

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

**Wednesday, February 10, 2021 11:00 am - 12:30 pm Eastern Time**

### Action Items

1. 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.
2. Faisal, Jeremy, Navin: Coordinate and schedule a discussion on next steps for the Resources WG to document identified gaps and support other various efforts within the CAT Coalition, as needed.
3. Everyone: Contact Jeremy, Faisal, Blaine, or Joe about your interest in helping to develop the new SPaT resource about transitioning deployments to a reduced spectrum and incorporating cellular communications.
4. RSU vendors and RSU deployers: contact Siva Narla to provide input for the USDOT/ITE RSU Standard Development effort.

### 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.
- Bob Rausch asked if the CAT Coalition was planning to develop a transition plan in light of the FCC decision to reflect the impacts that will be expected? That is something that Faisal expects will occur in the coming months through engagement of each group in the coalition, as appropriate.
- Jeremy provided a brief recap of the previous Resources WG webinar in November, including the IOO/OEM Forum Product Review: Preliminary Verification Resource and Overall Testing Approach, and the presentation by Barbara Staples on NCHRP 08-120: Deployment of CV Technologies on Rural Corridors. Ray Derr commented that NCHRP 08-120 revised final deliverables were received in January, and publication will take a few months.

#### CAT Coalition Updates

Faisal provided an update on CAT Coalition activities. Specifically, that WG work plan activities and regular WG meetings will conclude in November 2021. In the meantime, WGs will continue to focus on bringing their products to conclusion and wrapping up work plan activities by November 2021. A compendium of CAT Coalition products and associated narrative will be developed this year and concluded in 2022. Overall it is recognized that the CAT Coalition has proven to be a valuable collaboration and following its success the association leaders are in conversation about what kind of coalition might follow the CAT Coalition to meet the future needs. The Resources WG has completed most WG work plan activities, but will continue three specifically: 1) to provide review, input, and analysis of developed CAT documentation, tools, products, and resources; 2) support MaaS/MOD and

facilitated discussion with invited speakers and members surrounding the increasing role of MaaS/MOD in CAT beginning with today's meeting; and 3) update the CV Deployment Environment Resource based on new FCC announcements and the release of standards.

Gummada noted that parking lot items being identified by other WGs might be organized by the Resources WG as part of the compilation of documentation resulting from all CAT Coalition activities.

- Faisal suggested a small group of volunteers could assist in documenting these gaps that other groups are discovering.
- Blaine provided additional context, noting some items being identified as part of the Connected Intersections (CI) operations and testing approach activities. For example, if a utility vehicle blocks part of the intersection for a 3-4 hour part of the day, what should the IOO do? This time period is too short to generate a new MAP message, and the signal may or may not be placed in flash mode.
- Blaine noted that discussions for this resource have covered seven scenarios about how an IOO should approach these types of disruptions, and there is no clear answer yet. These types of gaps are what Gummada is proposing to document.
- Blaine proposes bringing the IOO-OEM Forum documents to this group for review on these items once the group adds more content.
- Shel Leader noted experience during testing with large trucks blocking the signal. Shel suggested sending a message about the blockage or using C-V2X services to get around this issue.
- Steve Kuciamba noted that NCHRP 23-10 is covering some of the content in a white paper. Blaine said the group is aware of that effort and would plan to reference the NCHRP document or expand on it, as needed. Steve is happy to coordinate with this effort. Bob Rausch noted the coordination that is taking place in New York for the spectrum and the technology upgrades that are needed, which is not trivial or cheap.
- Faisal noted that the CV Deployment Environment will need to be updated to reflect these changes and updates identified as a result of this activity.

### **New SPaT Resource**

Blaine Leonard described the SPaT Challenge history and successes with numerous deployments around the country. Given the FCC announcement about reallocating the 5.9 GHz, he identified a possible need to develop a resource that would help these agencies transition their DSRC deployments to a reduced spectrum and incorporate cellular communications. His presentation included a recap of a discussion on the January 28, 2021 Strategic Initiatives WG webinar, where WG members agreed that a resource was needed to support the SPaT Challenge sites given the recent FCC reallocation of 5.9 GHz band.

Additionally, no other group was identified as already developing a similar resource, so WG members agreed to develop this resource, possibly in partnership with the Resources WG. Joe Averkamp (Co-Chair of the Strategic Initiatives WG) agreed to lead the effort. Those interested may contact Jeremy, Faisal, Blaine, or Joe about working on this effort.

Discussion included the following observations and questions:

- Bob asked if this effort should be coordinated with the ITS America group. Blaine said that is an essential piece to keep in mind for this effort.
- Gummada asked about expanding the outline to discuss convergence about what resource or technology is expected to be relevant for what timeline, possibly around August. The FCC ruling invalidated a number of resources.
- Barry Einsig suggested a review of OEM announcements and guidance as part of this timeline analysis.

