

**Cooperative Automated Transportation Coalition
Technical Resources Working Group**

Quarterly Meeting Summary

Wednesday May 8, 2019 11:00 am - 12:30 pm Eastern Time

Action Items

1. Everyone: Contact Hannah.Rakoff@dot.gov if interested in testing the V2I Benefit-Cost Assessment Tool.
2. Everyone: Share leads, links, or attachments of resources on:
 - SPaT deployment, related to the full V diagram, e.g. ConOps, Reqs, Test Plans, Procurement or bid documents with scope, specifications, or SOW for equipment, installation, support contractors, cost information, general technical support resources, security details, project plans, network plans, or lessons learned.
 - OBU deployment documents that may assist deployers in the Connected Fleet Challenge.
 - Cybersecurity and network security resources.
 - Information on new or planned SPaT deployments, or updates for the SPaT website.
3. Faisal, Jim, Alan: Consider an agenda item for the next Resources WG webinar on C-V2X activities to provide a context and update for the technology capabilities and debunk myths.

Meeting Summary

Resources WG Recap and CAT Coalition Update

Jeremy provided a brief recap of the previous Resources WG webinar in February and updates to the work plan based on feedback received. He also presented the updated organizational structure for the CAT Coalition and noted the intent to expand membership to additional groups. Members recommended extending invitations to the following groups:

- Transportation Safety Advancement Group (TSAG) <http://www.tsag-its.org/>
- 5G Automotive Association (5GAA) <http://5gaa.org>
- Community Transportation Association of America (CTAA) <https://ctaa.org>
- Association of Public-Safety Communications Officials (APCO) <https://www.apcointl.org>
- International Association of Chiefs of Police <https://www.theiacp.org/>
- Association of Metropolitan Planning Organizations (AMPO) <http://www.ampo.org>
- American Public Transportation Association (APTA) <https://www.apta.com>

NTCIP 1218 Update

Jean Johnson provided an update of NTCIP 1218 activities, including the current status, two context diagrams, and timeline for release. She shared her slides for distribution to the WG members.

USDOT Update – Turner-Fairbank Activities

Deb Curtis provided an update of Turner-Fairbank projects of interest to the Resources WG. Specifically:

- The MAP tool has been modified to use output from the CAMP tool for curved approaches and other scenarios. The update is in alpha testing now, the plan is to seek volunteers and move to beta testing soon. After testing, the MAP tool will be hosted on the NOCoE website.
- The V2I Hub is being transitioned to the V2X Hub to reflect messages received from mobile devices, e.g. handheld devices for pedestrians or transit riders. As part of this effort, the team is

working with the ITS Architecture to ensure compatibility with existing systems. Contact Deb or Aaron Greenwood to be a part of this effort.

- The early deployer technical assistance program at Turner-Fairbank provides equipment loan and technical support to test CV infrastructure. Equipment loans have been provided to Delaware, Wyoming, and other agencies to test the equipment before procuring it, and technical support has been provided to a number of agencies, e.g. supporting MnDOT with flashing yellow arrow implementation for SPaT.
- The next round of RSU certification test plans are being developed, relating to NTCIP 1202 v3, SAE 2735 2016, and SAE 2735 MAP objects. Turner-Fairbank is working with closely with OmniAir in these activities to certify RSU devices.
- RSU Specification v 4.1 is now two years old and plan to move forward to revise the spec to accommodate other over the air communications and be agnostic where needed but with a reference implementation to insure interoperability.

All tools that Deb mentioned can be accessed at the following link, until it transitions to the NOCOE website: <https://www.pcb.its.dot.gov/CAVSupportServices.aspx>.

The public github repository for the V2X Hub project is: <https://github.com/usdot-fhwa-OPS/V2X-Hub>.

Access these resources by emailing: CAVSupportServices@dot.gov.

CV Deployment Environment Discussion

Bob Rausch presented an overview of this effort to develop a resource for agencies considering a CV deployment to comprehensively understand the bigger picture of considerations, upgrades, and technologies needed to have a fully operational CV environment.

A comment was made about using DSRC or cellular technologies within this environment, resulting in a suggestion from Jim Misener for Alan and him to give a presentation to discuss current status of C-V2X efforts and debunk myths. Siva noted for everyone that the CAT Coalition is agnostic and leverages the respective knowledge and backgrounds of individuals to understand different technologies, capabilities, deployments, and lessons learned.

V2I Benefits-Cost Assessment Tool

Hannah Rakoff presented on the V2I Benefits Cost Assessment Tool that has been developed at Volpe. She shared her slides for distribution to the WG members. She noted that Maryland and Texas are going to test the tool, and if others wish to pilot the tool, contact her at: Hannah.Rakoff@dot.gov.

A question was asked about the tool having sensitivity for safety. Hannah noted that it includes built in qualifiers about a theoretical maximum of safety impacts, tempered by communications reliability and levels of automation. Additional qualifiers may be incorporated after testing the tool with IOOs helps to identify local priorities. It is currently challenging to install V2I deployments on the basis of safety given low penetration rates.

Steve Lockwood noted the challenge in assessing V2I application effectiveness given lack of available information. Specifically, he noted the challenge to identify applicable crash scenarios and types, to what degree potential V2I benefits are marginal to higher levels of automation, the overlap with CV and AV, and operational design domains for weather, driver response rates, and etc.

Hannah noted this tool is to help IOOs decide where to deploy infrastructure. This tool is intended to look at different options and scenarios, whether the technology arrives or not. It was noted the relative benefit of low latency communications over traditional cellular for certain applications should be incorporated.

Upcoming Webinar & Close

Resources Working Group meetings in 2019 will be held on August 14 and November 13 at 11am ET.

Attendance

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