

SMART DRIVING CARS



<http://smartdrivingcar.com/AppleExit-101916>

Wednesday, October 19, 2016



How Apple Scaled Back Its Titanic Plan to Take on Detroit

M. Gurman, Oct 17, "Apple Inc. has drastically scaled back its automotive ambitions, leading to hundreds of job cuts and a new direction that, for now, no longer includes building its own car, according to people familiar with the project.

Hundreds of members of the car team, which comprises about 1,000 people, have been reassigned, let go, or have left of their own volition in recent months, the people said, asking not to be identified because the moves aren't public.

New leadership of the initiative, known internally as Project Titan, has re-focused on developing an autonomous driving system that gives Apple flexibility to either partner with existing carmakers, or return to designing its own vehicle in the future, the people also said. Apple has kept staff numbers in the team steady by hiring people to help with the new focus, according to another person....

Regardless of Apple's struggles, established carmakers have recognized the threat posed by new entrants and have embarked on a hiring and acquisition splurge to beef up their software capabilities. They are wary of allowing technology companies to own the lucrative software component of new cars..." [Read more](#) *Hmmm... Very interesting!)* *Alain*



For The Long Haul, Self-Driving Trucks May Pave The Way Before

Cars

U. Berliner, Oct 13, "...And just in case the driverless future arrives sooner than expected, Rush said he's thinking about a plan B. Maybe something in computers, like information technology. Those jobs are safe, right?" [Read more](#) *Hmmm... Yup! :-)* *Alain*

Arturf1 [AI Driving and GTA 5](#)

A. Filipowicz, Oct 2016, "...One major technical challenge on the road to that goal is reliable and robust perception of the driving scene. Human drivers predominantly use their eyes to detect lanes, signs, pedestrians, and other cars. They also are able to estimate distances to these objects. Computers have yet to duplicate this capability. Part of the reason why computers cannot extract the same information as humans from a driving scene is a lack of data to train them. While there exists plenty of video footage of driving, videos with appropriate and accurate annotations - such as distances to lane markings in each frame - are rare. These annotations are difficult to obtain in the real world. However, I'm looking into the use of video games to obtain data needed to train computers to drive. Specifically, video games allow automated scene generation, image collection, and measurement of distances....[Read more](#)
Hmmm... Yup! :-) Alain

[Will driverless cars really save millions of lives?](#)

[Lack of data makes it hard to know](#)

M. Lewis, Oct 18, "...One of the hardest questions to answer is, 'How do these cars compare to human drivers?'" Chris Urmson, then the chief of Google's self-driving car project, told transportation engineers in Washington this year. "And part of the reason why that's hard is we don't actually have a good understanding of how good human drivers really are."

One problem is that the U.S. government keeps no comprehensive database of crashes. That complicates what otherwise might seem to be a simple task: figuring out which vehicles are more likely to crash, human-driven ones or those run by software and sensors....An annual national tally of crashes relies heavily on those reported to police. It understates the actual total of crashes with injuries by at least a quarter and "property damage only" crashes by anywhere from 60 to 84 percent, they concluded. And they consider those numbers conservative, given the mishmash of state reporting requirements and holes in the local data used by federal agencies.

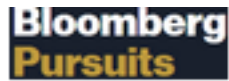
"It is crazy," said [Myra Blanco](#),..." [Read more](#) *Hmmm... Most interesting!* Alain

[France's Navya raises \\$34M for its self-driving shuttle bus, reportedly at a \\$220M valuation](#)

I. Lunden, Oct 11, "When it comes to self-driving cars, the public tends to focus on developments for private vehicles for individuals, but there are also some significant advances underway in other categories such as shuttle buses.

In the latest piece of news, [Navya](#), a startup out of France that makes driverless shuttles, has raised \$34 million (€30 million) in funding to build out its team, technology and sales. The funding is coming from two strategic backers, public transportation provider [Keolis](#) and automotive parts group [Valeo](#), along with Qatari investors Group8.

Navya is not disclosing its valuation but one report from Funderbeam estimates it at \$222 million after this round. Navya prior to this round had raised \$4.5 million (€4.1 million) from French investors Gravitation, CapDecisif, and Robolution Capital (an investment fund focused only on robotics investments)...." [Read more](#) *Hmmm... Yup! :-)* *Alain*



[Self-Driving Cars Will Be the Best Thing to Happen to Motorcycles](#)

K. Stock, Oct 11, "It all comes down to safety,...The math is as straightforward as it is compelling. Consider a left turn on an American road: A vehicle turning across a lane of opposing traffic has little to do with the bike rider, but is one of the most dangerous things in motorcycling. When motorcyclists die on the road, this is how it happens one out of five times, according to crash statistics from the National Highway Traffic Safety Administration.

