

SMART DRIVING CARS

<http://smartdrivingcar.com/UberSF-121816>

Sunday, December 18, 2016



On the first day in SF, Uber's self-driving car ran a red light

J. Bhuiyan, Dec 12, "On Wednesday, Uber rolled out a handful of its self-driving cars in San Francisco to be used by the public. Also on Wednesday, one of those cars ran a red light....Uber, unlike other companies operating self-driving cars on public roads in California, also hasn't applied for a permit from the DMV, as is typically required. But Uber's cars aren't technically self-driving just yet..." [Read more](#) *Hmmm... See video: [Uber testing legal boundaries and Uber running red light](#) and [SF, Your Self-driving Uber is arriving](#) Alain*



The California DMV says Uber has to stop operating its self-

driving cars in SF

J. Bhuiyah, Dec 14, "...In a letter addressed to Anthony Levandowski, the co-founder of Otto and now head of Uber's self-driving unit, the California DMV demanded that the ride-hail company stop operating its fleet of self-driving cars..." [Read more](#) *Hmmm... This is all so confusing. The letter from DMV describes the 'testing' of 'autonomous technology', but Uber isn't 'testing', it is operating and it doesn't describe its cars as 'autonomous' anything, but, 'self-driving' (which is the correct designation). To me, what Uber is operating is basically the same thing as what Tesla is selling in California. Moreover, Uber's Self-driving is **less** 'autonomous' in its operation than the operation of 'electronic stability control (ESC)' that [has been mandated](#) in every car built since 2012 that operate on California roads. (ESC has sensors and control logic that coordinate the operation of the brakes and throttle at the discretion of the sensors and over-ride the intended control actions of the driver. Now that's real 'autonomy' ...taking the driver out of the loop at the discretion of some control logic. Anti-lock brakes are similarly 'autonomous') Should everyone in California get a letter from DMV? Just think, New Jersey is trying to enact CA-like legislation. :-{ Alain*

Automotive News

[Autonomous features ripe for misunderstanding](#)

Dec 5. [Read more](#) *Hmmm... Good article if you have a subscription. Yes, there is an enormous amount of confusion some/much of which is caused by the automakers because the systems don't work well enough. The Mercedes crash that is discussed is a result of the Automated Collision Avoidance system **NOT** working **AND** there is a fundamental flaw in the Mercedes intelligent cruise control (Dystronic Plus) (as well as the intelligent cruise control of other manufacturers): **EVEN A SLIGHT TAPPING OF THE BRAKES TURNS OFF DYSTRONIC PLUS.** Why Daimler designers felt that tapping the brakes means that I, the driver, want to turn-off the system, designed to keep me from running into the back of a vehicle that I am following, is beyond me. Yes, I don't want to speed up anymore, but I still don't want to run into the back of the car ahead of me, so don't abandon me by completely turning off the system. Just turn off the throttle part!*

*I understand that old, dumb, cruise control turned-off if I tapped the brakes, but that was because the only thing that it controlled was the throttle. Yes, I wanted the throttle turned off (and I knew that the brakes were always completely up to me)! But intelligent-cruise controls **both** the brakes and the throttle. So unless I want to turn the whole system off, which I know I can do by reversing the flick of the lever that I used to turn it on, the braking logic/function **must** continue to be active. I am shocked that Mercedes hasn't fixed this flaw on my car or any car. Nor have they upgraded (over-the-air or during maintenance) any of the software on my car and, of course, NHTSA is busy with V2V to weigh-in on this easily fixable design flaw. Too bad there isn't a non-electric Tesla with AutoPilot on the market. Alain*

recode

[Google's former car guru Chris Urmson is working on his own self-driving company](#)

K. Swisher, Dec 10, "...The company, several sources told Recode, will focus on developing self-driving software, as well as data and hardware. This "full package" of autonomous technologies could then be sold to car makers that want to create and then alter their own offerings, in a manner not unlike how Google launched its Android efforts with both mobile software and hardware..." [Read more](#) *Hmmm... Congratulations, go for it, Chris. Alain*

recode

[Uber has lost three of its top self-driving engineers](#)

J. Bhuiyahm Dec 12, "Almost two years after Uber ransacked Carnegie Mellon's robotics lab, a few of the top engineers have left the company..." [Read more](#) *Hmmm... Given the intense demand for competent people, they really haven't lost that many. Alain*



[Not just a supplier: Delphi to start](#)

[autonomous ride-sharing outfit](#)

Krok, Dec 12, "...Delphi is set to announce two cities -- one in Europe, and one in the US -- that will serve as pilot programs for its upcoming autonomous ride-sharing service..." [Read more](#)
Hmmm... Why not! They want these vehicles to use Delphi components, but doubtful they survive as an operator. Do they really want to compete with their customers?? Alain

Some other thoughts that deserve your attention



[The Great A.I. Awakening](#)

G. Lewis-Kraus, Dec 14, "How Google used artificial intelligence to transform Google Translate, one of its more popular services — and how machine learning is poised to reinvent computing itself. [Read more](#) *Hmmm... Simply an excellent article. Most well worth reading. Alain*

