

Symposium 2021 Breakout Session Title:

B310-Reading the Road Ahead: Highway Agency Efforts Supporting ADAS and HAV Integration with the Roadway Environment

Session Contact/Organizers

- Scott O. Kuznicki, P.E., Modern Traffic Consultants
- Paul Carlson, Ph.D., Road Infrastructure, Inc. Ken Smith, Ph.D., 3M Company
- John Corbin, P.E., FHWA

TRB Sponsor/Partner Committees

Traffic Control Devices Committee (ACP55)

Session Description

In an era of constrained operating budgets, curtailed capital investment, and competing priorities, road agencies must develop and deploy investments that improve the consistency of Operating Design Domain (ODD) selection in conjunction with consistent applications of traffic control devices. This year, Reading the Road Ahead will examine approaches to improving the correlation between machine vision capabilities and roadway environments across various ambient conditions that influence ODD. Harmonizing infrastructure capabilities and machine vision needs (expressed as ODD) will inform agency investments, providing for consistent deployment of self-driving transport operations across various functional classifications of roadways.

Reading the Road Ahead serves as the AVS platform for examining machine vision system interactions with traffic control devices, with a particular focus on the performance of pavement marking systems managed by road agencies. Previous workshops have identified and described the critical characteristics for these systems based on real-world performance evaluations in the context of ADAS and HAV operations, validating the need to accommodate all automation levels.

Goals/Objectives/Outputs

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| Output 1 | Identify global resources concerning the criteria for ODD selection and Road assessment systems, particularly as they relate to traffic control device interactions and machine vision limitations |
| Output 2 | Report session outcomes to TRB's ACP55 Committees, informing Subcommittee Development and pan-industry collaboration |

Preliminary Agenda

1:30 to 2:15 **Machine Vision and Pavement Markings** Introduction from Dr. Ken Smith, 3M

- What Do we Really Need?
Scott O. Kuznicki, Modern Traffic Consultants
- Pavement Markings and ODD for Motorways
Siddartha Khastgir, Warwick University

2:15 to 3:00 **Road Agency Efforts and Stakeholder Response to New MUTCD Provisions** Moderated by Dr. Paul Carlson, Road Infrastructure Incorporated

- USDOT Perspective
Kevin Sylvester, FHWA *MUTCD* Team Leader
- State Agency Perspectives
Doug McClanahan, WSDOT
Brian Simi, Caltrans
- Automotive Perspective
Doug Campbell, ASC President
- PANEL DISCUSSION

Related Sessions

This workshop should not be scheduled opposite sessions relating to public agency barriers and opportunities or sessions explicitly addressing sensor technologies

Session Logistics

The moderated discussion will include extensive audience participation. To that end, we request theatre-style seating with floor microphones on stands positioned approximately two-thirds of the way up each aisle. If held virtually, this workshop will not require Zoom Breakout Room facilities in half-session format.