This year, about 1,000 riders in the U.S. will lose their lives to the left turns of others. Cars traveling in the same direction as the motorcycle often don't notice the bike overtaking on the left. Cars making a turn while coming from the opposite direction either fail to see the oncoming bike, or misjudge its speed...." [Read more](#) *Hmmm... And likely what happened in the Tesla Florida crash. The truck misjudged the speed of the Tesla and..."* *Alain*



[Ford design chief Moray Callum is preparing for a driverless society](#)

T. Warren, Oct 17, "...In the next five years, Ford says it will transform from a company that sells fastback Mustangs to building fleets of autonomous vehicles and launching car-sharing ventures. And as design chief, Callum has the daunting task of determining what Ford's future will look — a future in which the car could one day be smarter than the driver.... I love driving cars, but I can still see the benefits of the fully autonomous car. I think there will be drivable cars for a long time..." [Read more](#) *Hmmm... Interesting.* *Alain*



[Driverless car hits lorry during test drive](#)

M. Lin, Oct. 19, "A self-driving car and a lorry collided yesterday morning, in what is believed to be the first accident in Singapore involving an autonomous vehicle. No one was injured when the car knocked into the lorry while changing lanes in Biopolis Drive at one-north at around 9.30am. The car belongs to nuTonomy, a start-up software company that is conducting trials of its self-driving vehicles in the one-north business district..." [Read more](#) *Hmmm... More evidence on how phenomenally well Google has conducted its 'trials'.* *Alain*



[Elon Musk Says Every New Tesla Can Drive Itself](#)

J. Stewart, Oct 19, "...After being upgraded with a suite of cameras and sensors, Musk says this means his cars will have level 5 autonomy—the highest level, which requires zero interaction from the driver...But not for free. As with Tesla's current "Autopilot convenience features," turning on that functionality comes at a cost—\$8000, up from \$3000—even though the hardware upgrades will come standard..." [Read more](#) *Hmmm... See Tesla Blog posting. I really like Tesla, but there is simply too much Donald in Elon. 1st, it isn't... now, every new..., but some time in the future, maybe "by end of next year" and we'll see about 'every'. Plus, even then it is*

NOT Level 5!!! The Tesla will need to be monitored by a human overseer (aka driver) except for the trivial part of parking the car. It won't be able to go from SF to NYC without anyone in the car. So once again, it is a lot of over-hype and more 'AutoPiloting' all over again. The system is good. It provides value, but did Tesla get the Automated Emergency Braking (AEB) system to work so that if a truck cuts off the Tesla on the transcontinental drive it won't kill the passenger. I also like that Elon has decided to price along the demand curve. Even without being Level 5 and if the AEB also works, then it is worth the \$8,000 uptick. Alain



[All Tesla Cars Being Produced Now Have Full Self-Driving Hardware](#)

Tesla team, Oct 19, [Read more](#) *Hmmm...Focus on the word "Hardware". It takes more than hardware. Alain*



[Germany Says 'Nein' to Tesla Calling Its Tech 'Autopilot'](#)

A. Davies, Oct 18, "...And now, German transport minister Alexander Dobrindt asked Tesla to ditch the term "Autopilot," arguing it can lead consumers to think the car is far more capable than it is..." [Read more](#) *Hmmm... can't call it CoPilot either because Tesla doesn't own that trade name. Alain*



[Paul Minett: Will driverless cars be heaven or hell?](#)

Oct 18. "...Of course, the eventual reality will be somewhere in between heaven and hell, probably here on earth. The question is, can civil society influence the extent to which the outcome is more heavenly, rather than more hellish? Would we want to? ..." [Read more](#) *Hmmm... Interesting! Alain*



[Autonomous Vehicles - Negotiating a Place on the Road](#)

London School of Economics, Oct 2016, Executive Summary, "...We aim to measure and understand the level of "openness" people have towards AVs and, conversely, the situations in which people hope to avoid engaging with these vehicles. We argue that a successful introduction of AVs will ultimately depend on understanding and addressing the complex attitudes that define the public's view of this new technology....[Read more](#) *Hmmm... I haven't been able to find the full report. May be interesting. Alain*

Some other thoughts that deserve your attention



[It starts with a single app](#)

Oct 1, "...MaaS Global (short for Mobility as a Service) is the startup behind the most ambitious of Finland's schemes. At a tap of a smartphone screen its app, Whim, will show the best way to get from A to B by combining public transport and a variety of options from participating private firms. Whim is currently being tested; it is due to go live in Helsinki this autumn and in two other Finnish cities late in the year.." [Read more](#) *Hmmm...There are 'hundreds' of these Apps where a different one is the best in its own particular area. Unfortunately, 'Google' isn't good enough 'everywhere' and it may not even be the best anywhere (except maybe Silicon Valley). What is really needed is a "Good Housekeeping Seal of Approval" App that links to the best App in each area. Alain*



