

SMART DRIVING CARS

<http://smartdrivingcar.com/DeepDriving-051516>

[Sunday, May 15, 2016](#)



[Extracting Cognition out of Images for the Purpose of Autonomous Driving](#)

Chenyi Chen PhD Dissertation , "...the key part of the thesis, a direct perception approach is proposed to drive a car in a highway environment. In this approach, an input image is mapped to a small number of key perception indicators that directly relate to the affordance of a road/traffic state for driving...." [Read more](#) *Hmmm..EPO 10:00am, May 16, 120 Sherrerd Hall, Establishing a foundation for image-based autonomous driving using DeepLearning Neural Networks trained in virtual environments. Very promising. Alain*

FORTUNE [Tesla Drivers Claim Autopilot Caused Crashes](#)

D. Morris, May 14 "In a preview of a type of dispute that is certain to become much more common, two drivers of Tesla's Model S this week blamed the car's self-driving features for accidents. In both cases, the company refuted those claims, pointing out onboard data that conflicted with the drivers' stories, and citing clear warnings about how self-driving features should be used...

But again, Tesla responded with data showing Simpson had tapped her brake pedal before the crash, deactivating autopilot features." [Read more](#) *Hmmm...A couple of points here: 1. Tesla is capturing the data, so good luck on some of these claims. 2. I have complained to NHTSA, MB, BMW, Volvo and anyone who would listen (none have) about the terrible logic associated with "intelligent" cruise control (which must be a hold over from "stupid" cruise control.) In "stupid" CC: touch the brakes and the system is turned off. Fine, since the system only controls the throttle, then turning off the throttle is accomplished by turning off the CC system. In "Intelligent" CC, touching the brake SHOULD turn off the automated throttle. I've signaled to the system that I wish to slow down! So why isn't just the automated throttle turned off??? Why in the world would you also turn off the automated brake??? I've signaled that I want to slow down! If the car thinks that I need help slowing down even more, why has it turned off the automated braking system (without even saying: "your on your own now")??? Oh, I see, this is the legacy of stupid CC that just turned the whole CC off because I touched the brakes. Really??? Tell me this isn't true! Please!! Alain*

THE WALL STREET JOURNAL



[Apple's Latest \\$1 Billion Bet Is on the Future of Cars](#)

D. Wakabayashi, May 14, "Apple Inc.'s \$1 billion investment in Chinese ride-sharing company Didi Chuxing Technology Co. reflects an intensifying battle over the future of driving and highlights emerging alliances among auto makers, technology firms and ride-sharing companies. The competition to build and provide autonomous vehicles promises to pit the world's two most valuable companies, Apple and Google parent Alphabet Inc., among others, against one another and against the world's most valuable private venture-capital-backed company, Didi rival Uber Technologies Inc..." [Read more](#) *Hmmm...Seems a little strange to attach driverless cars to this investment made in a country in which the labor component of mobility is so small because of an enormous labor pool and extremely low wages for many. The biggest advantage of driverless is in regions of high cost of labor. For years, manufacturing moved to China because the labor was an infinitesimal element of Cost of Manufacturing. So... Hmmm... Alain*



[HERE maps London for autonomous vehicles](#)

May 4, "HERE has mapped London for autonomous cars, ... have used LiDAR (Light Detection and Ranging) technology to provide

comprehensive data that can be used by driverless cars to understand the world around them....Using its fleet of “HERE True” collection vehicles, the company is able to record 700,000 3D data sections per second, allowing it to pinpoint curbs, trees and road furniture to a 10cm accuracy....driverless vehicles ... will need to have a full understanding of the world around them... vehicles must have access to extremely precise, continuously updated maps, such as HD Live Map. This information is also crucial to the success of Advanced Driver Assistance Systems (ADAS), such as traffic jam assist and lane keeping..." [Read more](#) *Hmmm...Or the driverless vehicles could, every 20th of a second or so, simply image and interpret the nearby driving environment using DeepLearning Neural Networks. That way they also capture the most important information: what all the other cars, pedestrians, bicycles, etc. are doing near them that is completely absent from the HERE layers. Alain*



[Mobileye to Provide Car Companies With Autonomous Systems](#)

M Ramsey, May 12, "... Mobileye NV, has secured agreements with two auto makers to provide systems for fully autonomous cars in 2019, deals that give a clearer timetable for when auto makers believe they can start producing vehicles entirely capable of driving themselves..." [Read more](#) *Hmmm...OK. Alain*



[GM, Lyft to Test Self-Driving Electric Taxis](#)

M Ramsey, May 5, "General Motors Co. and Lyft Inc. within a year will begin testing a fleet of self-driving Chevrolet Bolt electric taxis on public roads, a move central to the companies' joint efforts to challenge Silicon Valley giants in the battle to reshape the auto industry..." *Hmmm...Isn't Tesla already doing this en mass? "...In addition to driverless cars, GM aims to use Lyft and its growing army of drivers as a primary customer for the Bolt, an electric car that launches later this year amid soft demand for electric vehicles. Hmmm...I see, it is really about finding customers for the Volt. ..."* [Read more](#) *Hmmm...OK Alain*



[Tesla Drivers Claim Autopilot Caused Crashes](#)

D. Morris, May 14 "In a preview of a type of dispute that is certain to become much more common, two drivers of Tesla's Model S this week blamed the car's self-driving features for accidents. In both cases, the company refuted those claims, pointing out onboard data that conflicted with the drivers' stories, and citing clear warnings about how self-driving features should be used...

