CAT Coalition
Strategic Initiatives Technical Working Group
October 31, 2019 Webinar
Notes and Summary of Discussions

Summary of Action Items

1. Working Group members are asked to send any resources related to on-board unit installations or the deployment of on-board equipment that would benefit the Connected Fleet Challenge website to Dean or Blaine.
2. Anyone participating in the Connected Fleet Challenge by planning or deploying on-board units on fleet vehicles are asked to use the reporting function of the Connected Fleet Challenge website (https://transportationops.org/connected-fleet-challenge) to describe their activities.

Welcome

Blaine Leonard welcomed everyone to the webinar and introduced himself and Joe Averkamp as co-chairs of this working group. Approximately 50 members and guests joined the webinar. A list of those in attendance is provided at the end of these notes.

Ongoing Commitment to Outreach and Knowledge Transfer

Blaine shared a resource that was recently completed by FHWA as the "Connected Vehicle Procurement State of Practice Assessment,". Blaine noted this might be beneficial to agencies procuring any aspect of CAT systems or devices. This resource has been added to the SPaT and Fleet Challenge resources portion of the CAT Coalition website. http://transportationops.org/catcoalition

Guest Presentation: Arizona Institute of Automated Mobility (IAM)

Karl Theisen provided an overview of the Arizona Institute of Automated Mobility (IAM). He noted that IAM is focused on an industry-driven, government supported, technology-neutral platform to drive the validation of consistent safety standards and policies that do not yet exist. IAM includes representatives from universities, industry, and government agencies. IAM is discussing critical metrics of safety performance and establishing 3-year goals for 4 focus areas: Implementers Forum, Directed Research, Test Network, and Traffic Incident Management Center.

A copy of Karl's slides is included with this summary.

V2I Applications Examples: Minnesota Connected Corridor

Dan Rowe and Kevin Chan discussed the Minnesota Department of Transportation Connected Corridor project. The project goals are to respond to the SPaT Challenge, gain DSRC and connected vehicle

experience, identify the benefits of DSRC, and begin to share real-time data. MnDOT anticipates that automation will also help Minnesota advance towards their "Towards Zero Deaths" (TZD) goals. The Minnesota Connected Corridor is located on Highway 55 between Minneapolis and I-494. Dan described their progress on equipping the initial four intersections and noted that MnDOT is hoping to complete acceptance testing and be operational by January. Dan identified some of the challenges MnDOT encountered, including:

- Deployment challenges, such as needing to adjust the mounting of one of the RSU antennas to avoid interference from a nearby bridge;
- Promoting understanding of a new technology throughout MnDOT;
- Meeting the schedule and budget; and
- Introducing the public to a new technology (as they were not familiar with DSRC).

A copy of Dan's presentation is included with this summary.

Update on Topics Discussed During the July Webinar

Blaine reminded members that 10 SPaT Challenge webinars had been conducted to support the agencies and individuals that accepted the challenge. As discussed previously, this working group decided to conduct three additional webinars to continue SPaT Challenge support and to also support activities within the Connected Fleet Challenge. The first SPaT Challenge/Connected Fleet Challenge webinar was held on October 3 with approximately 70 attendees. The focus was on deployment activities and information was provided about PennDOT's SPaT and fleet activities, the Tampa Hillsborough CV Pilot Deployment, and a local SPaT deployment in NHDOT. The next SPaT Challenge/Connected Fleet Challenge webinar will be held on Thursday, November 21. This webinar will include lessons learned for data collection and OBU installation from the NY City CV Pilot, testing and validation of V2I broadcasts, and Panasonic sharing their experience with the installation of CV2X units in Colorado and Utah, including dual units (DSRC and CV2X). A third webinar will be held on January 9, 2020, although the agenda is not yet finalized.

On the Fleet Challenge website, users now have the ability to enter brief summaries of their Fleet Challenge activities. Those activities entered will appear on a map display.

Blaine reminded members of the ongoing requests for:

- Members to send any Fleet Challenge related resources to include on the the Fleet Challenge website; and
- Members to use the reporting function of the website to describe activities they are planning or taking to equip fleet vehicles with OBUs.

PLR Working Group Update

Blaine reminded the group that the CAT Coalition is organized into "pairs" of working groups, and the Policy, Legislative, Regulatory (PLR) working group is the partner group to Strategic Initiatives. Dean Deeter reported that the PLR Working Group has recently initiated an activity to research the various terms used in legislation to describe automated driving systems. The goal is to support lawmakers that need clear, concise nomenclature by documenting the various terms used and understanding why some

agencies select to use one term over another. We will continue to update members as this work progresses.

Upcoming Webinars

Deb Curtis announced that the USDOT CARMA Webinar Series will include a webinar on November 7, "How to Get Started with CARMA and Become a Leader in Cooperative Driving Automation Research," from 2:00 pm– 3:30 pm EST.

