

CAT Coalition – Infrastructure-Industry Working Group November 18, 2021 Meeting Summary

Action Items:

- None at this time.

Notes:

Opening

- Tracy herself and Ed as co-chairs of this working group.
- The role of this group is to: 1) support pre-competitive industry research that will advance infrastructure development and maintenance; 2) Connect IOOs with industry; 3) Support the natural evolution of infrastructure to accelerate CAVs; and 4) Clarify terms, definitions and target audiences.
- Tracy provided a brief recap of the previous working group meeting, which featured discussions on digital twinning by Mina Sartipi and Kevin Comstock of the work in Chattanooga. These presentations will soon be available on the CAT Coalition I-I WG webpage: https://transportationops.org/CATCoalition/infrastructure_industry_WG.

Recording

This meeting was recorded and is available at the following link:

<https://www.dropbox.com/s/jlbdcg4woe7baod/CAT%20Coalition%20Infrastructure-Industry%2011-18-21%20Webinar%20Recording.mp4?dl=0>

Potential Use-Cases for Broadband in Transportation by Advanced Television Systems Committee (ATSC)

Madeleine Noland (mnoland@atsc.org) with support from Dr. Jong Kim (jongg.kim@zenith.com) described how broadband could be used in transportation through agreements between agencies and local stations and providers. The recording includes their full presentation, while the Q&A discussion is summarized below.

Are we talking about local broadcasters or cable providers? Local broadcasters. TV tower antennas with this new system can broadcast any data, not just TV broadcasts. The new system accommodates mobile use and has more data capacity. Antennas can be used not just on homes, but can also be placed on vehicles.

What infrastructure needs to be in place, particularly for use in rural areas? Transmission antennas on top of the tower to deliver data, and the receiver antenna, which is in smartphones and cars for any communication mechanism like LTE and Bluetooth. To enable a device to receive ATSC 3.0 signals, it would need an antenna with that capability built into it.

From a DOT perspective, what would I need to deploy to enhance connectivity or location platforms? If you can receive a TV signal in an area, it can receive that data. In terms of device antenna needs, it creates an added cost to receive the broadcast - maybe it results in cost savings over time, redundant data systems, and added resilience. OEMs may be interested in a universal antenna that would cover all signal sources, but are sensitive to costs.

How would DOTs partner with broadcasting stations? Local stations in Michigan are testing this capability. The local transmissions must be broadcast by stations, and those stations announce they have data available through their tower and any receiver can receive that data at home or in vehicles. Broadcasters are aware and should have the capability currently available for DOTs to broadcast that additional data.

What is an example use case? A DOT could work with PBS stations, which reach a large population. PBS could create a dedicated channel with rich information including a map, for example. The DOT could provide a data blog to PBS for broadcast that would enable trucks to receive that data assuming they have that receiver. This could be an aftermarket product in existing vehicles. A variety of compelling use cases exist for these large datasets to be pushed to fleet vehicles that are able to receive the ATSC signal. The receiver equipment could be looking for specific things in the signal to understand what parts of the data flow are intended for it to process. This is how the emergency broadcast system works.

Concluding remarks. Television broadcasting is a one way flow: one to many, but a TV also has an internet connection that can be leveraged as an uplink to get smaller pieces of info back to the network. ATSC 3.0 is smart enough to know that the uplink exists, and that it will be sent via a different path. ATSC 3.0 is great for big datasets and critical data - big downloads and emergency signals are of particular interest for vehicle use cases.

Overview of AV Survey Findings

Jeremy Schroeder provided a brief update on the findings from the AV surveys that were conducted earlier this year. These will be posted on the CAT Coalition website when they are finalized.

Overview of ITSA's Update on AV Principles

Tracy Larkin Thomason provided a brief overview of the AV Principles recently released by ITS America, which are available for download: <https://itsa.org/wp-content/uploads/2021/09/ITS-America-AV-Principles.pdf>.

Partner Updates.

