

Mercedes Benz has better 'driverless' car solution than Google...for now

☒ In the United States there are many companies, especially Google, which have been experimenting with self-driving or 'driverless' cars. As someone who loves to drive and who prefers old style manual transmissions and unassisted steering, the idea of technology that makes a mockery of the skill and pride of driving a car is rather bittersweet. In fact it is very bitter and not at all sweet. Therefore, my first thoughts steered clear from praise and wonder and were rather more pointed toward the problems and implications of the self-driving car. The legal implications of this project are in fact huge and not surprisingly, only California, Florida and Nevada have given Google permission to test their driver less vehicles – despite there always having to be the an actual human person with a driver's license present in the vehicle.

The proud human driver in me, who has to fork out several hundreds of dollars in insurance every year, promptly discovered a safety flaw in driverless technology. Surely, Google boasts that it would reduce road accidents due to driver distraction by 80% thanks to computers that are always paying attention to the road. But aren't computers also known for 'crashing', for being hacked? And more practically, will the auto insurance companies be able to trust a computer? In the event of an accident who would be responsible: Google or the car owner? Despite the progress made by Google to make autonomous vehicles, there are many who believe that two decades will pass before we see entirely self-driving vehicles on our roads. Even if the technology is already available, there are too many legal and regulatory concerns to confront.

The US Department of Transportation has already issued a non-binding recommendation that driverless cars should not be allowed, except for testing purposes. Therefore, what the next few years will bring are individual components of the technology rather than the whole driverless package at once. The market will promote the semi-autonomous car rather than the fully autonomous one featuring such devices as cruise control with adjusting the speed according to the position of the vehicle that precedes it, traction control, keeping lane assist, emergency braking. Mercedes Benz rather than Google has the most suitable driverless technology for the current market; it will also please the insurance companies. Compared to the high level of automation of Google's Driverless Car proposition, where the human element is ostracized, Mercedes Benz, backed by its partner Ars Electronica Futurelab, has delivered as driverless a car as the market will allow and you may order it today at your nearest dealership. The 2014 Mercedes S Class still needs a human driver but it is equipped with a range of ancillary features that make the task of driving vastly easier aimed at comfort and safety, while keeping intact the pleasure of driving.

Just as humans need eyesight to drive (perhaps cars for the blind will be possible with driverless technology), the key elements needed for driverless technology are cameras that analyze and recognize obstacles around the vehicle. These cameras should also be able to distinguish pedestrians, animals, traffic lights and so on. Mercedes, for example, has recently developed and adopted on the new S-Class Coupe a system that distinguishes between pedestrians and animals. Radars are also needed to keep track of the relative position and the relative velocity. However, a human brain's ability of the human brain (or at least mine and those of a select few...) to analyze a scenario and determine the best driving maneuver to confront it is not reproducible by computers. Human minds rely on imagination to deal with different situations; computers require pre-recorded instructions, which may not

always be able to handle the problem at hand.

Mercedes and Nokia are developing a detailed map that allows the computer to know in advance the so-called environment (the environment), and then record only the data related to moving obstacles while storing elements such as traffic lights, pedestrian crossings, traffic signs, light poles, trees and so on a virtual map, with an accuracy of one meter. Yet this has not compensated for complications such as the need for signaling or of handling changes to the road – in other words it would fail miserably in the traffic nightmare of road closures caused by parades and construction during the Toronto summer.

Driverless technology will give rare earth metals an even greater role in automobile design than at present. Lanthanum and terbium will be needed to make camera lenses and sonar systems as will ytterbium and neodymium for lasers and radar devices. Many of these metals will be required now to operate the various automated driving components that are already being introduced and demand can only increase.