

# SMART DRIVING CARS



<http://smartdrivingcar.com/History-0303516>

[Thursday, March 3, 2016](#)



## [THE ROAD NOT TAKEN: How we found \(and lost\) the dream of Personal Rapid Transit](#)

A. Robertson, Feb 10 , Feb. "...Half a century after its heyday, the Alden StaRRcar clearly wasn't made for its world. It looks like a white flatiron with wheels or a sleek, plastic bullet, dwarfed by the regal sedans of 1960s Detroit. It belongs in one of Buckminster Fuller's domed cities, a vehicle for traveling under the geodesics of a bubble-topped Manhattan. Its future wasn't one of highways, but of narrow cement tracks looping gracefully between city and suburb, connecting increasingly alienated parts of the American landscape...

Once considered a key to solving urban blight, the StaRRcar was part of a public transit revolution that never was — but one that would help launch one of the weirdest and most politicized public infrastructure experiments of the 20th century. It's an old idea that today, in an age of self-driving cars, seems by turns impractically retro and remarkably prescient...

PRT's invention is attributed to a transportation expert named Donn Fichter, but the central idea was conceived, remixed, and adapted by many in the 1950s and 1960s. While the details varied, the prototypical PRT system was a network of narrow guideways populated by small passenger pods. When commuters arrived, they would hit a button to select a destination, calling one of the pods like a taxi. Then, instead of running on a set line, the pod would use guideways like a freeway system, routing around stations in order to take passengers directly to their final stop.

The system was designed to be everything that existing public transportation wasn't. Pods would carry only as many people as an average car, guaranteeing a nearly private ride. Riders wouldn't need to follow a timetable or wait for other people to enter and exit the system. Because the pods would only be dispatched on demand, cities could run service to many low-

traffic areas without worrying about waste. There were no drivers to train or pay, and the pods could run quietly on electrical power instead of with fossil fuels...

Multiple plans for personal rapid transit fell through, whether because of budget problems, logistical issues, or political power struggles....

And as in the '60s, we're talking about whether self-driving vehicles could spell the end of private cars...." [Read more](#) *Hmmmm...A must read. Pretty much as I remember it. I lived much of it, including designing 10,000 station, 10,000 mile PRT networks that could serve all of New Jersey's needs for personal mobility. The good news was that the area-wide systems would provide great mobility for all. The bad news: No viable way to start. The best starting places could each be readily served by conventional systems with no technology risk. Without a place to start, PRT never got a chance to flourish in the vast areas that are un-servable by conventional technology. Moreover, PRT needed the diversion of public sector capital funds that weres already in the back pocket of those pedaling the conventional technologies. Consequently, the personal auto has reigned on.*

*Today is different. With PRT, even the first vehicle needed a couple of stations and interconnecting guideway (and all of the discussion and heartache was about the location and cost of those initial stations and guideway). With autonomous taxis **sharing** existing roads, one can begin with a single vehicle capable of serving many existing places without needing to pay-for/justify any infrastructure. That is today's fundamental opportunity, in contrast to PRT's monumental infrastructure burden even for one vehicle. That's why aTaxis are destined to finally deliver PRT's utopian mobility to all and substantially transform our cities and suburbs.*  
Alain

engadget

[Google self-driving car crashes into a bus \(update: statement\)](#)

J. Fingas, Feb 29 "It may be the first instance of a Google autonomous car being at fault in an accident...." [Lexus RX450h 2/14/16 DMV Report signed by Chris Urmson](#) [Read more](#)  
*Hmmmm...had to happen, but it was at 2mph. No big deal. Alain*



[ATRI SOLICITING TRUCKING INDUSTRY CRASH COST DATA FOR](#)

[NEW RESEARCH](#)

Press Release, March 2, "The American Transportation Research Institute (ATRI), the trucking industry's not-for-profit research organization, today launched a new data collection initiative to create a database of motor carrier crash costs by crash type and severity. This data collection will populate ATRI research designed to enable carriers to make better informed Onboard Safety System (OSS) deployment decisions.

This request for data is targeted toward motor carriers. ATRI is also **working with its insurance industry partners** to complete the crash cost database. [Read more](#) *Hmmmm... the operative*

*word are "...working with its insurance industry partners ..." to properly determine what is "self-insured" and what was covered by insurance for the accident histories of the trucks that have and have not the various OSS. Alain*



**ERICSSON**

### [Scania and Ericsson join forces to improve transport efficiency](#)

Press release, Feb 25, "...New developments in LTE and 5G standardization have created opportunities for dedicated vehicle-to-vehicle communications using the mobile network while minimizing risks of unpredictability and latency...." [Read more](#) *Hmmmm...You mean they are doing it without "FHWA"?! :-) Alain*