- USDOT. John Corbin noted progress in finalizing the FHWA Roadway Automation ConOps, which may help to enable and catalyze these conversations. This could be a potential topic for the next Infrastructure-Industry Working Group webinar, which could also inform a strategic discussion for how the ConOps moves forward into the next version. A stakeholder group is meeting later this month to discuss this. Additionally, the CAT Coalition is considering an alternative futures discussion in early 2022 to consider how this type of organization continues and evolves moving forward.
- AASHTO. The AASHTO annual meeting will be in person October 26-29 in San Diego. There will be a CAV group meeting on that Wednesday morning to discuss the principles that have been developed.
- ITS America. World Congress is soon taking place in Hamburg, Germany, and ITS America will be in-person in Charlotte in December. There are a number of recent position changes at ITS America that have been announced, including Shailen Bhatt stepping down and being replaced by Lauren Chase as CEO and Kristin White becoming COO. Tracy is moving from policy to programming at ITS America. ITS America released autonomous mobility principles earlier this week, and Tracy will share more about that at the next webinar.

Registered Attendees:

1.	Tracy	Larkin Thomason (Co-Chair)	tlarkin@itsa.org
2.	Ed	Bradley (Co-Chair)	ed.bradley@toyota.com
3.	Adam	Shell	adam.shell@iowadot.us
4.	Andrea	Eales	aeales@apwa.net
5.	Andrew	Bremer	andrew.bremer@drive.ohio.gov
6.	Anne	Reshadi	anne.reshadi@dot.wi.gov
7.	Ashley	Nylen	ashley.nylen@state.co.us
8.	Barry	Einsig	BEinsig@Econolite.com
9.	Brad	Freeze	phillip.b.freeze@tn.gov
10.	Brian	Simi	brian.simi@dot.ca.gov
11.	Carole	Delion	cdelion@mdot.maryland.gov
12.	Cathy	McGhee	cathy.mcghee@vdot.virginia.gov
13.	Daniela	Bremmer	bremmed@wsdot.wa.gov
14.	Dave	Huft	dave.huft@state.sd.us
15.	Donna	Clark	donna.clark@atssa.com
16.	Douglas	Gettman	doug.gettman@kimley-horn.com
17.	Edward	Straub	edward.straub@sae.org
18.	Ginna	Reeder	vreeder@tetcoalition.org
19.	Gummada	Murthy	gmurthy@aatso.org
20.	James	Gray	James.Gray@dot.gov
21.	Jeremy	Schroeder	schroeder@acconsultants.org
22.	Jianming	Ma	jianming.ma@txdot.gov
23.	John	Corbin	john.corbin@dot.gov
24.	Jong	Kim	jongg.kim@zenith.com
25.	Kevin	Tobias	kevtobias@pa.gov
26.	Kevin	Comstock	kcomstock@chattanooga.gov
27.	King	Gee	kgee@aatso.org
28.	Kristin	White	kristin.white@state.mn.us
29.	Kyle	Garrett	kyle.garrett@synesis-partners.com
30.	Lauren	Isaac	lauren.isaac@easymile.com
31.	Lauren	Parrish	lparrish@odot.org
32.	Madeleine	Noland	mnoland@atso.org
33.	Malcolm	Gilbert	malcolm.gilbert@drive.ohio.gov
34.	Marisa	Walker	marisaw@azcommerce.com
35.	Mark	Van Dyke	Mark.VanDyke@iowadot.us
36.	Michelle	Arnold	michelle.arnold@dot.state.fl.us
37.	Mina	Sartipi	mina-sartipi@utc.edu
38.	Paul	Carlson	paul@automatedroads.com
39.	Roger	Berg	roger.berg@na.denso.com
40.	Shane	McKenzie	shane.mckenzie@ky.gov
41.	Slade	Engstrom	sgengstrom@transystems.com
42.	Tim	Simodynes	tim.simodynes@iowadot.us
43.	Val	Rader	val.rader@alaska.gov

44. Venkat Nallamothe venkat.nallamothe@toxcel.com
45. Yvette Flores yvette.e.flores@txdot.gov

