Cooperative Automated Transportation Coalition
Technical Resources Working Group
Monthly Meeting Summary
Wednesday February 13, 2019 11:00 am - 12:30 pm Eastern Time

Action Items

1. Everyone: Identify any available SPaT deployment documentation along the entire systems engineering V diagram, including Concepts of Operations, Requirements, Test Plans, and Procurement or bid documents with scope, specifications, or statement of work for equipment, installation, support contractors, as well as cost information, general technical support resources, security details, project plans, network plans, or lessons learned. Share leads, links, or attachments with Jeremy or Faisal.
    a. Cheryl Lowrance, Tom Timcho: Send documentation mentioned on the webinar to Jeremy or Faisal.

2. Everyone: Provide information on new or planned SPaT deployments, as well as updates to those already on the website, by contacting Jeremy or Faisal.

3. Everyone: identify available OBU deployment documentation that may assist deployers in the Connected Fleet Challenge, and share leads, links, or attachments with Jeremy or Faisal.

4. Everyone: Provide feedback to Jeremy or Faisal on USDOT topics of interest.

5. Everyone: share relevant cybersecurity and network security resources as they identify them.

6. Faisal and Jeremy: Work with Deb Curtis to coordinate a presentation on Turner-Fairbank activities.

7. Israel Lopez, Imran Inamdar, Martha Morecock Eddy, Mohammad Hadi, Tom Timcho, and Cliff Heise will conduct a review of the RSZW-LC Model ConOps, which Jeremy will coordinate.
    a. Everyone: contact Faisal or Jeremy if interested in reviewing the RSZW-LC Model ConOps.

8. Faisal and Deb: provide an update on NTCIP 1218 for the next webinar; contact leads as needed.

Attendance

1.	Faisal	Saleem (Chair)	faisalsaleem@mail.maricopa.gov
2.	Navin	Katta (Co-chair)	navin@savarinetworks.com
3.	Carlos	Alban	calban@itsa.org
4.	Michael	Baril	michael.baril@stvinc.com
5.	Patrick	Chan	patrick.chan@consystec.com
6.	Alan	Clelland	aclelland@appinfoinc.com
7.	John	Corbin	john.corbin@dot.gov
8.	Deborah	Curtis	deborah.curtis@dot.gov
9.	Dean	Deeter	deeter@acconsultants.org
10.	Justin	Effinger	JEffinger@lakecountyil.gov
11.	Barry	Einsig	beinsig@econolite.com
12.	Edward	Fok	edward.fok@dot.gov
13.	Aaron	Greenwood	Aaron.Greenwood@leidos.com
14.	Mohammed	Hadi	hadim@fiu.edu

15. Cliff Heise   cdh@iteris.com
16. Doug Hohulin   doug.hohulin@nokia.com
17. Shah Imran   MdShah.Imran@atkinsglobal.com
18. Imran Inamdar   imran.inamdar@kapsch.net
19. Jean Johnson   jean.johnson@nema.org
20. Joshua Kolleda   kolleda_joshua@bah.com
21. Steve Kuciemba steve.kuciemba@wsp.com
22. Israel Lopez   israel.lopez@triunityeng.com
23. Cheryl Lowrance clowrance@vhb.com
24. Jianming Ma   Jianming.Ma@txdot.gov
25. Stephen Mensah   stephen.mensah@stantec.com
26. Jim Misener   jmisener@qti.qualcomm.com
27. Martha Morecock Eddy nymartha@aol.com
28. Roxane Mukai   rmukai@mdta.state.md.us
29. Venkat Nallamathu vnallamothu@aashto.org
30. Koorosh Olyai   koorosh.olyai@stantec.com
31. Hyungjun Park   hjp4w@virginia.edu
32. Landon Perry   laperry@dot.ga.gov
33. Sean Peirce   sean.peirce@dot.gov
34. Pierre Rasoldier   pierre.rasoldier@tc.gc.ca
35. Bob Rausch   robert.rausch@transcore.com
36. Jeremy Schroeder schroeder@acconsultants.org
37. Adam Shell   Adam.Shell@iowadot.us
38. Chris Stanley   chris.stanley@leidos.com
39. Barbara Staples   bstaples@noblis.org
40. Ray Starr   ray.starr@state.mn.us
41. Mike Stelts   michael.stelts@us.panasonic.com
42. Tom Timcho   tom.timcho@wsp.com
43. Karen Timpone   karen.timpone@dot.gov
44. Govind Vadakpat G.Vadakpat@dot.gov
45. Emil Wolanin   emil.wolanin@montgomerycountymd.gov

Meeting Summary

USDOT Overview and Feedback

Ed Fok, Govind Vadakpat, and Deb Curtis provided a USDOT update, which included the following information:

- Wyoming and Tampa are now operational in Phase 3 of the CV Pilot.
- The ITS JPO website is currently being updated with all Phase 2 materials from the CV Pilot sites.
- A basic, simple prototype of an SCMS misbehavior detection system is now available to prevent "stupid hacker attempts". Ed provided links to a Faulty BSM Generator available at: https://github.com/noblis/faulty-bsm-generator, and the Misbehavior Detection System available at: https://github.com/noblis/misbehavior-detection.
- The USDOT MAP Tool is being updated and maintained. Currently, USDOT is working with CAMP to take output from the CAMP MAP Tool code as an input to the USDOT MAP Tool to generate

MAP messages for work zones or curve approaches, for example, to expand the functionality of the USDOT MAP Tool. The USDOT MAP Tool will be given to NOCoE and available on the NOCoE website at the end of the project.