### [Varden Labs demonstrates self-driving shuttle at Fresno State](#)

Feb 23, "Silicon Valley-based [Varden Labs](#) showed off its electric, autonomous shuttle at Fresno State, Tuesday, Feb. 22, 2016. Rides were given to students, staff and media. The demonstration is part of a series of events hosted by the university's Lyles College of Engineering to commemorate National Engineers Week." [Read more](#) *Hmmmm...See video to view early version of an emerging product. Alain*



### [NVIDIA Puts Pedal to the Metal in New Jersey, Opens Auto Tech Office in Storied Bell Labs Site](#)

Feb 23, "This week, NVIDIA is opening a new office in New Jersey, where we'll focus on developing software for self-driving cars on our artificial intelligence DRIVE PX platform. AI and deep learning are playing a critical role in advances in driver assistance and ultimately autonomous vehicles.

The new NVIDIA space, coincidentally, is in the former Bell Labs building, in Holmdel, New Jersey, where deep learning pioneer Yann LeCun invented convolutional networks back in the late 1980s. These networks are instrumental to deep learning in general, and to the work of our team in particular." [Read more](#) *Hmmmm...Given the work that we are doing at Princeton University in Deep Learning ([DeepDriving](#)) and that of MobilEye's Andras Ferencz who works in Princeton, the addition of NVIDIA's initiatives in this are make New Jersey is the focal center of image-based software for SmartDrivingCars. :-) Alain*



### [DOT opens competition for transportation research grants](#)

Fastlane, Mar.1, "...up to \$377.5 million will be available over 5 years to support solution-oriented transportation research at colleges and universities under our University Transportation Centers (UTC) program. For Fiscal Year 2016, that's a substantial investment of up to \$72.5 million in the talent and ingenuity cultivated in American higher education. ... letter of intent by April 1, 2016, and an application for funding by May 13, 2016. Applicants will compete to join one of 35 UTC consortia; each focused on a major national transportation topic, such as transportation safety or freight mobility..." [Read more](#) *Hmmmm...OK. Alain*



Analyze the Future

### [Responsibility for Vehicle Security and Driver Privacy in the Age of the Connected Car](#)

ICI Opinion, Feb. 2016, "The Connected Car is one of the primary use cases for the Internet of Things (IoT). Yet it is one of the least well understood in terms of cybersecurity. Recent media coverage has exposed critical vulnerabilities to the software that improves performance of the vehicle and the experience of the driver. Similarly, personal data may be collected from cars — for legitimate purposes — that could compromise the privacy of drivers. Veracode commissioned this study to explore how manufacturers are addressing these issues and to understand whether drivers are concerned about them....to shed light on:

What are the cybersecurity implications of the connected car?

Who is responsible for ensuring the applications are secure?

Where does product liability lie with regard to the connected car?

What are the issues and approaches for personal data and privacy?

What types of applications that are drivers demanding? "

[Read more](#) *Hmmmm...Very interesting, but it fails to properly differentiate between "on-board-autonomous-collision-avoidance/ lane-keeping/self-driving" focused on enhancing safety versus "travel-tainment" -oriented connectivity. In my simple way of thinking it will be a very long time before "connectivity" has any impact on safety. By its nature "connectivity" delivers nothing by itself. It needs essentially everyone to be "reading from the same song sheet" in order to be effective. If it isn't essentially all, then it is none! On the contrary, the on-board-autonomous is, by its nature, operating as a one-off in delivering its value. It doesn't need anything from anybody. Consequently, it is largely immune to the security and privacy issues until the incremental benefits of the connectivity outweigh the security and privacy baggage that it brings along. So for now, it is important to build a strong firewall between the connectivity systems and the "self-driving" systems so as to enable "self-driving" to advance until a time when connectivity has properly addressed the safety and privacy issues, which may not be soon.*  
*Alain*



### [Automated Driving & Platooning: Issues & Opportunities](#)

TMC IR 2015-2 "This Information Report is published by ATA's Technology & Maintenance Council (TMC) and examines the intensive activity in the development and introduction of Automated Vehicles (AVs) and identifies potential issues and opportunities for the trucking industry. This report is intended to promote better understanding of this emerging technology and serve as a platform for discussing key areas of interest and concern on the part of commercial fleets. This report was developed by TMC's Automated Driving and Platooning Task Force under the auspices of the Council's Future Truck Committee." [Read more](#)

*Hmmmm...Unfortunately, I have not been able to get a copy of the report to review it. The above paragraph is encouraging; however, since the word "safety" doesn't appear above; nor does insurance/liability and "platooning" does appear I am suspicious that this may continuing to miss the miss the point as to why automation is so vital to improving the lives of truck drivers and truck owners. :-( However, there is the [TMC Future Truck Program Position Paper: 2015-3 Recommendations Regarding Automated Driving and Platooning Systems](#) which refers to this report. ????)Alain*



### [Geneva: Volvo announces Pilot Assist II updates](#)

Mar. 2, "Volvo Cars has announced a wide range of updates for model year 2017, including the introduction of its latest semi-autonomous drive technology, Pilot Assist II, as standard on the XC90 in selected markets. The introduction of Pilot Assist II on XC90 is made possible thanks to the modular approach to car building enabled by Volvo's new SPA architecture. Introduced first in the new S90 premium sedan, Pilot Assist II supports drivers up to speeds of 130 km/h in well-marked highway conditions.

