

U.S. Dept. of Transportation's New Policy on Automated Vehicles Adopts SAE International's Levels of Automation for Defining Driving Automation in On-Road Motor Vehicles

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WARRENDALE, Pa. ([PRWEB](#)) September 22, 2016 -- The U.S. Department of Transportation (DoT) now uses [SAE International's](#) six levels of automation for on-road motor vehicles in its just-released "[Federal Automated Vehicles Policy](#)."

The policy was issued, in part, to speed the delivery of an initial regulatory framework and best practices to guide manufacturers and other entities in the safe design, development, testing, and deployment of highly automated vehicles (HAVs).

"SAE International is proud to be a critical part of the process leading to deployment of self-driving vehicle technology. Top automotive experts from all around the globe developed an SAE standard J3016™ - classification of driving automation levels in on-road motor vehicles," David L. Schutt, PhD, Chief Executive Officer of SAE International, said. "By adopting this standard into the NHTSA Federal Policy for safe testing and deployment of automated vehicles, SAE J3016™ becomes the core reference and a guideline for all stakeholders in this transformational technology."

SAE International's standard provides and defines the six levels of driving automation, from no automation to full automation. Consistent with industry practices, the standard helps to eliminate confusion by providing clarity and is frequently cited and referred to by industry and media.

In general, SAE J3016™ levels and definitions include:

- **Level 0 – No Automation:** The full-time performance by the human driver of all aspects of the dynamic driving task, even when enhanced by warning or intervention systems
- **Level 1 – Driver Assistance:** The driving mode-specific execution by a driver assistance system of either steering or acceleration/deceleration using information about the driving environment and with the expectation that the human driver performs all remaining aspects of the dynamic driving task
- **Level 2 – Partial Automation:** The driving mode-specific execution by one or more driver assistance systems of both steering and acceleration/deceleration using information about the driving environment and with the expectation that the human driver performs all remaining aspects of the dynamic driving task
- **Level 3 – Conditional Automation:** The driving mode-specific performance by an Automated Driving System of all aspects of the dynamic driving task with the expectation that the human driver will respond appropriately to a request to intervene
- **Level 4 – High Automation:** The driving mode-specific performance by an Automated Driving System of all

aspects of the dynamic driving task, even if a human driver does not respond appropriately to a request to intervene

- Level 5 – Full Automation: The full-time performance by an Automated Driving System of all aspects of the dynamic driving task under all roadway and environmental conditions that can be managed by a human driver

Jack Pokrzywa, Director of Ground Vehicle Standards for SAE International, said the work of developing such critical industry standards is ongoing for SAE. “Stay tuned as our technical committees continue work on an extensive portfolio of standards related to all levels of driving automation including full driving automation incorporating architecture and interfaces, interoperability, communication, and cyber security.”

Barbara Wendling, sponsor of the J3016™ Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles document and chair of the On Road Automated Driving Definitions task force, added that the diligent work of the committee members helped make the adoption by the U.S. DoT possible.

“We were very fortunate to have an outstanding task force membership that includes deep experts in law and regulation, as well as automated driving technology design and development,” Wendling said.

The levels referenced are outlined in SAE J3016™: [Taxonomy and Definitions for Terms Related to On-Road Motor Vehicle Automated Driving Systems](#).

Recognizing the international importance of this standard, SAE International will offer the upcoming revised edition of J3016™ license free to enable wide adoption by global, regional, and local legislatures to expedite deployment of self-driving technologies.

Media may request a review copy of the standard by emailing [pr\(at\)sae\(dot\)org](mailto:pr(at)sae(dot)org) or calling 1-724-772-8522.

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