

# SMART DRIVING CARS



[http://smartdrivingcar.com/5.2-DoA\\_DSRC-021017](http://smartdrivingcar.com/5.2-DoA_DSRC-021017)

2nd edition of the 5th year of SmartDrivingCars

Friday, February 10, 2017

**Bloomberg  
BNA**

## Regulatory Chill May Pivot Connected Vehicle Tech's Course

M. Ross, Feb 8, "Technology and telecommunications groups opposed to a federal mandate that cars automatically communicate with each other are hoping the proposal is an early victim of President Donald Trump's regulatory clampdown.

The Department of Transportation rushed to publish a draft rule in the final days of the Obama administration that would mandate all new cars and light trucks be equipped to transmit data to other vehicles to warn their drivers of potential collisions. The department and automobile manufacturers have been laying the groundwork for such a rule for more than a decade, with **millions of dollars** in testing indicating that the radio-based technology could **immediately** save lives. *No, that's its fundamental flaw. Even if you have it, it can't do you any good unless the other guy has it. Thus it can't do anything immediately* ...The draft rule could save up to 1,365 lives each year by 2060. *Immediately??? I'll surely be dead and gone. All that money spent to get such a finding.*

....The total annual costs to comply with the mandate 30 years after the rule's launch range from \$2.2 billion to \$5 billion, according to 2016 NHTSA data. Consumers can expect to pay about an extra \$300 per vehicle equipped with DSRC technology, the data show. *That's a lot of 'good money to be thrown after bad'. Let's spend Billions to justify our Millions in sunk costs? Much worse than 'doubling down'* ...Meanwhile, artificial intelligence, camera technology, sensors and radar, which are already being used in autonomous vehicle development, improve vehicle safety and don't require cars to be connected to each other, Paul Brubaker, president and CEO of the Alliance for Transportation Innovation,..."

Read more *Hmmm... Not 'Regulatory Chill' but simply Common Sense. C'mon Man! I'm on the AV side of this one. V2V is fine on top of AV, but staying on the DSRC bandwagon is silly when it will be completely obsolesced by 5G before it has sufficient penetration to be better than 'a hope & a prayer' in avoiding crashes. V2V requires both vehicles to have the technology. The chance that both cars can even talk to each other, let alone know what to do and do what is needed, to*

*avoid a crash is the product of the adoption percentage of DSRC. So, a mandate today, that pertains only to having DSRC in new cars, will be lucky to be in 30% of the cars by 2025. Thus, the chance that DSRC is even relevant in an impending crash is  $0.3 \times 0.3 = 0.09$ . Meaning that there is only about a 10% (1 in 10) chance that DSRC is even relevant in averting a crash. It simply takes a long time to replace the cars that are on the road today with new ones. However, many of us replace our phones with the latest and greatest [much more quickly](#), so that by 2025 it is not unreasonable that as many as 70% of drivers will have 5G phones. The chance that these phones will have the opportunity to be a relevant V2V device in averting a crash is  $0.7 \times 0.7 = 0.49$ . Which road should we go down... DSRC mandate giving us at best a 1 in 10 chance of being relevant in 2025 (and we still need AV to perform the avoidance of the crash) or wait and piggy back on our 5G device that gives us a 1 in 2 chance in 2025 at no additional cost because we will have purchased it for other reasons. Alain*

**PR Newswire**

### [Five More Cities Join Bloomberg Philanthropies And The Aspen Institute's Global Initiative On Autonomous Vehicles](#)