[Report of Traffic Accident Involving an Autonomous Vehicle \(OL 316\)](#)

Hmmm... twenty (20) traffic accidents have been reported to date, latest Sept 23, 2016, and all but one, the infamous 2mph 'crash' between a Google car and a bus, the fault was clearly on the other vehicle. :-) Alain



[Get Off the Trolley Problem](#)

F. Pasquale, Oct 18, "... [Read more](#) *Hmmm... I didn't even want to insert an excerpt (although it is a good article) . If these cars work, they'll avoid encountering even one of the ugly alternatives, let alone both simultaneously. These are extremely rare events and I agree with the pragmatic misquote. We really have much more important and societally valuable things to do that to procrastinate over the 'Trolley Problem'. Alain*

[On the More Technical Side](#)

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

[Jobs](#)

https://nrel.wd5.myworkdayjobs.com/en-US/NREL/job/CO---Golden/Transportation-Behavior-Analyst_R1580

https://nrel.wd5.myworkdayjobs.com/en-US/NREL/job/CO---Golden/Transportation-Data-Project-Leader_R1582

https://nrel.wd5.myworkdayjobs.com/en-US/NREL/job/CO---Golden/Postdoctoral-Researcher-Transportation-Data-and-Analysis_R1574

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

Daily Mail [All aboard! Singapore will begin self-driving bus trials: Autonomous vehicles could ease congestion](#)

Reuters, Oct 18, "...It is unclear when the trial will start. Earlier this week, Singapore said it would seek information from the industry and research institutes on the potential use of self-driving vehicles for street cleaning and refuse collection..." [Read more](#) *Hmmm... Its futuristic video that is slightly interesting. Alain*



[Future for connected cars 'looks promising, but obstacles remain'](#)

ITS International, Oct 19, "...Matt Kendall, telecoms analyst at The EIU, said: "In many respects, connected cars are already an embedded part of the current motoring environment, with many vehicles on our roads utilising connectedness in the form of GPS, infotainment and on-board vehicle diagnostics. However, the end game for the use of connectedness is the self-driving car, which is able to use connectivity to manoeuvre around, and interact with, its environment...." [Read more](#) *Hmmm...Great! 'Connected' has made gains in TravelTainment, but is waiting for the end-game to contribute to 'Self-driving' where it has nothing but obstacles. Alain*

Older stuff that I had missed:



[Automated Vehicle Crash Rate Comparison Using Naturalistic Data](#)

Myra Blanco, January, 2016 "... This study assessed driving risk for the US nationally and for the Google Self-driving car project. Driving Safety on Public roads was examined in three ways. ..." [Read more](#) *Hmmm...Excellent! Alain*

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



[Half of Australians want driverless cars on the road - so they can get drunk at the pub and be driven home](#)

R. Morgan, Oct 13, "Drivers would embrace the introduction of **self-driving** cars on our roads especially to take control when we are tired, bored or getting home from the pub. A new study of 5,000 Australians over the age of 18 found that the majority of drivers are happy for an autonomous car to take over the wheel when we are tired or when they have consumed alcohol or drugs..." [Read more](#) *Hmmm... C'mon Australia, 'Self-driving' cars are NOT 'Driverless' cars which is what you need when you've had too much to drink. 'Self-driving' can only take you part of the way home, so unless you are happy that the 'Self-driving' car picks you up after you've staggered to the 'on-ramp' and then dumps you in the gutter at the 'off-ramp', you are either*

going to have to stay 'on the wagon' or wait until there are 'Driverless' cars. This is **SERIOUS**. There is widespread misunderstanding of the capabilities and limitations of these technologies! There is an enormous difference between 'Self-driving' and 'Driverless'. While we have cars that can 'Self-drive' (See Tesla, above) on some roads some of the time, we have **zero** 'Driverless' cars that operate anywhere near any watering hole or near anyplace where anybody lives, anywhere in the world, at any time. And the prospects are not bright that we will have any, any time soon. If these 'studies' are to be taken seriously, they need to do a much better job of portraying their hypotheticals. The fault here lies in the [Australian Driverless Vehicle Initiative](#) (ADVI) which properly defines a 'Driverless' vehicle as one that replaces '**all** dynamic driving tasks' but unfortunately has as its 'poster child' a man sitting behind the wheel praying that the car will negotiate the turn ahead, and ready to save the day, should it begin to fail. This is an image of a 'Self-driving' vehicle NOT a 'Driverless' vehicle. ADVI should stop confusing the public by either changing its name or changing the images that it uses to portray its mission. Alain