

SMART DRIVING CARS

<http://smartdrivingcar.com/Another-071416>

[Thursday, July 14, 2016](#)



[Another Tesla crash blamed on car's Autopilot system](#)

S. Musil, July 12, "The most recent crash involved a Model X near the small town of Whitehall, Montana, on Sunday morning, according to the [Detroit Free Press](#). Neither the driver nor the passenger was injured in the single-vehicle crash, the Montana Highway Patrol told the newspaper....The car failed to detect an obstacle in the road, according to a [thread posted](#) on the Tesla Motors Club forum by someone who said they're a friend of the driver. The thread included photos showing the damage to the vehicle.

Tesla said Tuesday that it appears the driver in the crash was using the system improperly.

"The data suggests that the driver's hands were not on the steering wheel, as no force was detected on the steering wheel for over 2 minutes after autosteer was engaged (even a very small amount of force, such as one hand resting on the wheel, will be detected)," a Tesla spokesman said in a statement. "This is contrary to the terms of use that are agreed to when enabling the feature and the notification presented in the instrument cluster each time it is activated.

"As road conditions became increasingly uncertain, the vehicle again alerted the driver to put his hands on the wheel. He did not do so and shortly thereafter the vehicle collided with a post on the edge of the roadway," the spokesman said. He added that the Autopilot feature was being used on an undivided mountain road despite being designed for use on a divided highway in slow-moving traffic....[Read more](#) *Hmmm....Interesting that Tesla didn't say that the car began to slow down (as it is supposed to if the driver does not put his/her hand back on the wheel!!!!???? (The "lane-centering" should NOT turn off if the driver does not respond (I believe the Mercedes "997 package" turns off lane-centering if you don't respond to the buzzer :-((However, since the lane centering on my 2014 S-550 only works if the lane is essentially perfectly straight, and Mercedes has never made an effort to fix/update my software, I rarely take my hands off the wheel. The system is so poor that I can't tell if lane-centering is just not working or the buzzer turned it off. :-()), What should happen is that the car should turn on its emergency flashers, slow down at a rate that is proportional to the quality of the road conditions and once it reaches a slow enough speed have the capability to determine if a lane change to the right (in US and ...) is safe or a clear shoulder to the right is available. If so, make the lane change and come to a complete stop, all the while announcing to the driver what the*

system is doing because hands have not been put back on the wheel. After stopping, "AutoPilot" should then turned off as should "AutoPilot" privileges until a "Tesla" representative resets the system. If that doesn't convince the driver to put "hands-on-wheel", then the car has just averted a possible catastrophe associated with a comatose driver. Alain

NHTSA

NATIONAL HIGHWAY TRAFFIC
SAFETY ADMINISTRATION

[July 8 Letter to Tesla](#)

J. Quandt, July 8 "This letter is to inform you that the ODI of NHTSA has opened a Preliminary Investigation PE 16-007 to examine the performance of the Automatic Emergency Braking (AEB) system and any other forward crash mitigation of forward crash avoidance system enabled and in use at the time of the fatal crash ..." [You MUST Read more](#) *Hmmm.... Specifically on page 3* "1. ...Separately, for each subject vehicle (*All Tesla vehicles equipped with any version of the Autopilot Technology Package ...*) manufactured to date by Tesla, state the following...k. The total number of AEB events that occurred with..." *and on the next page "2...and 3. ..."* *and on page 5* "5. Describe all assessments, analyses, tests, ...that relate to, or may relate to the alleged defect that have been conducted, are being conducted, are planned, ... and 6. Describe all modifications or changes made by, or on behalf of Tesla in" ... *and on page 6* "Provide the following information related to the subject system: a. ..., l. ..." *and on page 7* "8. Provide the following information on all AEB events experienced by the subject vehicles that involve avoidance or mitigation of crashes with vehicles crossing the path of the subject vehicle: 9. Provide Tesla's reconstruction of the subject crash, including: a. The positions of the vehicles at impact and the positions at each 10 msec increment up to two seconds prior to impact..." *Unfortunate that **Velocities** aren't also being requested and that for only 2 seconds before the crash. Why not 5 or even 15 seconds if Tesla has the data.* "10. Furnish Tesla's assessment of the alleged defects in the subject vehicle including: a. the reason the subject system did not activate in the subject crash;*This is a **VERY** good letter; unfortunately, there are caveats on page 8 under "Confidential Business Information" which will probably mean that most of the information will not appear in the public domain nor be shared with other automakers and developers so that "the same thing doesn't happen to another manufacturer". This information/data is all about safety. It should be open and shared as "lessons learned" and Tesla should be held harmless in return for sharing the information and placing it in the public domain. In that spirit, NHTSA should make a similar request of all manufactures that include AEB offerings, especially which VIN numbers have AEB systems so that one can reliably identify when these systems are involved in crashes. Undoubtedly the Tesla May 7 crash was NOT the first crash in which there was a fatality and the AEB did not avoid the crash. Likely there have been many. As an industry we MUST learn from each of these crashes. By the way, VIN numbers should reflect the optional safety/automated features that are included in the vehicle.* Alain



