

## *Automated Driving in Driving Simulation*

David A Heitbrink

### **ABSTRACT**

Automated vehicles are currently an active area of research, and early models are available for purchase today. There are multiple research questions, such as drivers trust in automation, driver vigilance, and transfer of control that need to be studied to improve their safety. Driving simulation provides a natural platform to explore these issues, as it provides both experimental control and repeatability. The ability to simulate automated vehicle controllers and driver-vehicle interfaces enables this research to be conducted at centers such as the NADS. In this paper we will discuss our efforts to support the simulation of automated vehicles in the NADS-1 and NADS MiniSim platforms.

### **PRIMARY AUTHOR**

#### **BIO**

David Heitbrink is a Software Engineer at the National Advanced Driving Simulator. He is responsible for maintaining many of the software systems that run the NADS simulator, including scenario control system, scenario authoring tool set, and many other the smaller systems. He was the lead software developer on the effort to design a new Image Generator for NADS, as well a new audio subsystem a few years before that. Mr. Heitbrink received his Bachelors of Science from the University of Toledo in Computer Science and Engineering. He continued to receive is Master of Science in Engineering at the University of Toledo in the spring of 2005, after which he joined NADS.