

**Cooperative Automated Transportation Coalition
 Technical Resources Working Group
 Monthly Meeting Summary**

Wednesday June 13, 2018 11:00 am - 12:30 pm Eastern Time

Actions

1. 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.
2. 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.	Patrick Chan	patrick.chan@consystec.com
2.	Denny Stephens	stephens@vitalassurance.com
3.	Venkat N (AASHTO)	vnallamothe@aaashto.org
4.	Eric Raamot	eraamot@econolite.com
5.	Jay Parikh (CAMP)	jparikh@campllc.org
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8.	Donna Matulac	donna.matulac@iowadot.us
9.	Francois Thibodeau	francoisthibodeau@ville.montreal.qc.ca
10.	Naveen Lamba	naveen.lamba@us.gt.com
11.	Brian Burkhard	brian.burkhard@jacobs.com
12.	Linda Preisen	preisen@acconsultants.org
13.	Peiwei Wang	peiwei.wang@noblis.org
14.	polly okunieff	polly.okunieff@icf.com
15.	Rachel Ostroff	rachel.ostroff@icf.com
16.	Scott Shogan	scott.shogan@wsp.com
17.	Matt Marchese	matthew.marchese@leidos.com
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28.	Amir Bushehri	abushehri@calamp.com
29.	Justin Johnson	justin@mmm.com
30.	Gary Piotrowicz	gpiotrowicz@rcoc.org

31.	Darryl	Dawson	ddawson@itsengineering-ltd.com
32.	Koorosh	Olyai	koorosh.olyai@stantec.com
33.	Hossam	Eldeen Abdel All	habdelall@rcmcweb.org
34.	Alan	Clelland	alan.clelland@intelight-its.com
35.	Justin	Chan	justin.chan@transpogroup.com
36.	David	Lucas	david_lucas@tempe.gov
37.	Jean	Johnson/NEMA	jean.johnson@nema.org
38.	Jeremy	Schroeder	schroeder@acconsultants.org
39.	Karen	Nguyen	knguyen@econolite.com
40.	Jeff	Marker	jeffrey.marker@itd.idaho.gov
41.	Bob	Koeberlein	robert.koeberlein@itd.idaho.gov
42.	Chris	Stanley	chris.stanley@leidos.com
43.	Ray	Derr	rderr@nas.edu
44.	Emil	Wolanin	emil.wolanin@montgomerycountymd.gov

Meeting Summary

Introduction

This was the third meeting for the Technical Resources Working Group in Phase 2 of the V2I Deployment Coalition. Jeremy welcomed everyone, reviewed the action items, and provided an overview of the discussion from the previous meeting. Anyone who is interested in providing feedback on the documents discussed in the previous meeting should contact Jeremy at schroeder@acconsultants.org; these documents were:

- DRAFT SPaT Challenge Procurement Document;
- DRAFT SPaT Challenge Estimated Costs Document’;
- DRAFT TRB Research Statement for Connected Fleet Challenge.

Jeremy noted that the CAT Coalition had several in-person meetings in Detroit in conjunction with ITS America, including the IOO/OEM Forum, Executive Committee, and Working Group Chairs. Additional information from these meetings will be presented in the coming months as the action items and work plans continue to be finalized.

CAMP MAP Creation Tool for Work Zones

Jay Parikh of CAMP presented on the MAP creation tool that CAMP has developed for work zones. These slides were distributed to Resources Working Group members. Discussion included the items highlighted below.

Ray Derr asked how an agency would handle changing lane lines, removed striping, or a lane shift to the shoulders. If lane lines are changed, you can re-drive through the open lane, but CAMP is also looking at ways to do this dynamically. Ray suggested engaging the AASHTO Construction Committee to get some feedback as CAMP plans to move toward a standard. The agency construction contractor often works with a subcontractor for the ITS devices, which adds layers of complexity for stakeholders that should be included in this effort. This is why CAMP has worked to make this process as simple as possible, requiring only a device connected to a laptop and a single drive through the work zone and then

software on the back end to create the visualization and message. The engineer can verify that the visualization accurately reflects the lane layout in the field, which takes only a couple minutes since the software generates all of the outputs. The application and the roadside safety message (RSM) method can accommodate a high- or low-fidelity map of the work zone, which may be sufficient information to communicate that a lane closure is in progress.

The software is independent from the RSU. The software generates an output file that is an UPER-encoded message. Data is communicated to the RSU and that transmits the message.

Denny Stephens asked what GPS accuracy is required for the system to capture lane locations during the vehicle drive through the work zone. To be practical, CAMP uses automotive-grade GPS and notes other variables that can affect accuracy. Ideally, the vehicle is driven in the center of the open lane since drifting to the left or right can create variation in the mapping process. To alleviate some map matching issues, heuristics are used to accommodate the variations. Specifically, this results in approximately half-lane width accuracy. The OBUs have built-in GPS, using U-Blocks which do not have an IDK connection. The two node points together provide a better map matching performance.

USDOT MAP Creation Tool and Related Resources

Matt Marchese of Leidos provided a brief demonstration of the USDOT MAP Creation Tool, and also presented slides that were distributed to the Resources Working Group members. The MAP tool can be accessed at: <https://webapp.connectedvcs.com/>. Discussion included the items highlighted below.

One question concerned the level of accuracy of the created MAP given the use of Bing Maps. Matt noted that having a verified survey point reduces the inaccuracy associated with the Bing Map. The MAP tool is reasonably accurate now, but there are ongoing efforts to update the tool and make it better. Additionally, it is possible to overlay CAD drawings if the view is occluded in Bing Maps, e.g., by tree cover, or for new construction that is not yet built or does not appear in the Bing Maps satellite view.

Ray Derr noted that he is a member of the AASHTO Design Committee and has observed that few states have a good system to easily access as-built CAD files. However, states are working to implement these types of systems. The AASHTO Design Committee would be a good group to collaborate with on this effort.

Upcoming Webinar & Close

The next Resources Working Group meeting will be held on July 11, 2018 at 11am ET.