Autonomous Vehicles – Quick History Review

• The 2011 Nevada Legislation Session, SB 511 authorized the testing and operation of autonomous vehicles and required the DMV to create regulations that:

1. Define insurance requirements
2. Establish minimum safety standards
3. Provide for testing of vehicles
4. Restrict testing to specific geographic areas
The 2013 Nevada Legislation Session passed SB 313 which changed the law in the following areas.

- A $5 million insurance liability requirement.
- **NRS 482A.025** “Autonomous technology” defined. “Autonomous technology” means technology which is installed on a motor vehicle and which **has the capability to drive the motor vehicle without the active control or monitoring of a human operator**. The term **does not include** an active safety system or a system for driver assistance, including, without limitation, a system to provide electronic blind spot detection, crash avoidance, emergency braking, parking assistance, adaptive cruise control, lane keeping assistance, lane departure warning, or traffic jam and queuing assistance, unless any such system, alone or in combination with any other system, enables the vehicle on which the system is installed to be driven without the active control or monitoring of a human operator.

- The manufacturer of a motor vehicle that has been converted by a third party into an autonomous vehicle is not liable for damages to any person injured due to a defect caused by the conversion of the motor vehicle or by any equipment installed to facilitate the conversion unless the defect that caused the injury was present in the vehicle as originally manufactured.
SAFETY REQUIREMENT for Testing Autonomous Vehicles in NV:

- At least two people must be in the vehicle during any testing. One of the two must be the operator of the vehicle and at any given time be able to take full control of the steering, throttle and brake systems.
- The two testing operators must be trained in the operation of the autonomous vehicle.
- Vehicle Must have Switch to Disengage Autonomous Mode & Must be Able to Alert Driver of Tech Failure.
- Must have Mechanism to Capture and Store Technology Sensor Data for at Least 30 Seconds Prior to a Collision.
- Must have a system to safely alert the operator to take control of the vehicle if there is a technical failure.
- Affirm that the autonomous technology does not adversely affect any other safety features of the vehicle which are subject to federal regulations.
- Must submit proof to the DMV that a minimum of 10,000 Miles of Driving in Autonomous Mode has been accomplished prior to applying in Nevada.
- Insurance coverage of $5 million.
Presently, four companies are licensed to conduct such tests in Nevada:

- Google
- Continental Automotive Systems
- Volkswagen Group of America
- Delphi Labs
“G” Endorsement: Autonomous Vehicle DL

• Before operating an AV, a licensed driver must fill out and sign the Departments “G” endorsement application.

• **The application requires the driver to acknowledge that he/she is:**
  - The operator of the AV whether they are physically in the vehicle or not;
  - The responsible party who must read and understand the manual provided for their AV;
  - Required to operate their AV within the capabilities and limitations outlined in the manual.

• The Department does not want to take on the liability of training the operators in their AV since the technology will vary between manufacturers and after market companies. Nevada believes this responsibility should be on the company who created the technology and the person who purchases that vehicle.
Registering Your Autonomous Vehicles in Nevada

• What is an “Autonomous Technology Certification Facility” (ATCF) ?????

• How does this facility work with my vehicle registration????

THE CAR IS POSSESSED – IT’S DRIVING ITSELF!!!!
ATCF: After Market AV Companies

Once the owner receives their certification from the ATCF, they will submit this to the DMV in order to update their register to an autonomous vehicle.

ATCF company provides the owner with a certificate to verify it meets the safety requirements of the State.

ATCF Technicians who install the AV technology on your vehicle.

Once the owner receives their certification from the ATCF, they will submit this to the DMV in order to update their register to an autonomous vehicle.
Once the owner receives their certification from auto manufacturer or dealer, they will be submit this to the DMV in order to register their vehicle as autonomous.

Certification stating it meets the Nevada safety requirements.
Autonomous Vehicles Benefits

• **Long-term safety benefits** of Autonomous Vehicles could be staggering. The below statistics could be greatly reduced due to this technology.
  - 93% of vehicle crashes involve driver error.
  - 33,561 deaths in the U.S. (2012)
  - $277B annual economic cost
  - $871B annual societal cost

• Insurance costs may go down due to the decrease in fatalities, medical costs, and property damage.

• **Congestion relief:**
  - Americans spend 5.5B hours per year in traffic delays
  - Congestion wastes 2.9B gallons of fuel
  - Congestion causes an additional $121B in productivity losses

• Driver’s who cannot drive due to certain medical conditions may gain back some of their independence – **Fully Autonomous**.

• Businesses may be able to expand their services (taxis, trucking, etc…) – **Fully Autonomous**.
SO.....WHAT NOW???

• We have a lot to do! The jurisdictions will be looking to the AAMVA AV Best Practices Working Group for common sense standards and regulatory guidance they can adopt.

• We have an opportunity to bridge the gap between government and the industry and build a great partnership that benefits the public.

• Safety is the foundation that all parties need to stand on.
QUESTIONS? COMMENTS?

JUDE HURIN, DMV SERVICES MANAGER
MANAGEMENT SERVICES & PROGRAMS
DIVISION
NEVADA DMV
JHURIN@DMV.NV.GOV