

DRIVERLESS CARS:

Florida's Technological Future



By Thornton J. Williams, Williams McMillian PA

Florida has now become the second state in the US, with Nevada being the first, to allow for the testing of self-driving cars.

So what exactly are autonomous cars and what purpose do they serve?

An autonomous car, also known as robotic, driverless or self-driving car, is a vehicle capable of fulfilling the human transportation capabilities of a traditional car and is capable of sensing its environment and navigating on its own. Utilizing such techniques as laser, radar, lidar, GPS and computer vision, advanced control systems interpret the information to identify appropriate navigation paths, as well as obstacles and relevant signage. The Nevada law defines an autonomous vehicle “to mean a motor vehicle that uses artificial intelligence, sensors and global positioning system coordinates to drive itself without the active intervention of a human operator.”

While autonomous cars are not currently in widespread use, since 2005 with BMW, many automotive manufacturers such as General Motors, Ford, Mercedes-Benz, Volkswagen, Audi, Volvo, and Cadillac have begun testing driverless car systems. Additionally, Google is now at the forefront of making this technology a reality with the company's fleet of self-driving Prius hybrids.

Several advantages have been linked to these technologically advanced automobiles, including:

- Reduced rates of crashes and motor vehicle fatalities and safer streets due to increased reliability versus human driving errors;
- Increased roadway capacity and reduction of traffic congestion due to reduced need of safety gaps;
- Increased optimization of time due to autonomous cars ability to locate faster routes and avoid traffic congestions;
- Reduced air pollution and oil consumption due to better manage traffic flow and the removal of unnecessary safety features;
- Relief of vehicle occupants from driving and navigation chores;
- Reduced violations of traffic laws;
- Reduced need for road signage (autonomous cars could receive necessary communication electronically).

The biggest obstacle to the proliferation of autonomous cars is the fact that they are currently illegal on most public roadways. Some disadvantages cited include the fact that the research on these cars are not fully developed yet

and the system may randomly crash. Additionally, completely autonomous systems raise thorny questions about safety and liability.

Likewise, new laws would be required if autonomous vehicles are to become a reality. For example governments and manufacturers would have to decide how to handle speed limits. Today, many localities set speed limits knowing most people speed. With this new technology, would drivers be able to choose their speed, or would cars be required to travel the actual speed limit? Additional issues that arise include liability concerns and how to insure them; how to make them affordable for public use; and how to integrate them with traditional cars on the roadway.

With Nevada's legalization of self-driving cars on their roadways for testing, Nevada became the first jurisdiction in the world where autonomous vehicles might be legally operated on public roads. The bill was signed into law by Nevada's Governor on June 16, 2011. The law went into effect on March 1, 2012. The Nevada Department of Motor Vehicles subsequently issued its first license for a self-driven car in May 2012 for a Toyota Prius modified with Google's experimental driverless technology.

Now Florida on the heels of this legislation, has become the second state to pass a bill allowing tests of self-driving cars. Florida's bill, HB 1207, sponsored by Representatives Jeff Brandes and Corcoran, provides for operation of autonomous motor vehicles on public roads; directs the state Department of Highway Safety and Motor Vehicles (DHSMV) to prepare a report on safe operation of such vehicles; and calls the DHSMV to submit a report to legislators by February 2014 detailing additional legislative action needed. The bill was subsequently approved and signed by Governor Rick Scott on April 13, 2012.

As of 2012, Hawaii, Oklahoma and California are also considering the legalization of autonomous cars. In fact, as of October 2010, Google, with a test fleet of autonomous vehicles, has already logged 140,000 miles reportedly in California.

In conclusion, autonomous car technology is one of the most exciting, transformative technologies under development right now. Its benefits to the future of our roadways in terms of mitigating pollution, reducing road congestion, increasing safety, and potentially reducing US dependence on oil, are all factors for bringing this technology to the state.

However, we must also fully vet the potential risks associated with any new technology being introduced into society. It was reported in August 2011, that a Google driverless Toyota Prius allegedly caused a five-car collision near the search giant's Mountain View Googleplex headquarters. While Google maintains that there was a human behind the wheel of the Google-customized Toyota Prius which allegedly instigated the incident, this accident raises a lot of concerns such as negligence and liability that must first be addressed before this new technology truly becomes viable. ■

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