Siva Narla added that several live webinars on cutting edge technology have been planned. Seating is limited and ITE is requesting that participants interact during the webinar and complete a feedback survey following each webinar. The scheduled webinars and topics are:

- Tue Nov 12, 12:30-2:30 pm EST – Vehicle-to-Vehicle ITS Standards for Project Managers
- Fri Nov 15, 12:30-2:30 pm EST – Introduction to SPaT/MAP Messages
- Tue Nov 19, 12:30-2:30 pm EST – Understanding User Needs for Transportation Field Cabinet Systems Using Actuated Traffic Control (ATC) 5301 v02
- Wed Nov 20, 12:30-2:30 pm EST – Transit Module 23: Leveraging Communications Technologies for Transit Onboard Integration

Carlos Alban reported that ITS America is hosting 2 webinars in the next week on connected vehicle pilot projects in New York and Tampa Hillsborough.

Close

T**he next webinar is scheduled for Thursday, January 23, 2020, at 2 pm Eastern.**

TWG 1 October 31, 2019 Webinar Participants

- Blaine Leonard (Chair)
- Ahmad Jawad
- Alan Clelland
- Bill Ball
- Carlos Alban
- Christian Kulus
- Cliff Heise
- Curtis Thompson
- Dan Rowe
- Deborah Curtis
- Dean Deeter
- Doug Hohulin
- Eduard Fidler
- Faisal Saleem
- Frank Provenzano
- Gary Duncan
- Gary Strack
- Gummada Murthy
- Hideki Hada
- Jack Hall
- James Chang
- Jay Parikh
- Jeff Stewart
- Jeremy Schroeder
- Jesus Ruiz
- Jianming Ma
- Jim Misener
- Joe Averkamp (Co-Chair)
- Joey Yang
- John Lower
- Karl Theisen
- Kent Kacir
- Kevin Chan
- Kyle Garrett
- Liana Mortazavi
- Matt Smith
- Mauricio Guerra
- Mike Kronzer
- Mike Schagrin
- Mohammed Hadi
- Pierre Rasoldier
- Rich Deering

- Roxane Mukai
- Shah Imran
- Shane McKenzie
- Siva Narla
- Steve Lockwood
- Steve Misgen
- Susan Catlett
- Wasif Mizra

CAT Coalition Strategic Initiatives TWG – Oct. 31, 2019
Webinar Agenda

1. Welcome
2. Outreach and Knowledge Transfer
3. New Topic #1: Arizona Institute of Automated Mobility
4. V2I Applications – Lessons Learned & Benefits
   - Minnesota's Connected Corridor
5. Topics from Previous Webinars
   - SPaT/Fleet Challenge Updates
6. PLR Working Group Update
7. Partner Reports

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Outreach and Knowledge Transfer

- Suggestions for additional members of this working group
- Suggestions for additional resources to be shared

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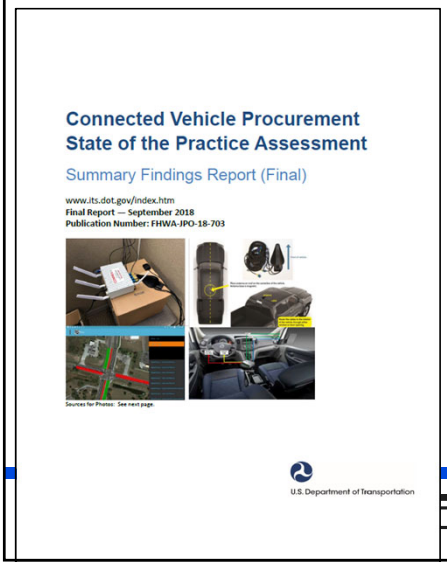
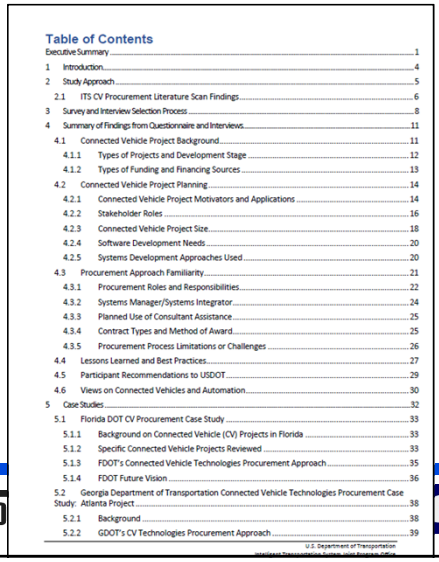
Connected Vehicle Procurement State of the Practice Assessment





- Presentation on this report during the CAT Coalition Technical Resources WG webinar on Nov 13th 11:00 ET
- Has been added to the SPaT Resources