Press Release, Jan 9, "Bloomberg Philanthropies and the Aspen Institute announced today that five cities have joined its global initiative to help city leaders plan and prepare for the emergence of autonomous vehicles. The cities of Helsinki, Finland; London, England; São Paulo, Brazil; Tel Aviv, Israel and Washington, D.C., USA will join the inaugural participants of the Bloomberg Aspen Initiative on Cities and Autonomous Vehicles announced last fall. Over the course of the next year, the multi-city cohort will produce a set of principles and tools that cities around the world can use to chart their own paths forward with the new technology. At the 2017 North American International Auto Show, philanthropist and three-term New York City Mayor Michael R. Bloomberg said today, "The autonomous vehicle revolution is here - and by examining the opportunities and challenges, mayors can lead the way in adopting policies that benefit citizens and communities. We're excited to welcome five new international cities to our initiative, and we are glad to have the active participation of auto companies. Together, we can help shape the future of transportation." ...[Read more](#) *Hmmm... Really Important! Kudos to the Mayor and Walter. Alain*

**CHINADAILY**

### [China to build world's largest autonomous driving testing zone](#)

L. Fusheng, Jan 16, "The city of Zhangzhou, Fujian province, is planning to build the world's largest experimental zone for autonomous driving. The project, which was signed on Dec 15 in Beijing, will be constructed in a 56-square-km zone in the city's economic and technological development area to enable testing of autonomous cars in a city-level lab road network with complete traffic signs. It will also cover a 600,000-square-meter closed testing ground and a two-million-square-meter open experimental field...the China Merchants Group, Frontt Capital and the CRI Intelligent Auto Research Institute have decided to set up an initial fund of 10 billion yuan (US\$1.5B) for the project. Mcity will offer technological suggestions to the project. Mcity is a test facility for evaluating the capabilities of connected and automated vehicles and systems built by the University of Michigan and the Michigan Department of Transportation. [Read more](#) *Hmmm... That is a non-trivial fund. If true, and given what we've pledged to such activities, we're going to get **crushed!***

*I sure hope U of M and MDoT are getting properly rewarded for their 'technological suggestions'. (I'm sorry! I got carried away. This is an 'all for one and one for all' cooperative global effort without trade barriers or 'jobs' implications.) Alain*

## **Forbes** [Waymo Is Crushing The Field In Driverless Cars](#)

Chunk Mui, Feb 8, "Imagine if you could pick between Uber drivers based on their driving experience. Would you hire an experienced driver who has logged hundreds of thousands of road miles or one who has driven just a few hundred miles? I'll bet you'd go with the experienced driver. Now apply the same question to driverless cars. How would you pick? The same logic applies: Go with experience.

As with human drivers, experience matters for driverless capabilities. That's because the deep learning AI techniques used to train driverless cars depend on data—especially data that illuminates rare and dangerous “edge cases.” The more training data, the more confidence you can have in the results....In 2016, Waymo logged more than 635,000 miles while testing its autonomous vehicles on California's public roads compared to just over 20,000 for all its competitors combined. ...

As the W. Edwards Deming principle that is popular in Silicon Valley goes, “In God we trust, all others bring data.” The data shows that Waymo is not only 615,000 miles ahead of its competitors but that those competitors are still neophytes when it comes to proving their technology on real roads and interacting with unpredictable elements such as infrastructure, traffic and human drivers. ...Waymo also leads the others in terms of fewer “disengagements,” which refers to when human test drivers have to retake control from the driverless software. Waymo's test drivers had to disengage 124 times, or about once every 5,000 miles... *enormously impressive!*...it is clear from the California DMV reports that Waymo is way ahead on the driverless learning curve. [Read more](#) *Hmmm... Chunka, as usual, excellent article! Alain*

## **NorthJersey.com** [Safety group urges states not to rush on self-driving car regulations](#)

J. Cichowski, Feb 7. "Though safety potential for self-driving cars is 'tremendous,' governors group asks states to first educate a skeptical public...." [Read more](#) *Hmmm... Yup. :-)* *Alain*

## **The Atlantic** [Unsafe at Any Speed](#)

J. Pelini, March 2017, "The case against human drivers.. .Driverless cars are looking better and better: They won't text with each other, or get angry. They won't play Grand Theft Auto in their off-hours. And they won't cut you off just for the hell of it. Even if they're BMWs..." [Read more](#) *Hmmm... Good article! Alain*

## **Market Realist** [When Will Nvidia See Revenue from Autonomous Cars?](#)

P. Tanner, Feb 6, "Nvidia (NVDA) is set to report strong revenue growth in the data center space as its Tesla GPUs (graphics processing units) make their way into servers and supercomputers. Another segment where Nvidia is hitting the road is in automotive.

