ARE WE READY FOR SELF-DRIVING CARS?

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† INTRODUCTION

On September 25, 2012, California Governor Edmund ‘Jerry’ Brown signed into law a bill that allows the operation of an autonomous or ‘self-driving’ vehicle on California streets for testing purposes. So, what is an autonomous vehicle? According to the California Legislature, an autonomous vehicle is one with “technology that, through the use of computers, sensors, and other systems, permits a motor vehicle to operate without the active control and continuous monitoring of a human operator.” This article will explore the early stages of the self-driving car and look at some possible insurance issues that may arise.

† THE GOOGLE EXPERIMENT AND DARPA

Now that there is legislation, most of us wonder why they have it and why we need it. This story starts with a name familiar to us all: Google. That’s right; not an auto manufacturer, but a software developer and innovator. In 2005, Google established a team of engineers led by Sebastian Thrun. He is the director of the Artificial Intelligence Laboratory at Stanford University and perhaps is most famous for his role as co-inventor of Google Street View. Thrun and his team of engineers developed a robotic vehicle that won a contest sponsored by the Defense Advanced Research Projects Agency (DARPA).

DARPA is a wing of the U.S. Department of Defense with a budget approaching $3 billion and is tasked with development of new technologies for military use. While that sounds a bit ominous, there are often benefits to society beyond military operations when new technologies are discovered. It is DARPA that was responsible for inventing the military communication network we know today as the Internet. While opinions vary as to whether the Internet is a good or a bad thing, almost everyone uses it in their daily personal and business lives. Will the self-driving car be as successful as the Internet? Will our ability to drive a car be as useful to us as knowing how to use a slide rule?

According to several sources, Google now has a fleet of more than a dozen self-driving vehicles. Google believes that self-driving cars can make driving more efficient and safer by eliminating distracted driving and other human error. More than 30,000 people are killed each year in auto collisions. Google would like to bring that number to zero. Google claims the self-driving vehicles have traveled more than 300,000 miles accident free. There is, however, admis-
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ards, fuel-economy standards, vehicle-identification standards, bumper standards, safety standards and anti-theft standards, along with a host of other standards. In fact, on the NHTSA website, the following statement appears: “The complete text of all Federal Motor Vehicle Safety Standards and other NHTSA regulations can be found in Title 49 of the Code of Federal Regulations (CFR). Title 49 of the CFR is published in seven volumes.”¹ Seven volumes seems like a lot to me. And we have not even reached the issue of who can drive a vehicle or what happens when a vehicle is involved in an accident.

State motor vehicle administrators have many state laws and regulations to enforce in regard to who is eligible to drive a vehicle, how to become licensed as a driver, how vehicles are titled and how titles are exchanged when a vehicle is sold.

State insurance codes have much to say about vehicle operation. Each state has a unique auto reparation system that specifies who is financially responsible if an accident occurs. The state laws will specify the court system used, the type of negligence law that applies and the mandatory insurance coverage that must be included or offered.

In addition to California, two other states (Florida and Nevada) have passed laws permitting self-driving cars for testing purposes, although only with a human passenger along as a safety measure. These states are ahead of the curve, having already passed legislation governing their use on public streets. However, new laws will have to be written to address the complex legal issues as these vehicles move from prototype to product. According to The New York Times, “the technology is now advancing so quickly that it is in danger of outstripping existing law, some of which dates back to the era of horse-drawn carriages.”²

The insurance issues are just as complex as the legal issues. What happens if a self-driving car gets into an accident? Who is liable for the damages? Will the human “co-pilot” be at fault or will the car’s manufacturer? The vast majority of accidents are currently caused by the driver and the manufacturer’s liability is small. With self-driving cars, the number of accidents should decline significantly, but the manufacturers’ risk of liability may increase. A balance will have to be reached so that consumers do not shy away from buying these vehicles and manufacturers do not avoid the sector.

What about underwriting? What will the auto policy say about the ‘driver’ of a self-driving car? Auto policies are written with the assumption that cars are driven by people, and most of the states require insurers to set rates based on the insured person’s driving history. What happens when a machine is doing the driving? With self-driving cars, the entire underwriting process will need to be revamped.

There are numerous questions that will need to be addressed before such vehicles take the road. Will the ‘driver’ have to maintain a constant vigil on the road ahead at all times? What are they allowed to do inside the vehicle? Can they drink? Can they nap, read a book or text message while the car does all the navigating? Will they even need a driver’s license?

* SUMMARY
When signing the bill that allows self-driving cars on California’s roads, Governor Brown said, “We are looking at science fiction becoming reality in a self-driving car.” Although self-driving cars are still in the experimental phase, cars are inching closer to a Jetsons-like world where drivers may no longer have to drive. Automakers are taking incremental steps toward producing fully autonomous vehicles. At the 2013 Consumer Electronics Show, Audi unveiled a car that could park itself in a garage after dropping you off. In addition, several manufacturers have recently announced they will soon offer models that will come with ‘Traffic Jam Assist’ technology, which will allow the car to drive itself in heavy traffic.

The U.S. Institute of Electrical and Electronics Engineers, Inc., predicts that 75% of cars on the roads in the world in 2040 will be self-driving and that the people operating them will not need a license. As excitement and momentum for self-driving cars grows, there is, however, a long list of safety, legal and insurance issues to iron out before these vehicles can roam the roads in the near future.

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