Cooperative Automated Transportation Coalition
Technical Resources Working Group
Monthly Meeting Summary
Wednesday May 9, 2018 11:00 am - 12:30 pm Eastern Time

Actions

1. All: Review SPaT Challenge documents and, as available, provide estimated costs and procurement documentation to incorporate as examples –

   - DRAFT SPaT Challenge Procurement Document
   - DRAFT SPaT Challenge Estimated Costs Document

2. All: Review TRB DRAFT Research Statement for Connected Fleet Challenge.

3. All: Continue to send Faisal, Navin, and Jeremy further thoughts on topics and tasks the Technical Resources Working Group should consider for its Phase 2 work plan.

4. Jeremy: Send presentation slides and documents discussed on call for review (listed above).

5. Faisal, Jeremy: Track USDOT CAV Resource Documentation efforts as it relates to the Resource WG action to develop a CAV Resource Reference white paper with CAV resources from USDOT, SPaT Challenge, CV Pooled Fund Study, TRB, and other groups.

Attendance

1. Faisal	Saleem (Chair)	faisalsaleem@mail.maricopa.gov
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43.	Emil	Wolanin	emil.wolanin@montgomerycountymd.gov

Meeting Summary

Introduction

This was the second meeting for the Technical Resources Working Group in Phase 2 of the V2I Deployment Coalition. Faisal welcomed everyone and reviewed the action items and provided an overview of the discussion from the previous meeting, including the activities and resources that the Resources WG may support in upcoming months from the USDOT, TRB, CV Pooled Fund Study, CAT Coalition, and other groups.

Updates on CAT Coalition Activities

Jeremy presented a brief overview of the Connected Fleet Challenge that the Strategic Initiatives Working Group has decided to pursue. Specifically, the goal of the Connected Fleet Challenge is for every transportation-related agency to equip one vehicle with an on-board unit (OBU) by 2019, with potential collaboration opportunities to equip law enforcement vehicles, first responder vehicles, agency fleet and plow vehicles, transit vehicles, and taxi fleets. The idea of the Connected Fleet Challenge is for agencies to follow their deployment of SPaT infrastructure with OBUs in at least one vehicle to help in validating that the SPaT and MAP messages are being broadcast properly, as well as the potential to use the SPaT information through application(s).

Ray Derr shared information about a research statement being developed by TRB to fund the development of resources to support the Connected Fleet Challenge. The document is intended to outline anticipated issues agencies will encounter in the Connected Fleet Challenge on a CEO level to obtain buy-in and funds for the development of resources and also research how agencies may overcome identified obstacles This document will be sent to the Resources WG members to provide

comments within a month. A request was made to also distribute the statement to the CV Pilot sites for their comments also, as the CV Pilot sites are all in the deployment phase and have a lot of lessons learned. Examples of recommendations include obtaining equipment for interference checking and testing to monitor and maintain the DSRC space and eliminate interference that may be present.

White Paper on Synthesis of CAV Resources
Faisal gave a brief update on the status of activities related to the action item for the Resources WG to develop a white paper that synthesizes CAV resources. Specifically, that Karen Timpone at FHWA is currently leading an effort that has developed a draft document of CAV resources that is expected to be made available. The Resources WG has provided input to support related efforts for Karen Timpone, and will likely be doing so again in coming months.

RSU Certification Update
Deb Curtis provided a brief update on Turner-Fairbank efforts related to RSU certification. Specifically, a project is beginning with the goal of expanding the certification test suite to include additional aspects of infrastructure that supports connectivity. The plan is to conduct outreach to stakeholders to ask what aspects of infrastructure-based equipment that deployers would like to see certified. The Turner-Fairbank contractor would then develop procedures as part of this effort and apply these test procedures to equipment at the request of equipment developers in order to provide the certification.

Deb also provided an update on NTCIP 1218 project, which she emphasized is <u>not</u> an RSU standard (which is expected to be a separate effort in the future). NTCIP 1218 is about information exchange between RSU and controlling management stations and monitoring the operational status of an RSU, e.g., that it is powered on, doing what it is supposed to be doing, and can interface with other connected devices and the SCMS, as well as be commanded remotely to do specific functions like collect or log data. This project has an open [non-voting] forum for all to participate. Anyone who is interested should contact Siva Narla (snarla@ite.org) to participate.

Related discussion during this time noted the following:
- Channelization is not yet standardized, such that SRM and SSM is left to the deploying agency based on their Concept of Operations and the objectives.
- It is critical to list a hardware security module in procurement documentation in order to get certification. The RSU Specification version 4.1 lists this as a "should" not a "shall".
- Technology neutrality should be a topic at a future webinar to assist agencies in making a procurement now that can anticipate and more easily transfer to new technologies or communications in the future. This should include consideration of cost models for those alternatives. This topic is proposed to be discussed at the CAT Coalition Executive Committee.

SPaT Challenge Resources
Jeremy Schroeder presented two resources being developed to support the SPaT Challenge. Both documents have been organized and populated with available material. The Resources WG members are encouraged to provide feedback on the structure of each document so that it can be organized in a useful way and, as able, to contribute documentation from agencies that have deployed SPaT infrastructure to help provide additional examples:
- The Procurement Resource is envisioned to assist agencies develop a procurement document by providing examples of those documents used by other agencies. It currently contains the procurement document by the Utah DOT. It is envisioned that this document would have a

summary table at the beginning to introduce the procurement documents from agencies and highlight the variations in each.

- The Estimated Cost Resource is envisioned to assist agencies in understanding the approximate costs for various elements that are necessary to deploy SPaT infrastructure, such as development of a Concept of Operations, requirements, various aspects of design, operations and maintenance, with an explanation to describe why costs may have been higher or lower for each agency that has provided costs. Currently, there are only 3-4 agencies that have provided input.

Bob Rauch noted the importance of separating the cost related to connected vehicles from those associated with typical traffic control as a large portion of costs may be from equipment upgrades like backhaul infrastructure that may be necessary regardless of connected vehicles. It was also noted that new tools have recently been released or are being developed that will make the deployment of SPaT infrastructure cheaper. Also, the deployment of SPaT only will be cheaper than a deployment that also includes MMITSS or other applications.

Finally, Jeremy noted the upcoming SPaT Webinars on May 15 and June 12, both at 2pm ET. The NOCoE website has recordings of the first four webinars and links for anyone who is interested to register for upcoming webinars: https://transportationops.org/spatchallenge/webinarseries.

Upcoming Webinar & Close
The next Resources Working Group meeting will be held on June 13, 2018 at 11am ET. Jay Parikh will present the MAP Tool for work zone scenarios that was developed by CAMP and will soon be available.