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Arizona's Institute of Automated Mobility

- Karl Theisen, ASU

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V2I Applications – Minnesota's Connected Corridor

Dan Rowe, MnDOT
Kevin Chan, MnDOT

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Update on Topics from Previous Webinar

Connected Fleet Challenge Website & Resources

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Connected Fleet Webinar #1 – October 3 Webinar

- About 70 Attendees
- Good Interaction / Many Comments and Questions
- Topics Covered:
  - SPaT Challenge Background and Update
  - Connected Fleet Challenge Background
  - Focus on Deployment
    - ❖PennDOT – Mark Kopko, PennDOT
    - ❖THEA CV Pilot – Steve Novosad, HNTB
    - ❖NHDOT SPaT Deployment – Curtis Thompson, Sebago Technics

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Upcoming Connected Fleet Challenge Webinars

Webinar #2 Agenda – November 21, 2019 at 2p ET

Primary Topics:

- Data Collection and OBU Installation Lessons Learned – Bob Rausch, Transcore
- Testing V2I Broadcasts for Compatibility with On-board Applications – Jay Parikh, CAMP
  - Overview of V2I Testing, preparation of a model Test Plan
- Installation of CV2X On-board Units
  - Panasonic's experiences in CO and UT, including dual DSRC-cellular units – Chris Armstrong or Rob Zimmer, Panasonic

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Upcoming Connected Fleet Challenge Webinars

- Webinar #2: November 21, 2019 at 2p ET
  - Register and more information at: https://transportationops.org/event/webinar-series-connected-fleet-challenge-webinar-2
- Webinar #3: January 9, 2020 at 2p ET
  - Register and more information at: https://transportationops.org/event/webinar-series-connected-fleet-challenge-webinar-3

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Connected Fleet Challenge Website

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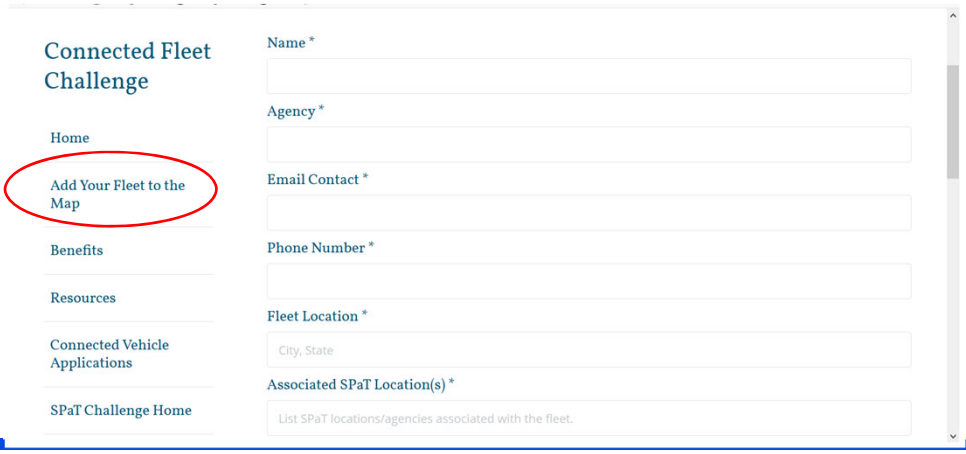
Connected Fleet Challenge Website



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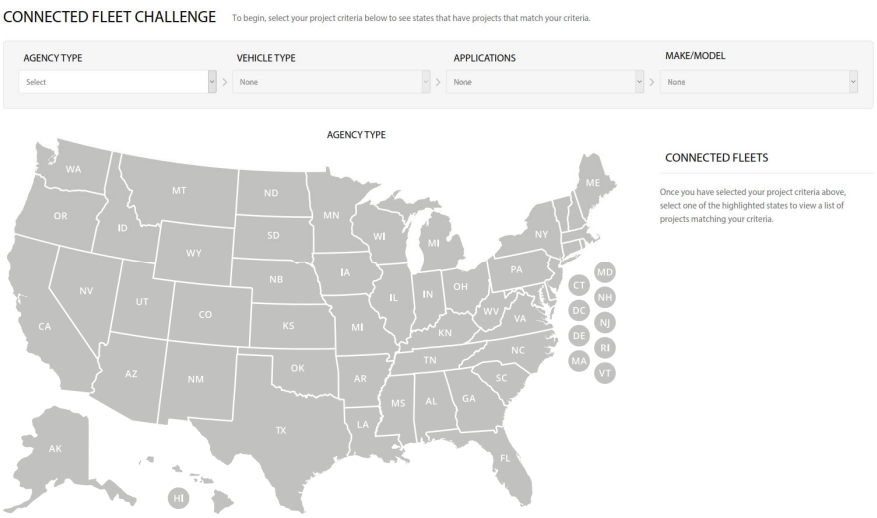
Connected Fleet Challenge Website – map not yet live



