

# SMART DRIVING CARS

<http://smartdrivingcar.com/Ford-081916>

Friday, August 19, 2016

The  
New York  
Times

## Ford Promises Fleets of Driverless Cars Within Five Years

N. Boudette, Aug 16, "In the race to develop driverless cars, several automakers and technology companies are already testing vehicles that pilot themselves on public roads. And others have outlined plans to expand their development fleets over the next few years.

But few have gone so far as to give a definitive date for the commercial debut of these cars of the future. Now Ford Motor has done just that. At a news conference on Tuesday at the company's research center in Palo Alto, Calif., Mark Fields, Ford's chief executive, said the company planned to mass produce driverless cars and have them in commercial operation in a ride-hailing service by 2021....

"That means there's going to be no steering wheel. There's going to be no gas pedal. There's going to be no brake pedal," he said. "If someone had told you 10 years ago, or even five years ago, that the C.E.O. of a major automaker American car company is going to be announcing the mass production of fully autonomous vehicles, they would have been called crazy or nuts or both."...

Ford also said it had acquired an Israeli start-up, [Saips](#), that specializes in computer vision, a crucial technology for self-driving cars. And the automaker announced investments in three other companies involved in major technologies for driverless vehicles....." [Read more](#) *Hmmm...This is significant because it implies that Ford, (or an entity under its control) will operate and deliver on a day-to-day basis MaaS (Mobility as a Service). In other words it will both build/assemble and operate mobility's "Cloud". The scale economies of such a mobility "cloud" are arguably much more substantial than that of the data storage & computing "cloud". Think about it! Alain*



## [Ford acquires SAIPS for self-driving machine learning and computer vision tech](#)

D. Etherington, Aug 16, "... It's also partnering exclusively with [Nirenberg Neuroscience](#), to bring more "humanlike intelligence" to machine learning components of driverless car systems.

[SAIPS'](#) technology brings image and video processing algorithms, as well as deep learning tech focused on processing and classifying input signals, all key ingredients in the special sauce that makes up autonomous vehicle tech. This company's expertise should help with on-board interpretation of data captured by sensors on Ford's self-driving cars, and turning that data into usable info for the car's virtual driver system. SAIPS' offerings include detection of anomalies, persistent tracking of objects detected by sensors, and much more. The company's past clients include HP and Trax, but its partner group doesn't appear to have included much in the way of driving-specific applications.

Ford ... identified SAIPS as a potential target through a tech scouting operation it began in Israel in 2013, and quickly determined that the company's machine learning expertise would help bolster its own efforts.

The Nirenberg partnership similarly takes research applied in a different area to the problems of full autonomous driving. Dr. Sheila Nirenberg's research focuses on restoring sight to patients with degenerative retinal disease, but Ford thinks the tech can be used to help its virtual drivers greatly improve their own vision systems, and process information in ways similar to how human drivers would...." [Read more](#) *Hmmm...Very promising. The race is on. Who is "the Usain Bolt"? Alain*



## [APNewsBreak: Ohio Turnpike May Soon See Self-Driving Testing](#)

J. Seewer, Aug 19, "Ohio's toll road, a heavily traveled connector between the East Coast and Chicago, is moving closer to allowing the testing of self-driving vehicles.

Testing is likely to begin within 12 months, and possibly before the end of the year, the Ohio Turnpike's executive director told The Associated Press.

Officials overseeing the roadway have spent more than a year looking at the possibilities, said Randy Cole, the turnpike's director...." [Read more](#) *Hmmm...Excellent!! [The NJ Turnpike and the NYS Thruway](#) should also be doing this for a host of excellent reasons. These are excellent roads that are largely amenable to self driving and should offer to*

*serve that capability in return for the tolls paid by the traveling public that has chosen to acquire the compatible technology. Just smart business sense. Alain*

**The  
New York  
Times**

[Uber Aims for an Edge in the Race for a Self-Driving Future](#)

B. Vlasic, Aug 18, "...Uber also said it had acquired Otto, a 90-person start-up including former Google and Carnegie Mellon engineers that is focused on developing self-driving truck technology to upend the shipping industry...Uber plans to open a 180,000-square-foot facility in Palo Alto, Calif., to house Otto, which will operate as a stand-alone company focused specifically on upending the long-distance trucking industry. Otto engineers will also work out of offices in San Francisco and Pittsburgh.