[New York Times Editorial Board Crashes into Automated Vehicles](#)

M. Scribner, Jul 13 "...In a country where more than 35,000 were killed in traffic accidents last year, national conversations about one or two additional highway fatalities, tragic as they are, are completely unwarranted. This is particularly true when the New York Times editorial board is attempting to lead the conversation....Tesla looked around and discovered their early-adopting owner pool would make the perfect guinea pigs...It is also important to note that even when much safer automated vehicle technology comes to market, people will still die on the roads.... The [promise of far safer roads](#), not impossibly and perfectly safe "[Vision Zero](#)" roads, should be our focus...

But it gets worse. In the closing three paragraphs, the Times editorial board makes the following claims:

- NHTSA needs to speed the deployment of vehicle-to-vehicle (V2V) communications, which could have plausibly saved the dead Tesla driver;
- Federal regulators should take to heart the lesson with early deployment of airbags, which killed women and children; and
- NHTSA should be prepared to update its rules rapidly and frequently.

On the first, I have [written about](#) why NHTSA's looming V2V dedicated short-range communications (DSRC) mandate will actually harm automated vehicle development and do little to promote highway safety. The V2V DSRC mandate is itself a major distraction funded by self-interested auto companies who, having forgotten about the sunk-cost fallacy of throwing good money after bad, refuse to give up on already obsolete technology because they've already thrown more than \$1 billion down the V2V DSRC hole..." [Read more](#) *Hmmm....Yup!*

Alain



[SEC Is Reportedly Investigating Tesla for Not Disclosing](#)

[Autopilot Death](#)

S. Gandel, July 11, "The Securities and Exchange Commission would like to know a little bit more about what Tesla Motors and Elon Musk knew about a fatal Tesla crash in early May.

On Monday, the Wall Street Journal reported that SEC officials are looking into whether Tesla TSLA 0.03% and Musk violated securities laws when the car company and its CEO sold \$2 billion worth of shares in mid-May without disclosing the fact that a driver had been killed while reportedly using the car manufacturer's autopilot feature...." [Read more](#) *Hmmm.... Amazing how poorly this "inevitability" has been handled by Tesla. How many other crashes have Teslas been involved for which Tesla has captured data during the "last minute" before the crash. These data, excluding any information about the individuals involved, should be released to public. These data are incredibly valuable and should be shared. In the end, they are likely all "discoverable" in a legal proceeding. released earlier, they could help everyone improve their systems and avert many repeated "shortcomings" and crashes. We have a lot yet to learn about these rare events. The faster we can learn, the more hardships averted and lives we will save.*

Alain

PLANETIZEN

[#TeslaCrash: Three reasons for Tesla \(and all of us\) to be concerned](#)

S. LeVine July 2, "...Last week my team and I released a new [Working Paper](#) on the liability issues raised by Automated Cars, and how this will constrain how they drive. I want to therefore share initial thoughts on this incident, starting with specific reasons for Tesla to be concerned, and concluding with broader reasons for the rest of us to also pay attention: "... [Read more](#)
Hmmm....Yup! Alain



[As U.S. Investigates Fatal Tesla Crash, Company Defends Autopilot System](#) B. Vasic & N. Boudette, July 12, "...The questions raised by the N.H.T.S.A., in a nine-page letter that was dated July 8 but not made public until Tuesday, indicated the agency was investigating whether there are defects in the various crash-prevention systems related to Autopilot.

Those systems include automatic emergency braking, which is supposed to stop Tesla models from running into other vehicles detected by radar and a camera...." [Read more](#) *Hmmm....See letter above. The accident image is not a correct representation of the intersection because it fails to depict the 76 foot grass median. [See images in Link](#) Alain*



[Fatal Tesla Crash Draws In Transportation Safety Board](#)

N. Boudette, July 10, "A second federal agency is investigating a fatal May 7 crash in Florida involving a Tesla automobile operating in Autopilot mode that failed to stop when a tractor-trailer turned in front of it...The involvement of the transportation safety board signals even greater scrutiny of the accident and Tesla's Autopilot technology. The agency specializes in determining the causes of crashes and is familiar with the self-driving technology used in trains and airplanes...." [Read more](#) *Hmmm....Yea. Alain*

The Detroit News

[Willow Run autonomous car test site needs \\$60M](#)

July 13, "The American Center for Mobility has grand plans to transform the weed-strewn concrete ruins of the former Willow Run bomber plant into a world-class autonomous car test site, but it still needs tens of millions of dollars to make it a reality.