- An effort is being planned to turn the RSU Specification v4.1 into a standard. This is not yet underway or confirmed, but is anticipated.

Future topics of interest for the USDOT to present to this group included discussion about an update on Turner-Fairbank activities, such as updates to the RSU Specification version 4.1 and Tools. A broad presentation on Turner-Fairbank activities could be a good introduction for a future webinar to then identify a presentation topic on specific projects of interest. Deb agreed to provide this update on a future webinar. Another idea included a CV Pilot site presentation that includes discussion of SCMS and lessons learned. It was noted that there is a lot to be learned from the CV Pilots and the SCMS solution in a timely manner; however, it may be challenging for others to deploy something similar. Another possibility would be a presentation from Denver, which is also pursuing innovative solutions.

ACTION: Faisal and Jeremy will work with Deb Curtis to coordinate a presentation on Turner-Fairbank activities.

ACTION: Everyone is asked to provide feedback to Jeremy or Faisal on USDOT topics of interest.

SPaT Resources Discussion
Ray Starr provided an update on SPaT Challenge activities, including the status of deployments nationwide, webinars conducted to date, available resources, and where to find this information on the NOCoE website: https://transportationops.org/spatchallenge. Next steps for the SPaT Challenge include:

1. *Assemble or link to relevant SPaT documentation*. We will track documents received and make them available on the website to support deployers as either PDFs or links, while noting any changes the agency would suggest in hindsight. Any available documentation is of interest, as detailed below.
2. *Document SPaT Challenge deployment information* by continuing to request information on new planned or operational SPaT deployments for the website map, and reaching out directly for updates and lessons learned. Work is also underway to develop a process for verifying the operational SPaT Challenge sites.
3. *Transition to also assembling resources for the Connected Fleet Challenge.* Dean noted a couple groups within the Strategic Initiatives working group that are following a similar approach for the Connected Fleet Challenge as the effort for collecting and making available existing SPaT documentation since a number of agencies have deployed OBUs and have experience in that. There are no plans to create new resources for this effort.

It was noted that a checklist or items to consider that are not necessarily seen during system engineering that are needed to ensure interoperability is also a needed resource, e.g. SCMS connectivity, supported data collection, network security, project plans, or networking plans.

Cheryl reiterated the need for this kind of sample documentation based on similar efforts she is undertaking to assist in a deployment; she offered to share available documents she has collected. Tom Timcho noted an RFP issued by City of Columbus for RSUs and OBUs that may be of interest. Bob suggested reaching out to Deb Curtis on the SPaT verification process, as she was involved in this with the CV Pilots.

ACTION: Everyone is asked to help identify any available SPaT deployment documentation along the entire systems engineering V diagram, including Concepts of Operations, Requirements, Test Plans, and Procurement or bid documents with scope, specifications, or statement of work for equipment, installation, support contractors, as well as cost information, general technical support resources, security details, project plans, network plans, or lessons learned. Share leads, links, or attachments with Jeremy or Faisal.

ACTION: Everyone is asked to provide information on new or planned SPaT deployments, as well as updates to those already on the website, by contacting Jeremy or Faisal.

ACTION: Everyone is asked to identify available OBU deployment documentation that may assist deployers in the Connected Fleet Challenge, and share leads, links, or attachments with Jeremy or Faisal.

RSZW-LC ConOps Discussion
Dean presented an updated on the status of the RSZW-LC Model Concept of Operations, and a brief overview of the document. For next steps, he is seeking 5-10 volunteers from the Resources Working Group to conduct a focused review, which will meet by teleconference within two weeks to discuss comments in order to complete the review and edits by March 4. The plan is to then conduct a broader review with the Resources Working Group possibly in the May webinar, followed by broader distribution and posting on website.

ACTION: Israel Lopez, Imran Inamdar, Martha Morecock Eddy, Mohammad Hadi, Tom Timcho, and Cliff Heise all volunteered to conduct a review, which Jeremy will coordinate.

CAT Coalition Overview of Activities
Jeremy provided a brief recap of the Resources WG activities, including presentation topics, gap identification, and identification of CAV resources, which are all documented in a white paper. He also provided an overview of the objectives, 2018 activities, and planned activities for 2019 of Strategic Initiatives and Peer Exchange & Outreach Working Groups, as well as the SPaT/RLVW, RSZW, and Connected Automation Working Groups within the IOO/OEM Forum.

Resources WG 2019 Activities & Feedback
Faisal presented an overview of potential topics of interest that may be presented in future webinars, and requested feedback. NTCIP 1218 was identified as being of interest: the walkthrough on that effort is at the end of February, and the NTCIP groups are open to anyone to participate (but not vote), and if interested in participating contact Jean Johnson (jean.johnson@nema.org). Security implications, more broadly including network security and message security, i.e. SCMS, are also of interest. Ed cautioned against a USDOT led discussion, which may be misleading given the many other good materials and resources available.

ACTION: Faisal will talk to the leads on the NTCIP 1218 effort, and Deb offered provide input at the next webinar.

ACTION: Everyone to share relevant cybersecurity and network security resources as they identify them.

Upcoming Webinar & Close
Resources Working Group meetings in 2019 will be held on May 8, August 14, November 13 at 11am ET.