But that talent and technology will apply more broadly to the technology behind Uber's grander self-driving car efforts, Mr. Kalanick said. He said he believed that his company's approach — a combination of teaming up with hardware manufacturers, Otto's software expertise and a large network of more than 50 million monthly riders as recently as July — places Uber in the best position to be competitive with companies like Google." [Read more](#) *Hmmm...Wow...I didn't see that coming, especially after GM acquired Cruise. Congratulations Anthony and Lior. Alain*

**recode**

[Uber paid \\$680 million for self-driving truck company Otto for the tech, not the trucks](#)

J. Bhuiyan, Aug 18, "If the fact that Uber acquired a self-driving trucking company for \$680 million in stock along with an agreement that included giving the company 20 percent of its trucking profits shocked you, you're not alone.

Uber and Otto aren't exactly a natural fit. Uber has never once mentioned going into the long-haul trucking business or creating a logistics platform for truck drivers as one of its ambitions. On paper, Otto doesn't yet need a company like Uber. The startup just launched out of stealth mode in May and had 91 employees. It built proprietary, autonomous technology and was already testing its self-driving technology in trucks on highways in San Francisco..." [Read more](#) *Hmmm...Uber paid less for Otto than GM paid for Cruise. That's a real Hmmm! Alain*



### [Volvo Cars and Uber join forces to develop autonomous driving cars](#)

Press Release, Aug 18, "The two companies have signed an agreement to establish a joint project that will develop new base vehicles that will be able to incorporate the latest developments in AD technologies, up to and including fully autonomous driverless cars. The base vehicles will be manufactured by Volvo Cars and then purchased from Volvo by Uber. Volvo Cars and Uber are contributing a combined USD 300M to the project.

Both Uber and Volvo will use the same base vehicle for the next stage of their own autonomous car strategies. This will involve Uber adding its own self-developed autonomous driving systems to the Volvo base vehicle. Volvo will use the same base vehicle for the next stage of its own autonomous car strategy, which will involve fully autonomous driving."...[Read more](#) *Hmmm...Each are using their own "autonomous car strategies" on the same base vehicle.?? Seems to imply that the real intellectual property is in the "autonomous car strategies" and that the "base vehicle" is text-book.*  
*Alain*

### **Bloomberg** [Uber's First Self-Driving Fleet Arrives in Pittsburgh This Month](#)

**The autonomous cars, launching this summer, are custom Volvo XC90s, supervised by humans in the driver's seat.**

M Chafkin, Aug 18, "Starting later this month, Uber will allow customers in downtown Pittsburgh to summon self-driving cars from their phones, crossing an important milestone that no automotive or technology company has yet achieved. ...

In Pittsburgh, customers will request cars the normal way, via Uber's app, and will be paired with a driverless car at random. Trips will be free for the time being, rather than the standard local rate of \$1.05 per mile."...[Read more](#) *Hmmm...Some amount of "sleight-of-hand" here. This is about Self-driving and NOT Driverless, so it doesn't solve Uber's Labor "challenge". HOWEVER, it is a very elegant way for both Uber and Volvo to give demonstrations of self-driving rides to the general public all the while assessing and learning from the customer response. This would have to be done in the initial stages even if the cars were actually capable of driverless operation as was done in the initial stages of the driverless [Heathrow Terminal 5 podcars](#). The same must have been done when [Otis first put in automated elevators](#). And I suspect that the elevators in NYC's Tiffany & Co. can also operate operatorless (last time I was there they had operators :-). Alain*

## BUSINESS INSIDER

### [France is opening its roads to self-driving car testing](#)

Aug 10, "The French government has announced that it will allow car companies to test self-driving cars on public French roads, reports Designyourworld.

