

**Unsettled Issues in
Balancing Virtual, Closed-
Course, and Public-Road
Testing of Automated
Driving Systems**

Sven Beiker, PhD

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About the Editor



Sven Beiker, PhD, is the Founder and Managing Director of Silicon Valley Mobility, a mobility consulting and advisory firm that specializes in technical diligence, product roadmaps, and business models for mobility topics. The engagements span startups, investors, and corporations in the mobility and adjacent industries. In addition, Dr. Beiker is a Lecturer at the Graduate School of Business at Stanford University where he instructs students on strategies for startups and corporations in the field of automated, connected, electrified, and shared mobility.

With his well over 20 years of experience gained during his tenure at McKinsey & Company, Stanford University, and the Daimler Group, Dr. Beiker is dedicated to the future of the automobile and personal mobility. His mission is to improve sustainability, safety, efficiency, and convenience in how consumers use automobiles. He combines perspectives from technology, business, policy, and human factors.

Dr. Beiker also serves on advisory boards of several startups in the mobility space, as an advisor to the German American Chamber of Commerce in San Francisco, and as an advisor/co-editor to the Lecture Notes in Mobility of Springer Science+Business Media. He is a continuing contributor to the SAE EDGETM Research Report series.

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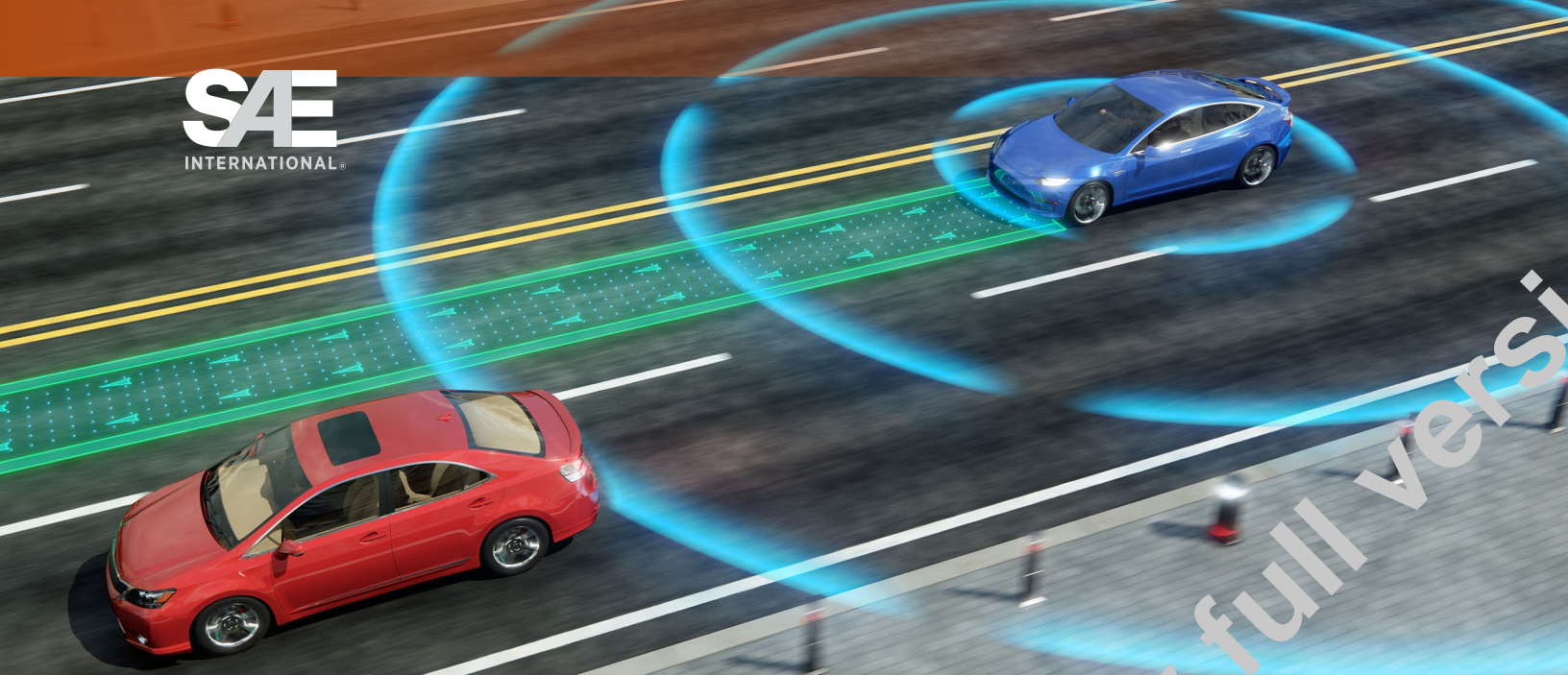
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Abstract

This SAE EDGE™ Research Report identifies key unsettled issues of interest to the automotive industry regarding the challenges of determining the optimal balance for testing automated driving systems (ADS). Three main issues are outlined that merit immediate interest:

First, determining what kind of testing an ADS needs before it is ready to go on the road.

Second, the current, optimal and realistic balance of simulation testing and real-world testing.

Third, the challenge of sharing data in the industry.

SAE EDGE™ Research Reports are preliminary investigations of new technologies. The three technical issues identified in this report should be discussed in greater depth with the aims of, first, clarifying the scope of the industry-wide alignment needed; second, prioritizing the issues requiring resolution; and, third, creating a plan to generate the necessary frameworks, practices, and protocols.

NOTE: SAE EDGE™ Research Reports are intended to identify and illuminate key issues in emerging, but still unsettled, technologies of interest to the mobility industry. The goal of SAE EDGE™ Research Reports is to stimulate discussion and work in the hope of promoting and speeding resolution of identified issues. SAE EDGE™ Research Reports are not intended to resolve the issues they identify or close any topic to further scrutiny.

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