Cooperative Automated Transportation Coalition
Technical Resources Working Group
Quarterly Meeting Summary
Wednesday, August 11, 2021 11:00 am - 12:30 pm Eastern Time

Action Items

1. Everyone: Please provide feedback to Faisal or Jeremy regarding the value you have gained from this working group, including how you have used or distributed products developed by this group.
2. Everyone: Share leads, links, or attachments of resources with Faisal or Jeremy on:
   - Suggestions from working group (WG) members on ways to enhance impact, including: 1) proposed new WG Members, 2) communications with/Involvement in other initiatives, and 3) knowledge resources to include on the CAT Coalition Website.
   - Resources or information to support SPaT and Connected Fleet deployments.

Meeting Summary

Ongoing Commitment to Outreach and Knowledge Transfer and Resources WG Recap

- Resources WG members were reminded to provide suggestions for proposed new WG Members, share new information about communications with/involvement in other initiatives, and any knowledge resources to include on CAT Coalition website.

IOO/OEM Forum RSZW Working Group Update on Products
Jeremy stepped through a new Connected Work Zone Data Needs and Suggestions for Standards Coordination resource that was developed by the IOO/OEM Forum RSZW Working Group. This resource is posted on the CAT Coalition website at:
https://transportationops.org/sites/transops/files/Summary%20of%20Connected%20Work%20Zone%20Needs%20and%20Suggestions%20for%20Standards%20Coordination%20-%20v1.0%2004192021.pdf.

Jeremy also talked through a work plan developed by the RSZW Working Group entitled Enabling Connected Work Zones: Needed Activities and Proposed Next Steps. A question was raised about who is involved with this work plan, with a special note that Audi is very active in work zones but not involved with CAMP. Rich noted that no current research and development activity in CAMP is associated with this activity. This work plan includes no suggestions on where and how; instead the work plan outlines what is needed. Faisal suggested identifying stakeholders that could have a role in this space to help advance this work plan and activities.

Rob Dingess expressed frustration with where we are after discussing this for so many years. Faisal noted the CAT Coalition is not funded to execute the activities, and the role is to identify the gaps and needs and advance the state of the practice. Faisal agrees that a need is there and the group tries to bring it to higher levels to find a path forward. Gummada noted that the CAT Coalition does not produce the results, but serves to identify the needs and bring the community together to discuss issues.

Connected Intersections Update on Testing and Findings
Jay Parikh shared an update on the USDOT/ITE Connected Intersections Testing effort. He noted there were 13 participants across 15 validation sites. Validation field test data collection activities were completed in July and field test analysis and results will be completed by the end of August. A validation report is tentatively planned to be available by the end of 2021.

The test environment is focused on the CI over the air (OTA) Signal Phase and Timing (SPaT) and MAP messages needed to support the Red-Light Violation Warning (RLVW) application. Specifically, verification examined required data frames and elements, as well as the structure and data values of those per SAE J2735.

Jay described the field verification steps. He noted that the verification does not examine the accuracy of the data in SPaT messages with what is coming out of the controller. Tom Timcho said that the CV PFS is intending to verify correctness, building on this testing. In total, Jay has processed and analyzed 100 field test data files provided by 12 sites.

Jay shared some preliminary observations from field test analysis. With SPaT, he noted the time difference between consecutive messages from the RSU is not always maintained at 100 ms. Additionally, the difference in message timestamp generated by RSU and received by OBU timestamp indicate the RSU and OBU clocks are not in synch. The OBU uses the GPS time source, and fundamentally these are supposed to be in synch. Bob Rausch noted this reflects a deeper issue. He said this may occur if the RSU is set to a vendor time and unable to synch to GPS time. Tom Timcho added that depending on how the data for the MAP was generated, correctness verification may still be needed.

Jay also showed the visualization tool used for verifying the MAP message. He shared some of his observations of errors in MAP messages, like: the first node point in MAP extends well beyond the stop bar into the intersection, missing egress lane definitions in MAP, and node points in reverse order.

Resources Working Group Completed Work Plan Activities and Impact
Faisal highlighted the work plan activities conducted by the Resources Working Group, and requested feedback from working group members on:
• What value have you gained from Resources Working Group activities?
• How have you used products developed by the Resources Working Group?
• Have you distributed these Resources Working Group products or webinars to others?
• How should our working group activities and accomplishments be highlighted or included for the final CAT Coalition compendium?
Faisal noted some responses have been received via email and any additional feedback that members are able to provide via email would be appreciated.

Partner and Member Updates
• ITE: Nicola commended the CI Committee on their excellent work, and noted the ballot being prepared for CI implementation.
• ITS America: Bob Rausch noted the ITS America e-mail distribution regarding clarification for use of the upper 30 MHz. For those that currently have DSRC, the upper three channels will be able to continue to be used, licenses will be issued for the upper 30 MHz, and there are waivers available for other use. Nothing has changed regarding vacating the other part of the spectrum.

2021 Webinars & Close
The next Resources Working Group meeting will be Wednesday, November 10 at 11:00am-12:30pm ET.

Attendance

1. Faisal Saleem (Chair)   faisal.saleem@maricopa.gov
2. Alvin Stamp   alvin.stamp@state.co.us
3. Bob Rausch   robert.rausch@transcore.com
4. Bryan Lee   Bryan.Lee@dot.gov
5. Daniel Lai   Dlai@bellevuewa.gov
6. Darryl Dawson   ddawson@itsengineering-ltd.com
7. Doug Hohulin   doug.hohulin@nokia.com
8. Gummada Murthy   gmurthy@aashto.org
9. Israel Lopez   israel.lopez@triunityeng.com
10. Jay Parikh   jparikh@camplllc.org
11. Jeremy Schroeder   schroeder@acconsultants.org
12. Jim Misener   jmisener@qti.qualcomm.com
13. Jonathan Haylock   haylock@gridmatrix.com
14. Kevin Viita   kviita@itsa.org
15. Liana Mortazavi   liana.mortazavi@us.panasonic.com
16. Marisa Adams   marisa.k.adams@leidos.com
17. Martha Eddy   eddy@battelle.org
18. Michael Sheffield   michael.sheffield@wcg.us
19. Mike Stelts   michael.stelts@us.panasonic.com
20. Mohammed Hadi   hadim@fiu.edu
21. Nanette Schieke   nschieke@mdot.maryland.gov
22. Nicola Tavares   ntavares@ite.org
24. Pat Zelinski   pzelinski@aashto.org
25. Peter Jager   pjager@utah.gov
26. Peter Thompson   pth@sandag.org
27. Roxanne Mukai   rmukai@mdta.state.md.us
28. Randy Roebuck   rdroebuck@omniair.org
29. Ray Starr   ray.starr@state.mn.us
30. Rich Deering   rkdeering@icloud.com
31. Robert Dingess   rdingess@mercerstrategic.com
32. Safak Ercisli   safak.ercisli@leidos.com
33. Shaun Quayle   shaun_quayle@co.washington.or.us
34. Shel Leader   shel@sleader.com
35. Steve Kuciemba   steve.kuciemba@wsp.com
36. Thomas Timcho   tom.timcho@wsp.com
37. Venkat Nallamothu   venkat.nallamothu@toxcel.com