But again, Tesla responded with data showing Simpson had tapped her brake pedal before the crash, deactivating autopilot features." [Read more](#) *Hmmm...Bravo! They could/should do it, else they could lose it all. Alain*



[Deutsche Bahn looking at adding autonomous cars to its mass transit network](#)

J. Golson, May 6 "German railway giant Deutsche Bahn is working on adding autonomous cars to its transport network as a way of getting riders to and from the train station — the last mile, so to speak. It's even looking at competing with companies like Uber in getting travelers around urban areas where a train might not be practical. Speaking in an interview with German newspaper WirtschaftsWoche, Deutsche Bahn chief Rüdiger Grube said the railway "will, with certainty, operate driverless cars in the future."...

And the company is working on more than just self-driving cars. It also plans to automate the operation of the trains themselves..." [Read more](#) *Hmmm...Bravo! They could/should do it, else they could lose it all. Alain*



[New Florida Town Designed With Autonomous Cars In Mind](#)

S. Hanley, May 4, "Babcock Ranch is a new community near the shores of the Coloosahatchie River east of Fort Meyers, Florida. It is being designed to be as sustainable as possible and to accommodate autonomous cars. In fact, the developer expects self driving cars to serve as the town's public transportation system. "We're really looking closely at parking, the size of the streets, what ultimately that's going to look like when you have driverless cars within the community,"..." [Read more](#) *Hmmm...Bravo again! Alain*



[Microsoft's first self-driving car hits the road with Cortana riding shotgun](#)

M. Dean, May 12 " April 25, "...Microsoft has also joined their ranks and showed off its first smart car...." [Read more](#) *Hmmm...never too late. Alain*

Some other thoughts that deserve your attention

On the More Technical Side

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

Recompiled Old News & Smiles:

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

[Inquiry into driverless car radiation risk](#)

G. Paton, May 16 "An investigation has been launched into the health effects of driverless cars amid concerns that magnetic fields generated by the vehicles may pose risks to motorists.

The United Nations has set up a task force to assess electromagnetic radiation levels in the cars, which are packed with hi-tech equipment. Sources said that it could lead to new regulations to limit the strength of gadgets such as radar, lane sensors, sat-navs and entertainment systems..." [Read more](#) *Hmmm...You can't make this stuff up, or another strike against Lidar? Alain*

[Volvo's self-driving trucks are going underground](#)

S Roberts, May 9, "...The truck is fitted with GPS technology and LiDAR sensors, which continuously scan its surroundings." [Read more](#) *Hmmm...I keep missing something... GPS doesn't work underground. OK that's why you need the Lidar. But GPS cost but pennies, so what's the big deal???* Alain

[Can the 'internet of moving things' end traffic jams?](#)

M Wall, May 10, "...The better we know where everything is, the better we can manage traffic flows and optimize routes, avoiding congestion, accidents and natural hazards, the argument goes...." [Read more](#) *Hmmm...Not really... Unless the vehicles are automated, good luck on getting humans to follow the "cloud's" directives. Plus who is the "we" overseeing "the cloud". Very 1984ish! I'm not a fan! Best way to eliminate congestion is to provide mobility that allows individuals that now drive alone (which is essentially everyone today) to ride along in small groups (casual ride-sharing), especially in "the peak direction" at "peak times". Congestion gone without "1984"! Alain*

[Ford patents drone that acts as autonomous car lookout](#)

M. Martinez, May 10 "...The United States Patent and Trademark Office published a Ford patent application for a drone deployment system that would work with autonomous vehicles to serve as the car's "eyes" by flying ahead and mapping its surroundings. Passengers would use the car's infotainment or navigation systems to control the drone as an aerial sensor...The drone device is introduced to the vehicle system in order to extend the range at which the vehicle is about to obtain information on its surroundings beyond the range of any one or more sensors, visual systems and/or communications interfaces that may be onboard the vehicle," the patent says..." [Read more](#) *Hmmm...This one probably deserves a C'mon Man! Really???* *Maybe for a high speed railroad because it can't see far enough ahead (but then it needs a high speed drone). This one doesn't come close to passing the "sniff test". Ford paid lawyers to file this???* *Things must be slow. Alain*

[USDOT updates its Connected Vehicle Reference Implementation Architecture](#)

May 11, "...The US Department of Transportation (USDOT) Intelligent Transportation Systems Joint Program Office (ITS JPO) has

announced that the Connected Vehicle Reference Implementation Architecture (CVRIA) and the Systems Engineering Tool for Intelligent Transportation (SET-IT) have been updated to Version 2.2 and are now available at the CVRIA website...The SET-IT software provides a single software tool that integrates drawing and database tools with the CVRIA, so that users can develop project architectures for pilots, test beds, and early deployments....[Read more](#) *Hmmm...We were all anxiously waiting for this update! Alain*

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

Calendar of Upcoming Events:



<http://www.autonomoustrucksevent.com/agenda-mc>



[Workshop on Automated Vehicle Policy and Regulation:](#)

[A State Perspective](#)

The National Transportation Center, University of Maryland

May 18, 2016

[Preliminary Program](#)

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