



### Autonomous Vehicles Information Sharing Group

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#### *Mission Statement*

The Autonomous Vehicle Information Sharing Group (the group) will assist the AAMVA community by providing information that will:

- Increase the sharing group's awareness of autonomous vehicle technology as it emerges including the impacts on driver's licenses and vehicle programs, legal aspects and law enforcement, environmental factors, insurance coverage and more;
- Assist jurisdictions in determining what regulations should be in place to promote uniform regulations for autonomous vehicle technology as it relates to appropriate vehicle safety, ensuring the safety of vehicle occupants, pedestrians and other road users; and
- Assist with the development of short and long range plans within the jurisdiction's vehicle and driver programs associated with emerging autonomous vehicle technology for the vehicles, operators, manufacturers and enforcement.

#### *Background*

New technology has been developed and continues to evolve allowing vehicles to be operated with less human interaction than is required today. This technology has captured the United States and Canadian provinces and territories' attention. Several jurisdictions have proactively enacted legislation to encourage the research, development and testing of automated vehicle technology, expressly permitting the operation of these vehicles in their jurisdiction under certain conditions. A number of additional jurisdictions are considering similar legislation.

For a frame of reference, the group will use the following definitions develop by the National Highway Traffic Safety Administration (NHTSA) to classify Autonomous Vehicles. It should be noted that the Society of Automated Engineers (SAE) has also develop a classification system for autonomous vehicles which will be reviewed by the Information Sharing Group.

Level 1 – Function Specific Automation:

Automation at this level involves one or more specific control functions; if multiple functions are automated, they operate independently from each other. The driver has overall control, and is solely responsible for safe operation, but can choose to cede limited authority over a primary



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control (as in adaptive cruise control), the vehicle can automatically assume limited authority over a primary control (as in electronic stability control), or the automated system can provide added control to aid the driver in certain normal driving or crash-imminent situations (e.g., dynamic brake support in emergencies).

#### Level 2 – Combined Function Automation:

This level involves automation of at least two primary control functions designed to work in unison to relieve the driver of control of those functions. Vehicles at this level of automation can utilize shared authority when the driver cedes active primary control in certain limited driving situations. The driver is still responsible for monitoring the roadway and safe operation and is expected to be available for control at all times and on short notice. The system can relinquish control with no advance warning and the driver must be ready to control the vehicle safely.

#### Level 3 – Limited Self-Driving Automation:

Vehicles at this level of automation enable the driver to cede full control of all safety-critical functions under certain traffic or environmental conditions and in those conditions to rely heavily on the vehicle to monitor for changes in those conditions requiring transition back to driver control. The driver is expected to be available for occasional control, but with sufficiently comfortable transition time. The vehicle is designed to ensure safe operation during the automated driving mode.

#### Level 4 - Full Self-Driving Automation:

The vehicle is designed to perform all safety-critical driving functions and monitor roadway conditions for an entire trip. Such a design anticipates that the driver will provide destination or navigation input, but is not expected to be available for control at any time during the trip. This includes both occupied and unoccupied vehicles. By design, safe operation rests solely on the automated vehicle system.

#### *Scope of Work*

The group will work with the AAMVA jurisdictions, law enforcement, federal agencies and other stakeholders to gather, organize and share information with the AAMVA community related to the development, design, testing, use and regulation of autonomous vehicle technology and connected vehicle technology.



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The group will:

- Establish a single online location for collected information and share information with the AAMVA community;
- Research and gain an understanding of the impact autonomous vehicles and other emerging vehicle technology will have on the AAMVA community including the impacts on driver's licenses and vehicle programs, legal aspects and law enforcement, environmental factors, insurance coverage and more;
- Identify the potential regulatory concerns autonomous vehicle technology, described by NHTSA as level 2, 3 and level 4, will create in categories to include but not limited to; vehicle technology (both hardware and software), safety standards, manufacture testing and operation, privacy concerns, impact on law enforcement and public awareness, operator licensing, vehicle registration and title, insurance and privacy concerns.
- By June 1, 2014 establish the following three subgroups:
  1. **Website Information Library Review Subgroup** to review and approve information for the AAMVA website library.
  2. **Legal Analysis Subgroup** to provide an analysis of current laws that have addressed the regulation of autonomous vehicles.
  3. **Framework Overview Sub-group** to identify and suggest aspects of autonomous vehicles that are of concern to the AAMVA community.
- By November 1, 2014 establish a smaller, formal AAMVA *Working Group* that will develop best practices for the regulation of autonomous vehicles, in the areas described in the document. AAMVA has applied for a federal grant from NHTSA that, if approved, will be used to fund the activities of the *Working Group* for a 24 month period.
- The formal *Working Group* will meet, via conference call, periodically with the larger Information Sharing Group to provide an update on their progress, to gain input and to share information.

It is anticipated the Information Sharing Group will identify issues and organize information that will begin to prepare the AAMVA community for the changes emerging technology will introduce to the vehicle, driver and enforcement programs. The smaller, formal AAMVA *Working Group* will use the work accomplished by the Information Sharing Group as a foundation to develop best practices for the regulation of the autonomous vehicles.