[On the More Technical Side](#)

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

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



[These 20 companies are racing to build self-driving cars in the next 5 years](#)

D. Muoio, Dec 11, "...Naturally, when we will see a fully driverless car hinges just as much on the regulatory environment as advancements in self-driving tech..." [Read more](#) *Hmmm... Once again, a totally inappropriate mixing of Self-driving and Driverless. While these 20 companies are working on Self-driving, **only** Google and Uber (and maybe Baidu) are working on, or have a business model that is not the antithesis of, Driverless. Alain*



[BMW takes responsibility for driverless cars](#)

A. Maclean, Dec 8, "...Speaking to Australian media at the global launch of the latest 5-Series in Portugal this week, the project manager for driver assistance systems on the seventh-

generation mid-sized sedan, Oliver Poguntke, conceded the German brand "must" take full responsibility for the safety and welfare of occupants in its future autonomous vehicle.

"I think you must [have full liability]. If you change the responsibility from the driver to fully automatic with the car then the mass producer must take liability for this... I think this is a necessary step," he said.

"To change the responsibility, we must also have the laws [that allow autonomous driving]. There is a lot of discussions in the world, and some countries are different to others. We need to have consistency with this."..." [Read more](#) *Hmmm... Overstated headline?? The quotes are "must" and unfortunately not "takes". Volvo has "taken". No argument that BMW 'should' but will it? Alain*



[U.S. DOT advances deployment of Connected Vehicle Technology to prevent hundreds of thousands of crashes](#)

Press release, Dec 13, "Citing an enormous potential to reduce crashes on U.S. roadways, the U.S. Department of Transportation issued a proposed rule today that would advance the deployment of connected vehicle technologies throughout the U.S. light vehicle fleet. The Notice of Proposed Rulemaking would enable vehicle-to-vehicle (V2V) communication technology on all new light-duty vehicles, enabling a multitude of new crash-avoidance applications that, **once fully deployed**, could prevent hundreds of thousands of crashes every year by helping vehicles "talk" to each other..." [Read more](#) *Hmmm... "...once fully developed (aka 'Half-baked')..." Sure let's hype and mandate stuff that is half-baked. And NHTSA complains about Elon Musk overselling AutoPilot ???? Actually... C'mon NHTSA!! Alain*



[Self-Driving Cars Probably Won't Boost Commuter Productivity](#)

E. Beras, Dec 12, "...Advocates for self-driving cars love to tout the benefits the cars would bring, such as fewer accidents and less congestion. Another alleged value of being a passenger rather than a driver is more productivity—you could work rather than concentrate on driving. But most people might not spend their newfound free time in self-driving cars whittling down their to-do lists..." [Read more](#) *Hmmm... Only 'Sunday Supplements' ...'tout' those benefits. Everyone else knows that Self-driving cars will simply improve the driver's quality-of-life, which, for most, correlates negatively with 'productivity' because they won't be getting paid, nor recognized by their employer if they use their newly found freedom to be more productive. How many people on the subways, trains and buses today are being more 'productive'? Very few! So why should those driving cars be any different once they are relieved from the burden of driving? Doesn't take in-depth [University research](#) to make that observation.*

What Self-driving cars will do is substantially increase VMT (per mile disutility is reduced) and congestion and pollution and energy consumption and everything else that is correlated with increased VMT. (Again, Safe-driving cars deserve the credit for Safety and it is not clear that Self-driving cars will be safer than Safe-driving cars.) Alain jlj|

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

The
New York
Times

[How Self-Driving Cars Work](#)

g. Gates, Dec 14, "Autonomous cars have arrived — [Uber has fleets in Pittsburgh and San Francisco](#), Google's parent company is [spinning off its driverless car](#) project in a sign it is closer to coming to market, and the federal government has begun to issue guidelines on how the cars should work...[Read more](#) *Hmmm... Maybe a reasonable grade-school depiction, but it is so bad on so many levels. It is a real shame that they interchangeably use the words self-driving, autonomous, driverless and want to describe aspects of what are Safe-driving cars as Self-driving features. Safe... and Self... are really VERY different. Plus they don't include what Daimler, Subaru, Nissan, Hyundai, Citroen, Baidu, ... are doing. Not even a good Sunday Supplement. [C'mon NYT!](#) You were poor with your pre-election coverage, you are poor here. Also, if you are going to use a graphic to demonstrate the Florida crash, PLEASE use one that depicts the geometry correctly. A 53 foot median separates the two turn lanes, which, I believe, is a critical element of this crash. Plus, a sentence having the phases 'some experts speculated' and 'might have avoided' don't deserve being in a 'Sunday Supplement' let alone a quality publication. [C'mon NYT!](#) Alain*

Calendar of Upcoming Events:

**Transportation Research Board
96th Annual Meeting**

January 8–12, 2017 • Washington, D.C.

[January 8-12, 2017](#)

[Washington, DC](#)

Princeton Alumni & Friends Banquet

Tuesday, 6:00pm Jan 10