Nvidia's Automotive segment has been reporting sequential growth since fiscal 3Q16 as in-car electronics increase. The segment has reported sequential growth as high as 21.5% in fiscal 1Q17, and in fiscal 3Q17, Automotive revenues rose 7% quarter-over-quarter to \$127 million, driven by strong demand for premium infotainment and digital cockpit features in mainstream cars...." [Read more](#) *Hmmm...OK Alain*



### [Self-driving cars could actually increase congestion on Danish roads](#)

Ray W, Feb 3, "...A new study from the Danish Road Directorate has suggested that the driverless vehicles will eventually be so popular that any space freed up would quickly be filled with – wait for it – more cars. By the time all cars in Denmark are self-driving, traffic could actually increase by 14 percent across the country, and even more in metropolitan areas...." [Read more](#) *Hmmm...I couldn't find the actual study. Please forward link... Anyway, it doesn't take a study to expect that Self-driving cars will increase congestion. They'll substantially reduce the dis-utility of travel and as such will increase VMT (VehicleMilesTraveled) since there is essentially no mechanism for ridesharing with personal ownership of Self-driving cars. Plus 'the ability to ride closer' has always been a myth (until market penetration is almost universal (which wont happen soon) and Putin is in control of all of these self-driving cars that we own and cherish). Also, today we drive too close in congested conditions.*

*Driverless cars do give us an opportunity to address congestion because they'll be fleet owned and managed, and they can accommodate shared-riding if we accept/tolerate/embrace it. The PMT (PersonalMilesTraveled) can go up while VMT goes down. Driverless gives us the opportunity to have our 'cake' and 'eat it too'! Alain*

## UBER

### [Uber and Daimler Join Forces on Self-Driving Cars](#)

T. Kalanick, Press release, Jan 31, "I'm excited to announce an agreement with Daimler, one of the world's top auto manufacturers with more than a century of experience designing some of the world's best and most iconic vehicles. In the coming years, Daimler has planned to introduce and operate their own self-driving cars on Uber's ridesharing network.

We are incredibly excited by the potential for self-driving cars to further our mission of bringing reliable transportation to everyone, everywhere. They will also help to reduce traffic accidents, which today kill many people a year; free up the huge amount of space currently used to park the world's billion-plus cars; and cut congestion, which is choking our cities...." [Read more](#) *Hmmm... Volvo, Daimler, .... Still just Self-driving, but we know Uber must get to Driverless. Nice progress. Alain*



### [Driver in fatal Tesla crash had blood alcohol nearly 3 times legal limit](#)

B. Raven, Feb 8, "The driver in a double-fatal crash of a Tesla had a blood-alcohol content measurement of 0.21 percent at the time her car crashed and burned in Indianapolis in November 2016...."However, had Autopilot been engaged it would have limited the vehicle's

speed to less than 35 mph on this street, which is inconsistent with witness statements and the damage sustained." [Read more](#) *Hmmm... Maybe AutoPilot should be on all the time and until Teslas become Driverless, have a sensor to not start at all if the driver is over the limit. We seem not to be able to not be stupid. Alain*



### [Watch Cruise's self-driving Bolt EV navigate smoothly to SF's Dolores Park](#)

D. Etherington, Feb 8, "The video includes a handy on-screen indicator showing when it's in autonomous mode, which appears to be throughout the entire course of the sped up footage. Kyle Vogt, Cruise CEO, provided the following statement about the conditions of the drive in an emailed statement:

This video was captured from one of our autonomous vehicles during a series of back to back test rides. No advance planning was done, and this was captured in a single take. The operator selected a random destination using the Cruise mobile app, pushed a button, and the vehicle started moving. Rides like this occur hundreds of times per day across our test fleets.