- Bob noted that cost and O&M models are not present in this outline, since the shift to a different spectrum allocation will have different cost and O&M models than what are currently used. Jim concurred with this recommendation.
- Steve Lockwood asked about the involvement of cellular providers. Jim Misener volunteered to facilitate the discussion.
- Bob Rausch similarly echoed that NYC is looking at 3-7 year outlooks.
- Steve noted there are legal issues beyond SPaT that need to be addressed. Blaine said he believes that concern is probably out of scope for this document so that it does not become too broad.
- It was noted that this discussion also reflects a need to review impacts on already-developed resources.

### **C-V2X Standards Updates**

Jim Misener provided an overview of cellular-V2X (C-V2X) activities. He highlighted the work progressing at SAE, including the work advancing within the SAE C-V2X Technical Committee. Additionally, C-V2X is being incorporated in the work of many other SAE efforts, including broader efforts focused on infrastructure/signal applications, vehicles, tolling, security, and advanced applications. Jim also highlighted new standards or updates being made to existing standards to incorporate C-V2X. This includes IEEE 1609, NEMA TS 10, and the ITE draft RSU specification.

Finally, Jim noted that OmniAir is prepared to initiate C-V2X testing activities. Specifically, OmniAir has used existing tests from SAE and 3GPP, and also developed new tests to launch a new C-V2X certification program. He pointed out that in the future 5G V2X will build on C-V2X and related efforts being done today with new, more advanced applications.

### **Update on USDOT/ITE RSU Standard Development Efforts**

Siva Narla and Blaine Leonard shared a brief update on the RSU Standard being developed. Siva acknowledged the great work from this group to develop a standard that is available for comments in such a short time. ITE continues looking for participation from RSU vendors and RSU deployers for input on what is needed for deployment as part of this effort. For more information, Siva provided a link: <https://www.ite.org/technical-resources/standards/rsu-standardization>.

### **Overview of Mobility as a Service (MaaS) and Mobility on Demand (MOD)**

Sara Davidson provided an overview of ITS America activities and projects related to MaaS and MOD, including the following:

- Six new ITS America committees are being formed, which include MaaS/MOD. Specifically, these focus on: smart infrastructure, automated vehicles, V2X/connected transportation, emerging technologies, and mobility on demand, and sustainability and resiliency. More information on the ITS America's Standing Advisory Committees can be found at: <https://itsa.org/about/standing-committees>
- Sara noted a national practitioner survey being distributed to state and local DOTs and transit agencies about their experiences with MOD. A second, public survey is looking at public perception of MODs. Survey results from both should be released in the spring. ITS America will conduct efforts to summarize and disseminate the results from this survey.

- ITS America has another effort on basic mobility and examine various approaches like a mobility wallet that would be accessible to all. Information on the Mobility on Demand Alliance is at: <https://www.modalliance.org>
- There is a TSMO/MOD Peer Exchange in partnership with NOCoE and AASHTO focused on MOD that is including how DOTs and partners incorporate MOD into their operations and maintenance strategies. This discussion is on TSMO/MOD as an integrated system, opportunities within the ecosystem, and includes scenario planning exercises.
- Finally, a sandbox webinar with USDOT and ITS America on experiences and lessons learned from the MOD Sandbox programs. Findings and Lessons Learned from the MOD Sandbox Trip Planning and Fare Payment Deployments are available at this link: <https://itsa.org/event/findings-and-lessons-learned-from-the-mod-sandbox-trip-planning-and-fare-payment-deployments>
- Other updates regarding ITS America's MOD/MaaS initiatives can be found here: <https://itsa.org/s/mobility-on-demand/>

Contact Sara for additional questions or requests for information on these topics at: [sdavidson@itsa.org](mailto:sdavidson@itsa.org)

### Partner and Member Updates

- ITS America: Kevin Viita noted that the new standing committees are being assembled now, and outreach will be conducted to collaborate with the CAT Coalition.
- ITE: Siva noted that the Connected Intersections effort has been productive and on-time, resulting in guidance that brings convergence to IOOs, OEMs, mobile users, and other stakeholders. A variety of task forces and volunteers have provided a tremendous level of support to provide validation from all perspectives. A design walkthrough is planned for March, followed by detailed design documentation in April. All members are invited to participate.
- TRB: Ray Derr shared a summary of TRB Cooperative Research Program efforts is available at <http://bit.ly/2y8gEm4>.

### 2021 Webinars & Close

Upcoming Resources Working Group meetings in 2021 will be held on Wednesdays at 11:00am-12:30pm ET on May 12, August 11, and November 10.

### Attendance

- |                           |                             |
|---------------------------|-----------------------------|
| 1. Faisal Saleem (Chair)  | faisal.saleem@maricopa.gov  |
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| 4. Alan Clelland          | aclelland@appinfoinc.com    |
| 5. Alvin Stamp            | alvin.stamp@state.co.us     |
| 6. Barry Einsig           | BEinsig@econolite.com       |
| 7. Blaine Leonard         | bleonard@utah.gov           |
| 8. Bob Rausch             | robert.rausch@transcore.com |
| 9. Cliff Heise            | cdh@iteris.com              |
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