

Research Report Summary



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Driving Simulator Use in the Roadway Design and Planning Process

National Advanced Driving Simulator: Texture Algorithm
and Tile Model Integrator Tool

Driving simulators are powerful tools to support transportation designers and highway safety evaluations through the creation of driving simulator scenarios that can be used to evaluate how existing and proposed highway facilities impact driving performance. However, scenario creation remains a lengthy and system-specific process, requiring expertise in visualization and driving simulation. Time invested in creating scenarios for a specific driving simulator provides no benefit to researchers or transportation designers who wish to run an experiment using the same scenario on a different platform.

This collaborative project between the University of Wisconsin-Madison and the University of Iowa focused on establishing a workflow to create visual models and road attributes that were compatible with two simulator platforms: the NADS MiniSim™ and RTI. A focus on core aspects of the scenario was necessary because the 3D modelling and roadway definition tasks are among the most time-consuming steps in scenario creation. Therefore, establishing a common workflow between the two simulator platforms could result in time savings and a



Texture test model



Simulation model