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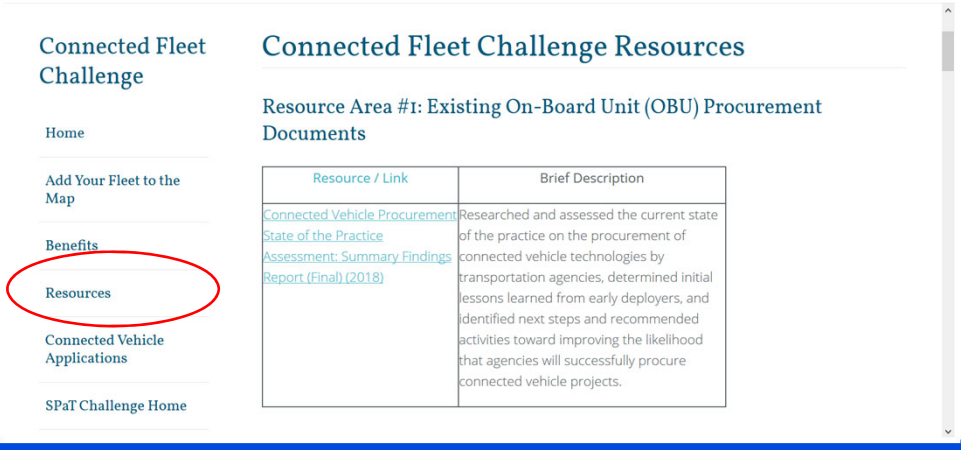
Connected Fleet Challenge Website



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Connected Fleet Challenge Request for Information

- Sample documentation for deploying agencies to use
  - Including procurement or bid documents, cost information, lessons learned, general technical resources
- Connected Fleet Challenge deployment information for map on website
  - Planned or operational sites

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Brief Update from the Focus Area Working Group: Policy, Legislative, Regulatory (PLR) WG

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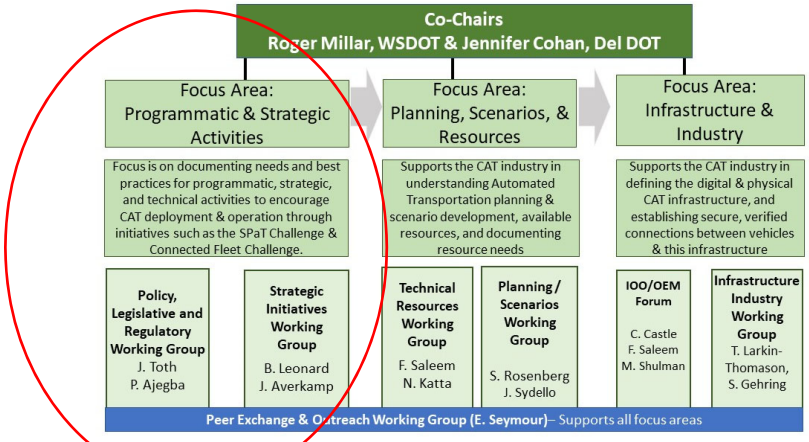
Programmatic & Strategic Activities Focus Area



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Plain Language for Automated Driving Systems (ADS) Policies

The Challenge/Need:

- Legislators need clear concise nomenclature with common definitions when creating & reviewing policies & legislation

The Concept:

- Review what language & terms are used in existing ADS policies & legislation in member states
- Synthesize terms; identify conflicts, challenges, and commonalities
- Coordinate with a parallel USDOT effort underway
- This effort **Will NOT** create any guidelines or recommendations for nomenclature

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Examples of Different Terms

Allowing Use of ADS / autonomous vehicles / driverless-capable vehicles

- Example A: "A driverless-capable vehicle may operate on the public roads of this state without a conventional human driver physically present in the vehicle, as long as the vehicle meets the following condition…"
- Example B: "A driverless-capable vehicle may operate on the public highways of this state without a conventional human driver physically present in the vehicle, if the vehicle meets all of the following conditions:" <list in original>
- Example C: Testing or operation of vehicles on public roads that do not have a person present in the vehicle shall be allowed only if such vehicles are fully autonomous
- Example D: "An autonomous vehicle or a fully autonomous vehicle may be operated in this state under an autonomous vehicle pilot program approved by the State Highway Commission"
- Example E: "A person may use an Automated Driving System to drive a motor vehicle or to control a function of a motor vehicle if the system is capable of complying with every state and federal law that applies to the function that the system is operating."

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Agenda Item #5: Partner Reports

USDOT – Deb Curtis

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ITE – Siva Narla

ITS America – Carlos Alban

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Next Strategic Initiatives WG Webinar

- Next Webinar:
  - January 23rd, 2020 2:00 PM Eastern

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