The change in policy is an element of the New Industrial France initiative, which aims to energize the country's industrial and manufacturing sectors..." [Read more](#)

*Hmmm...Another small step forward. Alain*

## yle

### [Helsinki rolls out driverless bus pilot](#)

M Chafkin, Aug 17, "History is being made in Helsinki's Hernesaari district, as automatic buses take to the streets. Commuters and motorists will have to get used to seeing a pair of driverless mini-buses negotiating traffic in the area as the city tests the robot vehicles through mid-September.

The pilots are among the first in the world, since Finnish laws don't require vehicles on the road to have a driver. This has made it easier for officials to get the required green light from the transport safety authority Trafi....

While Helsinki may be one of the first cities in the world to let loose the robot buses on the streets, it is not the first Finnish city to do so. Last year neighbouring Vantaa rolled out similar vehicles during its housing fair, although they only operated on routes shut off from other traffic at the time.

By contrast, Santamala considers the test track in Hernesaari to be a challenging traffic environment, because it is constantly changing. Motorists who may be prone to road rage will also have to keep their cool navigating traffic alongside – or behind – the robot buses, whose average speed is about ten kilometres an hour...." [Read more](#)

*Hmmm...Another small step forward. Alain*

### Some other thoughts that deserve your attention

The  
New York  
Times

### [Judge Overturns Uber's Settlement With Drivers](#)

M. Isaac, Aug 18, " A federal judge on Thursday struck down a proposed class-action settlement between Uber and a group of its current and former drivers, potentially continuing a protracted lawsuit that questioned a key tenet of the ride-hailing company's business.

Under a settlement forged in April, Uber had been set to pay up to \$100 million in reimbursement damages to nearly 400,000 drivers...Judge Edward M. Chen ruled that the April settlement was “not fair, adequate, and reasonable” as grounds for denial. He also said a small portion of the \$100 million amount reflects only 0.1 percent of the potential full verdict value of the case...As part of the settlement agreement, Uber also made other concessions, like recognizing and speaking with quasi-unions of its drivers in California and Massachusetts. It also allowed drivers to accept tips at the end of each ride...."[Read more](#) *Hmmm...Really bad when the judge rules settlement was “not fair, adequate, and reasonable”. Poor Uber drivers. Not only are they not wanted, they're not represented.... but they were going to be allowed to accept tips! Alain*



[Turning off red light cameras costs lives, new research shows](#)

July 29, " Red light camera programs in 79 large US cities saved nearly 1,300 lives through 2014, researchers from the Insurance Institute for Highway Safety (IIHS) have found. Shutting down such programs has cost lives, with the rate of fatal red-light-running crashes shooting up 30 per cent in cities that have turned off cameras. ...."[Read more](#) *Hmmm...Read the original study: W. Hu & J. Cicchino :[Effects](#) of Turning On and Off Red Light Cameras on Fatal Crashes in Large U.S. Cities. It is a a reasonably good study (especially the discussion starting on p16) but it did not account for what seems to be an increase in distracted driving in the last 10 years (See especially Figure 1, p12 ... the rise of the open circles since 2010.) Also, if we can assume that there are two main reasons why drivers run red lights: 1. they want to, or 2. they were clueless (they didn't see it, for what ever reasons). Cameras/Fines address #1 (from some perspectives the means (fines) have Draconian overtones, especially in poor communities where the traffic fine can spiral into total ugliness, way beyond its regressiveness. ) No one should run a red light (unless it is the middle of the night and there is zero traffic and you've stopped and look both ways and deemed it is safe to proceed and ...). So once your behavior has been changed by the red light camera, then why does the behavior revert once they are turned off. Is it because the sign designating it as such has been removed? (How prominent were those signs in the first place?) Then don't remove the sign, but would ITS still be a fan?. Alain*

[On the More Technical Side](#)

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

Older stuff that I had missed:

electrek

[Tesla responds to 'cover-up' claims in 'Montana Autopilot Accident', offers more details on investigation](#)

F. Lambert, July 23 "...Here's Tesla official response in full:..." [Read more](#)

*Hmmm...Speaks for itself. Alain*

Calendar of Upcoming Events:

**NEXTGEN**  
TRAIN CONTROL

[Sept 15 & 16, 2016](#)

[Arlington, VA](#)



[Sept 19-21, 2016](#)

[Antwerp, Belgium](#)