City Safety updated: Volvo has also expanded its safety technology to cover one of the most common causes of single vehicle accidents with Run-off road mitigation, which uses auto-steer to help keep you on the road. Volvo's standard collision avoidance system, City Safety, also receives an update with Large Animal Detection added on 90 Series cars....." [Read more](#)

*Hmmmm...At least they are not over-hyping and it operates at speeds up to 130km/hr. Thank you. (If you want to go faster than 130km/hr, please stay far away from me. :-) ). Alain*



## [STMicroelectronics Reveals Most Highly Integrated Automotive 77GHz Radar Chip for Emerging Long-Range Applications](#)

Press release, Feb 23, "STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications and the world's largest supplier of short- and mid-range (24GHz) radar chips for Advanced Driver Assistance Systems (ADAS), is now supplying its latest long-range (77GHz) radar chips to leading automotive customers..." [Read more](#) *Hmmmm...Excellent. Alain*



## [Harbrick Goes West, Harvests Funds](#)

Feb 17, "Autonomous driving technology is growing fast, and startups like Harbrick Technologies are growing with it. The developer of the popular middleware plug-in PolySync has raised money, hired top technology executives, and moved to the West Coast, all in the last quarter or so...." [Read more](#) *Hmmmm...Congratulations!!. Alain*

### Some other thoughts that deserve your attention



## [Geneva: Volvo announces Pilot Assist II updates](#)

Feb 29, "The World Trade Center Transportation Hub, opening Thursday, gives the city an Instagram-ready attraction and the most expensive train station ever... The project's cost soared toward a head-slapping, unconscionable \$4 billion in public money for what, in effect, is the 18th-busiest subway stop in New York City, tucked inside a shopping mall, down the block from another shopping center....Meanwhile, the city has an Instagram-ready attraction whose defenders insist no one will remember it is the most expensive train station ever. Who recalls how much Grand Central cost?

Actually, I do. It cost \$80 million, or about half the cost of the hub, adjusting for inflation, which was private, not public, money. Grand Central spurred a building boom that transformed the surrounding blocks and the city's economy. This new hub is shoehorned into an unfinished office park in Lower Manhattan whose development it has complicated, not hastened — while the whole area has been evolving into a livelier live-work neighborhood despite what's happening at the World Trade Center, not because of it..." [Read more](#)

*Hmmmm...Unbelievable!. Has the public sector doing anything right lately in the transportation arena? :-( Alain*



[Welcome to Competitive Drone Racing](#)

D. Ferry, Mar. 2 "How do you start a new sport from scratch? A former Tough Mudder executive and other entrepreneurs around the world are about to find out..." "The best drone pilots in the world have come together here," the reporter intones, "to face off against one another and a racecourse built for speed!" The countdown begins: three, two, one! A bell rings and the machines rise off the launch pad then accelerate through neon-lit gates, into the concourse, then up a circular staircase. They hit speeds above 80 mph. Welcome to the qualifying rounds of the Drone Racing League's inaugural season..." [Read more](#) *Hmmmm....Interesting! Certainly a step up from video games. Alain*



[Woman, 77, Fatally Struck by Livery Cab in](#)

[Midtown](#)

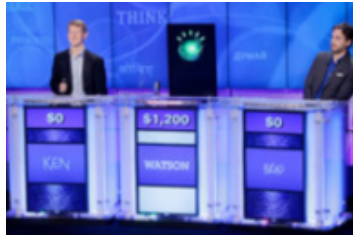
N. Remnick, Feb. 29, " ..... was crossing Madison Avenue at 36th Street just after 8:30 a.m. on Monday, a few blocks from her apartment and the costume jewelry company that she started more than 35 years ago, when a black livery cab turned and struck her, pinning her under the car..." [Read more](#) *Hmmmm....How do these tragedies continue to plague us when Automated Collision Avoidance Systems (ACAS) that can mitigate such tragedies remain sitting on the shelves of the OEMs. These systems must be adopted NOW. Since NHTSA wont mandate them, Insurers must make their adoption "intuitively obvious to the most casual observer"! Insurance should either cease cross-subsidizing drivers of so unequipped cars or simply buy the systems for them and enjoy the cascading increase in profits. It is now abundantly clear that the insurance risk associated with a pool of ACAS-equipped vehicles is substantially smaller than that of a pool of vehicle not-ACAS-equipped. Moreover, that difference, at least associated with transit buses, is greater than the market price of the ACAS option. Insurance rates must begin to reflect this disparity! Alain*



