Nevada Center for Applied Research

NCAR

University of Nevada, Reno

Faculty / Researchers
- Grad Students
- Post-Docs
- Engineers

Industry
- Startups
- Spinouts
- Mid/Large Companies

Public Sector
- State Agencies
- Federal Agencies
- Citizens
INTELLIGENT MOBILITY

A User-Centered, Open – Innovation Living – Lab Ecosystem for Automated and Connected Vehicles in Nevada
Our Partners

Nevada Governor’s Office of Economic Development
Empowering Success

blyncsy
Moving Forward Faster

DMV
dmvnv.com

Fraunhofer IVI

PROterra

THE NATIONAL JUDICIAL COLLEGE Est. 1943

CITY OF RENO

CITY OF SPARKS Nevada

Velodyne LiDAR

NEVADA DOT

RTC

Dell EMC
ELECTRIC BUS INSTRUMENTATION

Goals
Build a sensor/computer platform that can be useful for a public transit system

Scope
Focus on sensors/computers – no automation
Providing improved situational awareness to transit agencies brings
Assess need for future automation

System
Lidar, Cameras, GPS, Computers
Dovetails with current software for autonomous car.
L4 - AUTONOMOUS CAR

Smart Localization

Innovative Path Planning

Advanced Decision Making / Social Intelligence
Mapping The Living Lab

- High-resolution maps can be used for self-driving car
- Deploy system on more public roads
- Map areas of Nevada outside of Reno
- The most detailed maps ever made of Reno area
- Make map data available to public/third parties
CONNECTED INFRASTRUCTURE

First “LiDAR Enhanced” Roads

DSRC Communication

Continuous Data

Eco-Drive and Collision Avoidance Applications

Improved Pedestrian and Bike Safety

OBJECTIVE: To analyze data, predict traffic and provide transportation-related stakeholders and end-users with solutions to optimize real-time mobility and future planning.
City of Reno Living Lab Virginia St. Corridor
SOCIOECONOMIC IMPACT

Online Survey About the Living Lab to Assess:

- Travel behavior
- Perceptions of safety and congestion
- Self-reported knowledge and familiarity of concepts/terms essential to the Living Lab
- Willingness to consider future travel by different modes
- Pedestrian or cyclist willingness to use sensor devices
- Projected future benefits of a connected corridor
- Demographic data
PART 1: Conducted a literature review of the attribution of responsibility and liability for autonomous vehicles (AVs)

PART 2: Conducted a series of focus groups involving 30 sitting judges to:
   a) assess their knowledge and experience with AVs in legal cases
   b) determine their concerns and need for training

PART 3: Symposium: How automated Vehicles will Interact with the Law and the Judiciary.
   Form Steering Committee (Agencies – Industry – Judges – Academics)
Goal: Develop a project using an autonomous vehicle test bed, a fleet of 10 electric buses and VRU safety technology to be use for the benefit of the public in Washoe.

- Use app that protects VRUs from connected vehicles.
- One AV and ten electric buses in the Living Lab will receive alerts of any pedestrian, bicyclist or motorcyclist endangered by vehicles predicted behavior.
QUESTIONS?

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