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Cooperative Automated Transportation Coalition
Technical Resources Working Group
Monthly Meeting Summary
Wednesday August 8, 2018 11:00 am - 12:30 pm Eastern Time

Actions

1. All: Continue to provide feedback and suggestions for the CV Deployment Survey / Interview approach

Attendance

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Meeting Summary

Introduction

Faisal welcomed everyone and led roll call.

Resources Working Group Recap

Faisal presented a brief recap of Resources WG webinar from the previous month, which included:

- A Connected Fleet Challenge Update
- Introduction to the USDOT CV Liaisons: Edward Fok and Govin Vadakpat
- NOCoE Proposed Self-Reporting CV Deployments, where Patrick Son described the CV Deployment Tracking map and proposed a submission form for agencies to self-report CV deployments.
- Draft White Paper: CV Resources and Resources WG Activities that would document current and upcoming CAV resources to help practitioners more easily identify all available documents to assist in deployments and identify resource gaps, and summarizes past and future activities of the Resources WG.
- White Paper: CV Deployment Lessons Learned, which would be a high-level view of the lessons learned, as well as location, scope and responsible parties for deployments.

Updates on CAT Coalition Activities

Faisal presented an update of CAT Coalition Activities, which included:

- SPaT webinars, the slides and recordings of the seven completed webinars are posted on the NOCoE website. There was recent discussion on whether to continue these, how frequently, what format and topics. Given the high interest level it was decided to continue the series by re-visiting key topics as they evolve, sharing more information from operational deployments, and diving into Connected Fleet Challenge topics. Webinars will occur about every 8-10 weeks. The next SPaT webinar is scheduled for August 14 at 2pm ET and will present an introduction to the Connected Fleet Challenge
- The SPaT Procurement Resource, which was discussed on a prior Resources WG webinar, is now posted on the SPaT challenge website

- The details of the Connected Fleet Challenge are still being discussed – a recently added focus is on fleet vehicle diversity, with a goal for agencies to equip one light duty and one heavy duty vehicle to gain experiences with both types of vehicle.
- The DSRC Deployment list that was discussed on a previous Resources WG webinar continues to be updated, with a goal to be submitted to FCC. We can use this list to help support our efforts to conduct a survey / interview of deployment sites.

This generated some discussion regarding FCC licensing, as this is one way to make FCC aware of DSRC deployments and should be done before being listed on that DSRC deployment document. The licensing process can take up to a year, e.g., areas with height and power limitations, and FAA gets involved near airports. Some areas in NYC were not initially accepted with licensing. Licensing lessons learned would be a valuable input area for the Lessons Learned White Paper. Some things in the FHWA document need to be updated. Many FCC licensing issues are local, e.g., identifying the local FCC coordinator, etc. Edward Fok provided this link to a SPaT Challenge resource on FCC Licensing: https://transportationops.org/spatchallenge/resources/Recommended-Practices-for-DSRC-Licensing-and-Spectrum-Management

USDOT Update – SCMS and CV Pilot Interoperability Demonstration
Edward Fok provided an update that USDOT has not abandoned SCMS, and is still exploring how to scale up SCMS to a national level. Nothing is off the table, and different models of ownership and governance are being explored, as well as the tradeoffs to these alternatives and how it would impact the long-term lifecycle.

He also provided an overview of the CV Pilot Interoperability Demonstration. The USDOT team and all three CV Pilot sites met for three days to run 102 interoperability tests, which included a variety of messages, 6 different OBU manufacturers and 2 RSU devices. Overall, interoperability was successful. More information will be presented in a forthcoming report, but some early information is available at this link: https://www.its.dot.gov/pilots/crosssite_cvp.htm

Discussion began with a question of what should agencies do for SCMS now? Ed said the answer depends on where the agency is now: if a core system has to do the signing then the core network has to be very secure, but if an edge device RSU will be handling the SCMS, then the agency has to work with the vendor to provision certificate into those devices. Right now, the system will not be interoperable unless you cover all aspects of security capability for DSRC, which includes a number of things that are not available. A recommendation was made to pursue small-scale deployments now until things are later implemented; the fundamental software will be available later this year, and security pieces needed to support the CV environment are not yet available that would be needed for a large-scale deployment. Most available guidance centers around the CV Pilots, but ITS JPO is working on a more general resource for other types of deployments. The CV Pilot sites have struggled with going back to re-install and add chips to support security: it takes many pieces to make a robust nationally-supported interoperable CV system with security. A lot has been learned from the CV Pilots in going from theoretical to detailed design and now constructing the ecosystem, and it is a challenge to turn all those lessons learned into transferrable lessons for the rest of the country. Someone inquired about how other communications that are not DSRC are impacted. Edward Fok noted that SCMS is communications platform agnostic, can be used across multiple communication media, and will be needed depending on what is being sent.

Survey of CV Deployments
Jeremy presented an update regarding the approach to gather information for the Lessons Learned White Paper. The SPaT Challenge Tactical Working Group is working to develop a short list of questions that would provide some general background information including the goals and objectives of the deployment, and a question about willingness to be contacted to share additional lessons learned. The Resources Working Group can use that gathered information and contacts from the SPaT Challenge deployments, but will need to identify contacts and reach out to other deployments. Some high-level focus areas with general questions were discussed. It was noted that the CV Pilot sites are required to gather lessons learned, and the Resources WG should coordinate this effort with FHWA. Faisal is thinking of a 1-2 page summary for each contacted site as we do not have the resources to match the larger-scale efforts done by CV Pilots. A request was made, although it may be too early, for comparative analysis, ROI, or cost benefit information as this would be beneficial to understand how the deployments compare to other efforts. More efforts are underway to see broader benefits, and knowing how they are calculated can help to justify the investments. Deb Curtis said Volpe is flushing out a framework for benefits analysis. It was noted that a lot of deployments are in place for integrating mobile observations (IMO) for snow plows using both DSRC and cellular communications – and these connected plows have shown benefits.

Colorado DOT Deployment Update
Tyler Svitak of CDOT and Chris Armstrong of Panasonic presented an update on the CDOT partnership and approach for deploying infrastructure and developing applications to support connected vehicles, including both DSRC and C-V2X. Note that CDOT and Panasonic are plugged in to support an effort to develop use cases for a standard about data being sent from vehicle for probe data. CDOT is currently deploying DSRC radios, but able to adjust for C-V2X or DSRC in future deployments. CDOT is not fully decided on the communications mechanism to ultimately be used in the built-out system. CDOT owns the data and equipment, and outputs. Panasonic owns the business analytics to support the functionality.

Upcoming Webinar & Close
The next Resources Working Group meeting will be held on September 12, 2018 at 11am ET.