[Welcome to the Smart Mobility newsletter](#)

The last few years' massive work on self-driving vehicles is now changing gear and traditional vehicle manufacturers, like Ford, as well as new players are increasingly looking at using automation to design new mobility services. This newsletter aims to keep its readers abreast of just that; new exciting concepts within the field of Smart Mobility. .." [Read more](#) *Hmmmm....Welcome Jan! Alain*

# The New York Times



## [Slowly Fulfilling the Promise of Watson](#)

S. Lohr, Feb 28 9 "When IBM's Watson computer triumphed over human champions in the quiz show "Jeopardy!" it was a stunning achievement that suggested limitless horizons for artificial intelligence.

Soon after, IBM's leaders moved to convert Watson from a celebrated science project into a moneymaking business, starting with health care. Yet the next few years after its game show win proved humbling for Watson. Today, IBM executives candidly admit that medicine proved far more difficult than they anticipated. Costs and frustration mounted on Watson's early projects. They were scaled back, refocused and occasionally shelved. IBM's early struggles with Watson point to the sobering fact that commercializing new technology, however promising, typically comes in short steps rather than giant leaps..." [Read more](#) *Hmmmm...Very interesting. Alain*



## [When 'Symptoms of Television' Began Their Inexorable Spread](#)

N. Bakalar, Feb 29, "It was a problem everyone knew was solvable, but one that had yet to be solved.

Engineers, inventors and tinkerers had been working on "telemotion," the "televista," the "photo-telegraph," the "tele-vision" in various forms, using well-known technologies and off-the-shelf equipment, since the early 20th century. The New York Times first mentioned the idea — it was still only an idea — on Feb. 24, 1907, in an article announcing the first successful transmission of photographs by wire. "The new 'telephotograph' invention of Dr. Arthur Korn," the anonymous reporter wrote, "assures us that 'television,' or seeing by telegraph, is merely a question of a year or two with certain improvements in apparatus...." [Read more](#) *Hmmmm...More perspective on technological change. Alain*

### [On the More Technical Side](#)

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





### [Comments on Proposed AV Regulations in California](#)

R. Peterson, Feb 23, "...Although section 38750 attempts to assign the regulation of "autonomous vehicles" to the DMV, the definition of "autonomous vehicle" was unworkable and outdated soon after its adoption. The definition attempts to draw a distinction between systems that "enhance safety or provide driver assistance" (listing, but not limiting them to a list of systems that existed at the time), but attempts to exclude from these safety enhancing features, those technologies "capable" of driving the vehicle "without active control or monitoring of a human operator."

There are two faults in this definition. First, it seems to attempt a distinction between safety enhancing features and autonomous vehicles. This is a false dichotomy. By taking drunk, distracted, careless, and sleepy human drivers with their limited skills out of the primary role of driving, autonomous technology is safety enhancing. It just happens to bring in its train a number of additional utilities and benefits that most safety features do not deliver. This is hardly a vice.

Secondly, the definition turns on "capability," not the OEM's purpose or intention. 227.02(d). Almost as soon as section 38750 was adopted, and before these proposed regulations were published, vehicles "capable" of driving themselves within the parameters for which they were designed were on the roads and legal in every state, including California. [Read more](#)

*Hmmmm...Excellent. Alain*

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



### [ATRI SOLICITING TRUCKING INDUSTRY CRASH COST](#)

#### [DATA FOR NEW RESEARCH](#)

Press Release, March 2, "The American Transportation Research Institute (ATRI), the trucking industry's not-for-profit research organization, today launched a new data collection initiative to create a database of motor carrier crash costs by crash type and severity. This data collection will populate ATRI research designed to enable carriers to make better informed Onboard Safety System (OSS) deployment decisions.

This request for data is targeted toward motor carriers. ATRI is also **working with its insurance industry partners** to complete the crash cost database. [Read more](#) Hmmmm... the operative word is "...**working with its insurance industry partners** ..." *to properly determine what is Self-insured and what was covered by insurance for the accident histories of the trucks that **have and have not** the various OSS. Alain*

## THINKING Highways

### [Nissan Unveil A New Driverless Version of The Qashqai](#)

Mar. 2, "Stage one autonomous drive technology will give refreshed Nissan Qashqai 'single lane control' in heavy traffic conditions on highways...." [Read more](#) *Hmmmm...Headline grossly exaggerates what's here. Playing catchup, but far behind. Alain*