

Symposium 2021 Breakout Session Title:

B404-The Managed and Shared Roads to AV Deployment: How can we get there?

Session Contact/Organizers:

- Mike Davis, RS&H (Co-chair of ACP35)
- Dan Lamers, North Central Texas Council of Governments (Co-chair of ACP35)
- Yilun Xu, DKS Associates
- Mia Zmud, Central Texas Regional Mobility Authority
- Glenn Havinoviski, JMT Technology Group
- Nick Wood, University of Texas, Texas A&M University
- Julie Evans, RS&H
- Casey Emoto, VTA

TRB Sponsor/Partner Committees (if any): Managed Lanes (ACP35)

Session Description (NEW for 2021 highlighted)

The roadmap to autonomous vehicles (AV) deployment has continued to challenge the Infrastructure owners and operators (IOOs), policy makers, auto manufacturers, and mobility service providers. While managed lane facilities offer ideal real-world grounds for testing and incorporating AV and associated emerging technologies, policies and guidance, questions remain whether AV deployment should focus on exclusive or mixed-use roadways. What types of facilities are the most suitable for immediate AV testing? What are their pros/cons? Where is the most logical place to start? What is the business case for AV testing, in managed lanes or mixed traffic? How about the equity issue?

The main audience for this session is IOOs, automobile manufacturers, policy makers, finance/investment community, and potential industry and research collaborators interested in moving forward on deployment of AV.

Goals/Objectives/Outputs

- Better understand from industry leaders' standpoints the most logical next step of AV deployment testing, including a feasible roadmap.
 - How to develop technology and data strategies for AV testing and deployment?
- Examine the business cases of AV testing from the perspectives of automakers, service providers, IOOs,
 - Justify the investment of infrastructure and technology for AV testing
 - Explore pros and cons of exclusive vs mixed-use facilities for AV testing and deployment
- Identify the immediate opportunities for AV deployment testing (e.g. truck platooning, managed lane facilities, etc.)

Agenda

Topic 1: What's next for AV deployment and testing – industry leaders' perspectives(1.5 hrs)

Description: understanding of the most logical next step of AV deployment and testing related to managed lane facilities and/or in the mixed use environment.

Format: presentations, followed by panel discussion

Intended speakers: industry leaders from IOOs and auto manufacture, and policy makers

Moderator: Mia Zmud

Note-taker: Yilun Xu, Mike Davis, Julie Evans, Casey Emoto

Presenters and topics:

- Bob Frey (THEA) – FHWA CV Pilot Project
- Steve Kuciemba (WSP) - FCC Ruling and IOOs c2vx--implications (NCHRP study)
- Richard Bishop (Bishop Consulting) – private-sector perspective on the roll-out of Automated Trucking
- Dr. Zhuomin Zhang (Research Institute of Highway, Ministry of Transport, P.R. China) - Toward automated driving implementation: design and standardization of road traffic signs and markings for CAV

Q&A to follow presentations

Topic 2: The opportunities and challenges of testing AVs at exclusive versus mixed-use roadway facilities (1hrs)

Description: Explore pros and cons of exclusive vs mixed use facility for AV testing and deployment. Identify equity issues that comes with AV testing related to managed lane facilities and/or in the mixed use environment.

Format: case studies, followed by a moderated panel discussion

Intended speakers: practitioners from IOOs, auto manufacture, mobility service providers, and researchers

Moderator: Glenn Havinoviski

Note-taker: Yilun Xu, Mike Davis, Julie Evans, Casey Emoto

Presenters and topics:

- Lev Pinelis (Transurban) - update on the Automated Driving Systems (ADS) project with USDOT/CAMP/Virginia Tech
- Jennifer Foote (BEEP) – shuttles in Lake Nona FL and St Pete - Challenges and opportunities in Autonomous Shuttles in Mixed Flow Traffic
- Greg McGuire (MCity @ U of Michigan) - Test Bed perspective

Q&A to follow presentations

Topic 3: Immediate opportunities and a call for actions (0.5hrs)

Description: Identify and advocate for immediate opportunities (trucks, fleet, etc.) of AV deployment testing. Examine the business cases of AV testing and identify the feasible roadmap. Explore recent research updates, partnership opportunity, and future research needs.

Format: open moderated panel discussion with breakout rooms

Intended speakers: industry leaders from IOOs, auto manufacture, policy makers, mobility service providers, researchers

Moderator: Nick Wood

Note-taker: Yilun Xu, Mike Davis, Julie Evans, Casey Emoto

Lead panelists:

Mark de la Vergne (Cavnue)

Thomas Bamonte(North Central Texas COG)

Topic 3 expectation:

- Moderator to introduce
- Mark & Tom shares learning from the prior topics followed by Q&A
- Scribe takes notes from chat from Topic 1 & 2
- Facilitator/moderator manages discussions on Topic 3
 - May use whiteboard to post probing questions, e.g. what is the business case of AV testing?
 - Additional documenter to record discussions
- Mark and Tom service as lead panelists; all previous presenters and the audience may participate in the rest of of the session (open discussion)
- Potential breakout room as platform allows