

ARTS22 Breakout Session Title:

252-Automated Trucking Research and Development

Session Contact/Organizers:

- Andrew Krum, Virginia Tech Transportation Institute
- Nicole J. Katsikides, Texas A&M Transportation Institute
- Billy Hwang, Texas A&M Transportation Institute

Session Description

Private and public organizations are focusing on the development and testing of automated trucks due to predicted safety improvements, an increasing demand for goods movement, and an expected significant return on investment. Benefits are expected to resolve challenges with labor shortages, supply chain inefficiencies, freight facility efficiency, and crashes involving trucks on the nation's highways. Public agencies are seeking to engage with industry to define and provide the transportation architecture that will help enable these technologies to operate safely and efficiently. Private entities are already developing transfer hubs and facilities needed to implement automated trucks. There is a need to identify how the public and private sector can work together and how the public sector can support implementation and prepare for changes to freight movements and the impact on public infrastructure.

This session will dig into the details that manufacturers and developers, states and federal governments are working through to develop the path forward for automated trucking. During the event, the session will include live presentations and panels with time for questions and answers from the moderator and audience.

Goals/Objectives/Outputs

- Bring together a representative set of stakeholders to discuss advanced and automated freight delivery.
- Discuss the research, development, and testing activities that will lead to improved freight delivery.
- Identify what the public sector can do to support development and implementation, what they need to know?
- Share public sector capabilities with the private sector so that there is awareness of what each party can do.
- Output: Identification of the recent successes and remaining challenges to apply Level 2 and Level 4 trucking automation.

Agenda

Panel 1 (60 minutes)

Moderator: **Andrew Krum, VTTI**

- *Heavy and Commercial Vehicle Government Activities*
 - a. FHWA Update: Cooperative Automation Use Cases
Edward Leslie, Senior Electrical Engineer, Leidos
 - b. FMCSA Update: Automated Trucking Research Overview
Mike Lukuc, Manager, FMCSA Automated CMV Evaluation Program
 - c. Transport Canada Update: Automated Vehicle Safety Program
Peter Burns, Chief, Human Factors and Crash Avoidance Research
 - d. Trucking Automation Research Issues
Rich Hanowski, Director, Division of Freight, Transit, and Heavy Vehicle Safety, Virginia Tech Transportation Institute

10 Minute Break

Panel 2 (60 minutes)

Moderator: **William Hwang, TTI**

- *Automated Freight Pathways and Local/State Infrastructure*
 - a. Developing an Automated Trucking Network
Ryder System, Inc. (Speaker TBA)
 - b. Utilization of a Trucking Automation Hub Network
TuSimple (Speaker TBA)
 - c. State DOT Infrastructure Perspective
Organizations TBA

10 Minute Break

Panel 3 (60 minutes)

Moderator: **Andrew Krum, VTTI**

- *Operational Use Cases for Automated Freight in Motion*
 - a. Operation: Automated Follower
Michelle Chaka, Locomotion
 - b. Operation: Automated Solo
Torc (Speaker TBA)
 - c. Operation: Automated Remote Monitoring/Assistance
Stefan Seltz-Axmacher
 - d. Operation: Research into Automated Command Applications
Jean Paul Talledo Vilela, Senior Technology Implementor, VTTI