The state of Michigan has pledged \$3 million, and officials expect approval this month for an additional \$17 million in state aid. But the nonprofit still needs another \$60 million to fully

realize a 335-acre test site that would include tunnels, bridges, traffic stops, suburban cul-de-sacs and city streets to test the driverless cars of tomorrow..." [Read more](#) *Hmmm....As I found out, not an easy sell :-/ (unless you're willing to do "v2v" as per Columbus.) Alain*



[IBM's Watson makes a move into self-driving cars with Olli, a minibus from Local Motors](#)

I. Lunden, June 16, "IBM today took the wraps off its first big foray into the world of self-driving cars, not as the driver of them, but as the brain behind making your self-driving journey a little more interesting.

IBM Watson, the company's AI platform, is powering services in Olli... The cars will start operations first in Washington, DC, before expanding to deployments in Miami-Dade County and Las Vegas later this year. IBM says Miami-Dade County will run a pilot to transport people around Miami using these autonomous vehicles.

Olli will be using a special version of Watson aimed at automotive applications and it is not fully powering the car's self-driving features. Instead it's aimed at "improving the passenger experience," according to a statement from IBM." [Read more](#) *Hmmm....What a let down! Not a very big "move" if it just doing "travelTainment" (aka "passenger experience"). C'mon IBM, you really should be able to do more. Alain*

Some other thoughts that deserve your attention

PLANETIZEN [Playing 'Telephone' with Transportation Data](#)

S. Polzin, July 11, "... As I continued [reading](#), my confidence in a transformational change diminished with each sentence. But I did stumble across one of my pet peeves—the infamous allusion to 30 percent of traffic in cities being due to drivers seeking parking. The Guardian story contained the following quote.

"The emails and documents show that Flow applies Google's expertise in mapping, machine learning and big data to thorny urban problems such as public parking. [Numerous studies](#) have found that 30 percent of traffic in cities is due to drivers seeking parking."...

The story's "numerous studies" linked to the often-cited Donald Shoup article "[Cruising for Parking Transport Policy](#)". The reference to numerous studies evidently referred to the case studies Dr. Shoup was able to assemble in his research—some of which appears to be single data points. This 30 percent average, rather incidental and appropriately qualified data in the original paper, has taken on a life of its own and is regularly cited as evidence for everything from the opportunities for better parking management to the benefits of public transit to the wastefulness of auto dependency to the current prospect of mitigating congestion by virtue of eliminating parking through automated vehicles. Indeed, Google Scholar shows over 300

citations, with nearly 100 reported in Web of Science.... [Read more](#) *Hmmm....Details matter!*
Alain

On the More Technical Side

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

Recompiled Old News & Smiles:



Videos of Automated Emergency (Non) Braking

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

GIZMODO

[Hyperloop Connecting Helsinki and Stockholm Turns 300-Mile Trip Into 28 Minute Ride](#)

A. Walker, July 5, "Where will the first Hyperloop be? So far there are plans to use the tubular transportation system to move passengers in Slovakia and freight in Switzerland. But a proposed application for the Hyperloop announced today could solve a transportation conundrum that has been challenging planners for centuries: Connecting the neighboring nations of Sweden and Finland..." [Read more](#) *Hmmm....Do-able since one actually was built and operated 150 years ago in NYC by [Alfred E. Beach](#), resurrected by [Lawrence Edwards](#) as [Gravity-vacuum transit](#) in the mid 1960s and reinvented several other times since ([Vactrain](#)) only to be "[Al Gore](#)" (self-proclaimed "creator" of the internet) by [Elon Musk](#). Given the graveyard of failures, the initial investors better pu a lot of lipstick on this pig and flip it quickly. *Alain**

C'mon Man! (These folks didn't get/read the memo)



[LG Electronics says to jointly develop connected car platform with Volkswagen](#)

Reuters, July 6, "LG, in a statement, said it and Volkswagen will work to jointly develop over "the next few years" technologies allowing drivers to control and monitor devices in their homes such as lights and security systems, as well as in-vehicle entertainment technologies and an alerting system for drivers providing "recommendations" based on real-time situations.

Automakers and technology companies have been forming partnerships in recent years, as the race to develop self-driving cars has created need for more sophisticated components and software that will allow vehicles to seamlessly communicate with various external devices and servers via the internet.

LG Electronics ...has identified the auto industry as a new growth driver and has been pushing to grow new businesses amid continued struggles for its mobile phones division. [Read more](#)
*Hmmm....How can VW whose image is so shattered have this view of a "connected car"?
Instead of focusing on driving, a driver is now going to monitor their homes and receive
"recommendations". If this is inspired by LG, its struggles are not over. [C'mon VW & LG](#) Alain*

Calendar of Upcoming Events:

NEXTGEN
TRAIN CONTROL

[Sept 15 & 16, 2016](#)

[Arlington, VA](#)



[Sept 19-21, 2016](#)

[Antwerp, Belgium](#)