

AMERICAN SOCIETY OF SAFETY ENGINEERS NORTH FLORIDA CHAPTER

APRIL 2016 NEWSLETTER

What Would the Jetsons Think?

The problem of distracted driving in America is widespread and is likely not going away anytime soon. Despite a growing number of cellphone bans and public awareness campaigns, people still get hurt and killed on U. S. roads every day. And don't forget about drunk driving, road rage, and just plain bad driving.

Arguably, traditional methods of addressing distracted driving have fallen short of solving the problem. Likely, the same could be said for the war on drunk driving and road rage. And those who just can't get the hang of driving and shouldn't be on the road at all, well, that's a whole other discussion. So, what to do? Interestingly, a recent article in *Time* magazine may just have the solution to this multi-faceted, enigmatic problem; or not.

According to the March 2016 *Time* article entitled *Why You Shouldn't Be Allowed to Drive*, car makers from General Motors to Mercedes-Benz have pledged to manufacture and sell autonomous vehicles in the very near future. And according to

the *Time* article, these autonomously-driven vehicles are safer than human-driven vehicles. The article goes on to point out that computers that run autonomous vehicles are simply better at driving than humans are. They are, reportedly, also better at keeping their eyes on the road, maintaining a safe cruising speed, utilizing GPS data, and making rapid-fire adjustments. On top of all of that, computers don't get distracted; they don't attempt to put on makeup, shave, or eat while driving; and they don't try to drive with their knees.

Mr. Matt Vella, the article's author, tells us that autonomous vehicles are going to change everything; the safety and economic effects will be astounding; and the moral and legal challenges will be quite obstinate. Mr. Vella reminds us that apparently there is no right to drive automobiles within the U. S. Constitution. Try telling that to the more than 200 million drivers in our country. But since the gulf between humans and machines is so wide, and will apparently get wider, the next step after making driverless cars legal will be to make them

mandatory. Mr. Vella points out that today we generally pay a higher insurance premium to drive a flashy and fast roadster versus a minivan. But in the future, he predicts, we'll pay a huge premium for the privilege of driving at all.

Mr. Vella reminds us that there are six million car accidents in America each year; approximately 33,000 fatalities and two million injuries result from them. And according to the National Highway Traffic Safety Administration, 94 percent of road accidents are the fault of drivers. To put an abrupt end to all of this mayhem will, according to Mr. Vella, require taking human drivers out of the equation. He goes on to tell us that this concept is becoming reality with incredible speed. In 2004, when our government funded the first international competition for autonomous vehicles, not one vehicle completed the 150-mile course. Today, reportedly, Google's self-driven test vehicles have logged more than 1.4 million miles on public roads, all with no significant accidents. This is equivalent to approximately 100

years of driving for the average driver.

According to a 2013 study conducted by the nonprofit group Eno Center for Transportation, converting a mere ten percent of the vehicles currently on U. S. roads to autonomous vehicles could reduce the number of accidents each year by 211,000 and save 1,100 human lives. Converting 90 percent to autonomous vehicles could reduce the number of accidents each year by 4.2 million, saving 21,700 human lives.

So with all of these groundbreaking innovations, what could be on the list of possible challenges? For starters, think of how many times your laptop has locked up in the last 30 days. Now think of the ramifications of just one computer lockup in an autonomous vehicle moving at 65 miles per hour. What if by chance the autonomous vehicle's backup computer refused to simultaneously engage as its main computer was blowing a gasket? And just think, all of this is happening because you had not updated its operating system just like your iPhone tells you to do on a constant basis. Now think for a moment of the moral dilemmas that could arise. For example, an autonomous vehicle is traveling through a

neighborhood when a boy runs into the road directly right in front of it to fetch a ball. Does the onboard computer tell the car to swerve to miss the child, thereby running into a utility pole? Or does it strike the child and spare the driver? And who would the attorney, or group of attorneys, go after in either scenario? Would it be the vehicle's owner? Would it be the vehicle's manufacturer? Or would it be the person who coded the operating system? The list of challenges is currently very long. But many smart people are working on them and they will be, eventually, overcome.

In closing, Chris Urmson, who leads Google's self-driving car program and is an adjunct professor at Carnegie Mellon University, sums up the current situation by saying "I think we can make vehicles that are better than human-driven vehicles, but something that won't fail is just an impossibility." Obviously, Mr. Urmson is familiar with Murphy's Law. But going back to the title of this article for just a moment, what would the Jetsons think of all of this? Back in 1962 when the first episode aired, George Jetson knew that vehicles could fly, but not by themselves. We've come a very long way. Or have we?

Bob Dooley



Photo Source:
<http://freshome.com/2013/03/22/what-you-can-learn-from-the-jetsons-about-home-automation/>

Article Sources and Hyperlinks of Interest

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<http://www.popularmechanics.com/cars/a9541/the-12-most-important-questions-about-self-driving-cars-16016418/>

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ASSE Local Chapter Meeting Schedule

April 27 - Worker's Memorial Day, 10:00 a.m. until noon at FSCJ Downtown Campus

May 18 – Fall Protection, Riverside YMCA

Please RSVP to Steve Wilson at steven_wilson1@me.com.