Vision:

Provide the function and support our customers need to fulfill their research and development goals, while keeping the miniSim an affordable and accessible solution.

Stats:

• Over 65 simulators at 50 sites
• Over 75 user publications, reports, and theses/dissertations published to date
• Based 20 years of development at the University of Iowa
• Supported by full-time staff members
- Single PC
  - Cost Effective
  - Reliable
- Configurations
  - Desktop
  - Quarter Cab
  - Half-Cab
  - Custom
- Compatible with NADS simulators
  - NADS researchers use the same tools daily
  - On-site development and support staff
Common tools used across all NADS simulator platforms

- Integrated Scenario Authoring Tool (ISAT) for scenario authoring
- Tile Mosaic Tool (TMT) for map assembly
- nDAQtools for data reduction
Display configurations:

3 x 24” LCD

Single LCD
(size depends on application)

3 x 48” LCD
Hardware configurations:

Desktop
Simplified Cab
Quarter Cab
Wheel and pedal systems:

- ECCI Trackstar 6000
- Fanatec ClubSport V2
- SimXperience AccuForce
- Logitech G27
Custom Configurations

Mobile

Clinical

All are single PC!

Projectors – Flat Screens

Projectors – Curved Screens
Custom Simulators and Cabs

Fits 36 inch Doorway
Installation and Training

Onsite Assembly

Projector Installation

User Training
Logical Database API:
Extract road information at runtime
• Geometry
• Speed limits
• Lane Marking
• Scenario Static Objects
• Scenario Dynamic Objects

Vehicle Automation:
External control of low-level behaviors
• Transfer Control
• Lane and Speed Following
• Lane Change
• Brake to stop
• Merge/Exit
• Turn
• Pull Over
• Abort
• Transfer
• Turn-By Turn Instruction
• Driving Style

miniSim Automation Features
miniSim™ Integration Features

**Network**
- Interface with external devices, applications
- miniSim sends and receives simulator variables
- Trigger simulator events
- Supports multiple devices simultaneously
- UDP over WiFi, LAN, etc

**User-Defined Subsystem**
- Direct Read/Write to simulator shared memory

**Hardware Subsystem**
- Consolidates hardware interfaces (cabs, wheel, etc)
- Handoff of Control to selected Variables
ISAT™: Integrated Scenario Authoring Tool

GUI Interface
- No Scripting required
- Sophisticated event triggering

3 Modes
- Edit
- Rehearsal
- Playback
A Tile-Based Approach to Building Road Networks

Controllable Features

- Feature 1:
  - Null
  - House
  - Fire Station

- Feature 2:
  - Null
  - House
  - Apartment
TMT™: Tile Mosaic Tool

Includes the following:

>250 Tiles
  - Urban
  - Residential
  - Freeway
  - Rural

- Assemble your design
- Export to miniSim
Custom Tile Development

- U.S. and International
  - AASHTO
  - EU
- Replica or ‘typical’ environments
- Accurate sign fonts and color
- New and aged roadmarkings
- Many source data formats
- Extensive existing libraries
- Support for non-NADS simulators
Wrong-Way Countermeasures
Custom Tile Development Service

Customer-Supplied Data
Automated Feature Extraction
Run your carSIM® and truckSIM® vehicle models on your NADS miniSim™ driving simulator.

NADS has integrated Mechanical Simulation’s VS Solver into the miniSim, providing the capability to run your own chassis, tire, aero, and drivetrain Math models in the miniSim simulation environment.
miniSim™ now supports DI-Guy digital humans from VT MÄK.

DI-Guy creates natural-looking smooth behavior for its more than 2,000 motions and transitions.
Springfield: Anytown, USA

A Virtual Proving Ground for Automated & Connected Vehicles
Built, Tested, and Ready to Go!

Ambient Traffic

Diverse Environment
- 285 square miles
- 230 miles of roadway
- 178 intersections
- 143 traffic signals
- 1362 signs

Supports many applications
- Automation Development
- UI Testing
- Distraction
- Outreach, Education
Video Capture Option: NADS VidCap™

- Synchronized with Simulator
- Data Overlay
- 4 x Cameras
- Full HD
- AVI, MPEG4
Compatible with:

**Eyetracking Inc.**
- ✔ FOVIO
- ✔ EyeWorks
- ✔ Tobii

**Ergoneers**
- ✔ D-Lab data acquisition
- ✔ Dikalbis and Tobii

**Smart Eye**
- ✔ SmartEye Pro
- ✔ MAPPS