security, which includes scanning for vulnerabilities. RTMC uses vendor data for traffic sensors, probe data from cell phones (travel times) and HERE origin/destination data to help with travel times. Cory Johnson, CAV Office Technical Director discussed the Highway 55 Connected Corridor to help us understand what MnDOT should invest in for CAV. MnDOT identified Highway 55 10-mile section with 22 signals.

- *Dan Chen asked what are the key "new" data streams enabled by CAV that will improve safety outcomes from MnDOT's perspective?* Some of the data we've examined include hard braking or data that shows when windshield wipers turn on (to indicate weather events). However the data companies MnDOT has met with haven't proven their data is as accurate as the current data MnDOT already uses. MnDOT often gets requests from 3rd party vendors to use these different datasets but they can be expensive and challenging to integrate and aggregate.

4. **Connectivity and Data Committee Goals and Priorities** – Co-Chairs Damien Riehl & Frank Douma overviewed the 5 committee goals including: (1) determine DOT/CAV data needs; (2) develop privacy principles; (3) develop a high-level policy framework document; (4) identify privacy/security by design best practices; (5) find ways to collaborate with the private sector. The Committee developed a work plan including short-term, mid-term and long-term goals.

- The Committee reviewed many different data laws and policies to develop *Minnesota's CAV Data Privacy Principles*, which were shared with the Committee.
- Bill Leifheit, MnIT, discussed the state's development of the *CAV Security by Design Framework* to create systems that prevent against cyberattacks and security risks. MnIT looks at confidentiality, integrity (can you trust the data?) and availability of data (making sure the right people can access the data) to make sure systems are secure. MnIT is using national standards in this work, including the US DOT's Intelligent Transportation System architecture.
- The Committee is coordinating its work with the State's Blue Ribbon IT Council and is using the lessons learned from the launch of the *COVIDaware* application's privacy features.
- Jason Gadd of the League of Cities Coordination noted how the committee is ensuring this technical work can be explained in a simple, clear way to communities and policy makers at the local, county and state level, in partnership with the Alliance's Education and Outreach Committee.
- The Committee also convened a *CAV Data Legislation and Policy* to help review CAV data policy proposals by the legislature.
- *The City of Minneapolis recommended reviewing micromobility data: https://github.com/openmobilityfoundation/governance/blob/main/documents/OMF-MDS-Privacy-Guide-for-Cities.pdf*
- *Jay Hietpas asked if the Connectivity and Data Committee is looking at both data Minnesota government needs and data the private sector needs. The Infrastructure Committee is looking at data the private industry needs, so both Committees will need to coordinate on this topic.*

5. **Conversation with Council –** Chairs will foster conversation with Council members.
    - The work we're doing, here, is already having a national impact!
    - Interested in privacy from what California has implemented.

- Rep. Elkins has been collaborating with Washington State on an alternative framework to the California Consume Protection Act. The CCPA wasn't well crafted and was difficult to implement. This November the CCPA was updated with a new privacy act. We have a very active local chapter of the Int'l Association of Privacy Professionals (IAPP), data privacy attorneys, CIOs and intellectual property community. People on the call now are the national leaders.

6. **2021 CAV Annual Report** – CAV-X outlined the framework for the 2021 annual report, highlighting the work of the CAV Innovation Alliance and local partners.
   - Council member Peterson reminded the Council to include the voices and perspectives of individuals with mobility challenges. Thank you for the inclusive work as it's especially relevant for those that cannot get a driver's license.
   - Council member Bernardy appreciated that equity is still an important part of this work. CAV-X should make sure the cover of the report includes people and emphasis on people with disabilities and equity.

7. **Public comment**
   - Michael Wenger asked what the Council needs from the public and how it knows it's representing Minnesotans? CAV-X shared that Minnesota concluded a statewide survey and interviews with Minnesotans to help inform our strategic communications and engagement plan, which the Council will discuss at the April meeting.

8. **Closing**
   - **Updates and information**: The next Council meeting is April 16th where we will discuss the Outreach and Education Committee's Work and hear updates from a panel of federal CAV experts. CAV-X also shared upcoming events including the TRB Annual Meeting, the March Transportation Conference.
   - **Co-chair Magney** thanked the Council and committee chairs for a terrific meeting where we learned a lot. This Committee has "taken the ball and run with it" for the benefit of the Council and the public.
   - **Co-Chair Anderson Kelliher** noted this was a content rich meeting and thanked the committee co-chairs. There is a lot of work ahead and there is a lot of interest in the legislature in these issues.

List of Attendees

1. Adesawa Adesji
2. Allen Eisinger
3. Ashley Tompson
4. Bill Goins
5. Bill Leifheit
6. Bret Weiss
7. Brian Kary
8. Bryan Nemeth
9. Cathy Chavers
10. Cathy Huebsch
11. Charlie Zelle
12. Chelsea Arbury Prorok
13. Chris Hadfied
14. Cory Johnson
15. Courtney Jasper
16. Damien Riehl
17. Dan Chen
18. Dan Rowe
19. Danielle Elkins
20. Daryl Taavola
21. David Fenley
22. Emily Smoak
23. Eric Klute
24. Erik Rudeen
25. Fawkes Char
26. Gina Baas
27. Ginny Crowson
28. Jackie Buck
29. Jacob Mages
30. Jason Gadd
31. Jay Hietpas
32. Joan Willshire
33. Joe Marble
34. John Dukich
35. John Thompson
36. Josh Fisher
37. Josh Fisher
38. Ken Buckeye
39. Kevin Chan
40. Kim Norton
41. Kristin White
42. Laurie McGinnis
43. Comm. Margaret Anderson Kelliher
44. Mark Philips
45. Marthand Nookola
46. Matt Wooldridge
47. Mel Reeder
48. Michael Wenger
49. Mike Hanson
50. Mike Kronzer
51. Myrna Peterson
52. Nancy Daubenberger
53. Nicole Barranco
54. Patrick Weldon
55. Rep. Paul Torkelson
56. Phil Magney
57. Randy Sanford
58. Rep. Connie Bernardy
59. Rohit Tandon
60. Ryan Daniel
61. Sara Eken
62. Sarah Psick
63. Sen. Scott Dibble
64. Shawn Lowry
65. Skip Foster
66. Suzanne Murtha
67. Tammy Meehan Russell
68. Tara Olds
69. Terry Haukom
70. Thom Peterson
71. Tim Lynaugh
72. Tim Sexton
73. Tina Folch
74. Todd Biewen
75. Tyler ___
76. Wayne Pisinski
77. Wayne Sandberg