The point Vogt is making is that this Cruise demo video shows real-world capabilities, in unpredictable circumstances. Of course, GM still gets to choose what videos it release, but that's still impressive ..." [Read more](#) *Hmmm... Agreed. It is impressive. Congratulations. Alain*



### [Google Maps engineer who pioneered Street View is now working for Lyft](#)

A. Hawkings, Feb 9, "Luc Vincent, senior director of engineering at Google, has been hired by Lyft to lead the ride-hail company's maps and marketplace division. He is the latest Google Maps engineer to migrate to the world of ride-sharing, where many companies are staffing up their mapping divisions in the interest of making the art of connecting rider and driver as precise as possible. While at the search giant, Vincent helped pioneer Google Maps' wildly popular Street View, which provides panoramic views of many of the world's roads. At Lyft, Vincent said he will be helping the ride-hail company "rethink" transportation. That includes improving dispatch, pick-ups and drop-offs, and helping drivers get to where they need to go more precisely. ...Vincent is a major score for Lyft, considering many of Google's engineering experts have gone to work for Uber. A few weeks ago, Amit Singhal, the former Google engineer who helped perfect the search engine's ranking algorithm, went to work for Uber as senior vice president of engineering. He joined Manik Gupta, the former head of Google Maps product division, and Brian McClendon, who once ran Google's entire mapping division. It comes at the same time that Uber is pumping \$500 million into building a map of the entire world, a crucial step toward using autonomous vehicles. [Read more](#) *Hmmm... Very interesting. Alain*

## Reader's Comments..



### with respect to my comment in the previous issue:

*Hmmm... Some nice ideas; however, Google/Alphabet/Waymo may just offer it for free and have its advertisers pay to have the opportunity to secure your undivided attention to buy stuff during the ride. Hmmm... Steffen Bartschat wrote: "With advertising revenue for Facebook and Google estimated to be in the range of \$100 per user per year in the US, I don't see how an advertising revenue model can work to support building, operating, and maintaining an unlimited private transportation service, even if the value of those captive eyeballs increases by an order of magnitude." Hmmm... Steffen, excellent point! I stand corrected. Advertising aren't that great. Thank you! Alain*

## Some other thoughts that deserve your attention



### Inside the Bugatti factory: an exclusive look at the making of the \$2.6 million Chiron

T Warren, Feb 9, "It takes a team of 20 people six months to assemble..." [Read more](#) *Hmmm... Just for fun :-)* Alain

### On the More Technical Side

<http://orfe.princeton.edu/~alaink/SmartDrivingCars/Papers/>

## Half-baked stuff that probably doesn't deserve your time



### Udacity open sources its self-driving car simulator for anyone to use

D. Etherington, Feb 8, "Self-driving cars require self-driving car software, and Udacity's helping to feed that need with its nanodegree program in the field. Now, the online education company is also making available its self-driving car simulator via open source license, allowing anyone with a working knowledge of Unity to grab the assets, load its preexisting scenes and create their own tracks for virtual testing..." [Read more](#) *Hmmm... So UNFORTUNATE!! Totally the wrong focus/tool for SmartDrivingCars. The simulator is that of a test track, on which, I assume, self-driving cars can learn to go fast. So NOT the objective of a simulator or a test track! The focus needs to be SAFETY in traveling between places people actually want to go to and from at rational speeds. Only in Fantasy Land is this simulator of any value. It is even worth less than GTA5. At least GTA5 allows one to construct relevant driving scenes involving people, bicycles, intersections, traffic control devices and signs, approaching traffic, weather effects, etc. I thought Udacity wanted to be taken seriously in this space. Please don't waste your time on this distraction. Alain*