

CAT Coalition

Strategic Initiatives Technical Working Group

April 22, 2021 Webinar

Notes and Summary of Discussions

Welcome

Blaine Leonard welcomed approximately 60 members and guests to the webinar. A list of those in attendance is provided at the end of these notes.

Ongoing Commitment to Outreach and Knowledge Transfer

Blaine invited members to identify additional topics and resources that would be of interest to this group or additional members who would be a benefit to or would benefit from this group. This is an ongoing invitation so if something or someone comes to mind after this webinar, please contact Blaine Leonard or Dean Deeter with your input and ideas.

Blaine shared that the CAT Coalition's IOO/OEM SPaT/RLVW Working Group has prepared a draft version of the Connected Intersections Consistent Procedures for Operations (CPO) document. The document is posted on the CAT Coalition website and is available for review at <https://transportationops.org/CATCoalition/resources>. Blaine invited members to review this document and to share any comments on it by emailing Dean Deeter at deeter@acconsultants.org.

At the January Strategic Initiatives webinar and shortly after, the Strategic Initiatives WG members were polled to identify interest in future topics. The polls showed a high interest in the following topics:

- CV applications using network cellular communications;
- Connected work zones; and
- Transition from DSRC to C-V2X.

Blaine reviewed today's agenda, noting that all three of these topic areas of interest would be covered.

Virginia C-V2X Deployment for Work Zone Safety

Mike Mollenhauer from Virginia Tech (VTTI) described Virginia's Connected Corridor. Since 2014, Virginia DOT and VTTI have partnered to test and implement connected and automated vehicle technologies and have pursued significant work in construction corridors and work zones. VTTI teamed up with Qualcomm and then Audi to demonstrate the features of C-V2X by developing work zone use cases.

One application VTTI is working on is a Smart Vest System for workers. This wearable system uses a tablet-based application to manage geofenced areas in work zones. Using a base station and mesh network, the Smart Vest System provides an auditory alert to roadside workers when they are nearing or have exited the work zone perimeter. Smart cones are used to improve the mesh network and define the designated area. The Smart Vest System integrates with northern Virginia's Connected Corridor using C-V2X and 4G

LTE cellular, sending TIM messages to connected vehicles that can alert drivers of work zone speed limit changes or that workers are present.

Mike noted that the vehicle on-board unit (OBU) communicates using the 4G network cellular communications until it is within range of an roadside unit (RSU) when it will transition to receiving messages from the RSU. A copy of Mike's slides is being circulated with this summary.

Transition from DSRC to C-V2X

During the January webinar, this group discussed how with the FCC's announcement of the gradual phase out of DSRC, the infrastructure owner operators (IOOs) that participated in the SPaT Challenge and deployed DSRC RSUs (as well as other IOOs that deployed DSRC RSUs) would benefit from a resource document to help them understand the transition process. As the Strategic Initiatives WG has been supporting activities of the SPaT Challenge, this group decided in January to prepare this resource. A group of 7 volunteers, led by Joe Averkamp, has been meeting weekly since January to draft a document that focuses on FAQs. With input from the Technical Resources working group and information available through NCHRP 23-10, the group is in the process of creating a document that addresses many questions of deployer agencies.

Currently, the group is working on drafting responses to 28 questions. Responses for 6 questions are nearly complete. Other responses continue to be discussed. Joe Averkamp stepped through the current set of questions (as shown in the slides circulated with this summary) and invited input from the group on any additional questions that should be answered. Joe also asked if members have any examples of documents used to procure C-V2X deployments that are publicly available and could be linked to the FAQs. Feedback will also be requested from the Technical Resources working group. A final document is expected to be released by the end of June.

Joe invited members that would like to participate in reviewing the draft responses to the FAQs to contact either himself or Dean.

CV Applications that use Network Cellular Communications

Adrian Pearmine from DKS and Maureen Bock from Oregon DOT (ODOT) presented on Oregon's Road User Charge (RUC) program. The program went live in July 2015 on a voluntary basis. ODOT is expanding the road use charging technology to create a Connected Vehicle Ecosystem that delivers safety and ITS communications by sharing information between the vehicles on the roadway, ODOT devices and employees, and car manufacturers.

ODOT is working with OEMs and tier 1 providers to ingest data by focusing on LTE and 5G components. They are interested in extending active traffic management messaging to mountain passes and are deliberating how to get data from cars that are not equipped. The technology being proposed would use a combination RSUs and the cellular network together to communicate information back and forth to the vehicles on the road.

Adrian went on to present Oregon's TriMet Next Gen Transit Signal Priority deployment. TriMet provides bus, light rail, and commuter rail in the Portland, Oregon area. This system will function on a cloud platform using an onboard unit that communicates with RSUs. An RFP was released in December 2020

and interviews were held in early April. The project will be awarded later this spring. A copy of the presentation covering both activities is being circulated with this summary.

Partner Reports: USDOT, ITS America, ITE, Other

ITS America – Carlos Alban shared that ITS America recently released a blueprint for safer, greener, smarter transportation systems that eliminate negative impacts, improve mobility, and maximize efficiency. During the week of April 25th, ITS America will host a webinar for National Work Zone Awareness week to educate and encourage current and potential partners. Also, Friday, April 30 is the deadline to submit ideas for the ITS annual meeting sessions.

Close

The next CAT Coalition Strategic Initiatives Working Group webinar is scheduled for Thursday, July 22, 2021, at 2 pm Eastern.

TWG 1 April 22, 2021 Webinar Participants

Blaine Leonard (Chair)	Jeremy Schroeder	Maureen Bock
Adrian Pearmine	Jesus Ruiz	Mauricio Guerra
Ahmad Jawad	Jianming Ma	Michelle Maggiore
Alan Clelland	Jill	Mike Mollenhauer
Bob Murphy	Jim Frazer	Mike Stelts
Brian Cronin	Jim Misener	Mohammed Hadi
Brian Kelley	Joe Avekamp	Nagham Mafont
Carlos Alban	Joey Yang	Navin Katta
Christian Kulus	John Corbin	Patrick Son
Cliff Heise	John Lower	Richard D'Alessandro
Dave Miller	John Roman	Roxane Mukai
Dean Deeter	Jon Riehl	Stan Caldwell
Doug Hohulin	Ken Moshi	Stephen Mensah
Frank Provenzano	Ken Yang	Steve Misgen
Gary Strack	Kent Kacir	Steve Sawyer
Henry Song	Kyle Garrett	Tom Kern
Iouri Nemirovski	Leisa Moniz	Tom Timcho
Jacob Folkeringa	Luke Faubion	Weimin Huang
Jeff Stewart	Marisa Adams	William Martin
Jeffrey Bergsten	Mark Kopko	
Jenny Roberts		