#### **Europe Starts Planning For Autonomous Cars**

Carmakers will pick up your insurance bill for your self-driving car under proposed European laws that make the companies liable for any damage or injury cause.

The European Parliament has just voted to support a draft report which looks into the framework around who will be to blame if a self-driving car crashes.

The report makes an urgent call to the insurance industry to start imagining how it would deal with an autonomous car that goes rogue, damaging people or property, and advises carmakers to take out insurance on their robotic products just in case.

"The future legislative instrument should provide for the application as a rule of strict liability to damage caused by 'smart robots', requiring only proof of a causal link between the harmful behaviour of the robot and the damage suffered by the injured party," the report says.

#### **Share Quote**

"An obligatory insurance scheme, which could be based on the obligation of the producer to take out insurance for the autonomous robots it produces, should be established.

https://www.wheelsmag.com.au/news/1701/europe-starts-planning-for-autonomous-cars

2017-01-16



#### **Positioning Technology Program Receives Government Funding**

A program designed to test instant, accurate and reliable positioning technology will receive funding from the federal government.

Research has shown that the widespread adoption of improved positioning technology has the potential to generate more than \$73 billion of value to Australia by 2030.

The program could test the potential of Satellite Based Augmentation Systems (SBAS) technology in the four transport sectors — aviation, maritime, rail and road.

"SBAS utilises space-based and ground-based infrastructure to improve and

augment the accuracy, integrity and availability of basic Global Navigation Satellite System (GNSS) signals, such as those currently provided by the USA Global Positioning System (GPS)," said Federal Minister for Infrastructure and Transport Darren Chester.

"The future use of SBAS technology was strongly supported by the aviation industry to assist in high-accuracy, GPS-dependent aircraft navigation."

http://www.technologydecisions.com.au/content/gov-tech-review/news/positioning-technology-program-receives-government-funding-56627373#axzz4WIBP4qPR 2017-01-18



# Autonomous Cars Won't Kill People, But They Will 'Take Our Jobs'

I'm both excited and nervous about the arrival of the autonomous car.

Seeing firsthand at **CES 2017** just how dedicated the automotive industry and the big-name tech brands are to making cars that won't need to be driven, was an eye-opener for me.

It sounds like a future world full of promise: people won't need to worry about driving their car home if they're too tired or too drunk to drive. They won't need to concentrate on the road if they have something else on their mind. And the cars won't crash, because the computers will be so high-tech and much better at avoiding accidents than a tired or distracted driver.

But forget all that. **Autonomous cars** may not kill people with all their clever mapping, sensors, cameras, radars and such, but they will almost certainly kill some people's livelihoods.

Here's a scenario for you: Bob is a 47-year-old Sydney resident, who works in the city five days a week. He starts early and finishes late, doesn't see his kids as much as he'd like, and his wife is working full-time a bit closer to home, too.

Now, let's imagine Bob is working some extra hours as an Uber driver, trying to help make ends meet to get ahead on his million-dollar mortgage in the suburbs. He does this on Friday nights, Saturday nights and Sunday afternoons, when the money is good, because otherwise he mightn't make enough cash to catch up.

Well, too bad, Bob – you're getting the sack. Uber as we know it won't use humans to drive people places. The cars will do that for them, and over time it will be cheaper for them.

The same will happen for taxis, hire cars, probably even buses in the long run. And the socialist part of me hates the hell out of the idea.

http://www.caradvice.com.au/511822/autonomous-cars-wont-kill-people-but-they-will-take-our-jobs/

2017-01-20



# **Galileo Clock Anomalies Under Investigation**

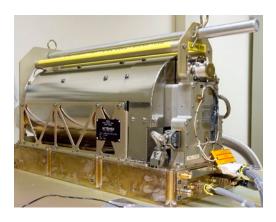
The European Space Agency (ESA) issued a press release addressing the Galileo clock failures reported Jan. 18. GPS World Innovation editor Richard Langley provided the following summary of the satellites and clocks involved, based on information we have received to date.

- 5 satellites affected: 3 IOVs, 2 FOCs
- Total of 10 failures; 1 fixed; so 9 continuing failures
- 5 masers on IOV satellites
- 2 masers on FOC satellites but 1 of these fixed
- 3 rubidiums on FOC satellites
- No satellite currently has fewer than 2 working clocks

The ESA press release provides additional details on the failures and actions being taken to address the problem.

Read more in *GPS World* article. http://gpsworld.com/galileo-clock-anomalies-under-investigation/

2017-01-19



#### **NT Driverless Bus Trial**

This will be the first time an autonomous vehicle will be used as a transport solution in Australia.

Northern Territory Chief Minister Michael Gunner says the six-month trial deployment of Australia's first EasyMile EZ10 'driverless' vehicle at the Darwin Waterfront commencing early this year.

It will see the driverless vehicle transport visitors from the Waterfront precinct to Stokes Hill Wharf on a repeat loop.

"Autonomous transport technology is no longer science fiction – it's here and we are leading the way," he says.

"With this project, the NT Government and Darwin join an exclusive list of jurisdictions worldwide actively developing autonomous transport including Singapore, Dubai/UAE, France, Netherlands, California and Japan.

"This project is something I have been interested in for a while now as we need to look towards these technologies as an alternative and niche way of efficiently and safely moving people around precincts and the CBD – and ultimately, the potential of linking the harbours between Stokes Hill and Cullen Bay.

"This trial will see the vehicle transport people between Stokes Hill Wharf and the Darwin Waterfront, and from there we can look towards future options in the Top End."

The fully autonomous vehicle provides zero emissions when operating, is fully airconditioned and capable of carrying up to 12 passengers at one time. The vehicle can provide up to 12 hours of operation per charge.

The first stage of the trial will cost the NT Government approximately \$150,000. https://www.busnews.com.au/industry-news/1701/nt-driverless-bus-trial 2017-01-17



# Coming to a Commute Near You: Melbourne Launches World-first Connected Living Transport Lab

The fringe of Melbourne's CBD will become a connected transport living lab from this year, in an ambitious project that will connect data from vehicles, bicycles, transport infrastructure and more, to prevent traffic jams and crashes, and cut travel times and carbon emissions.

The project, led by the University of Melbourne School of Engineering, is now set to hit the streets following the signing of an University MOU on 6 January with 17 private and public sector project partners.

The University of Melbourne is collaborating with industry leaders from Australia and around the globe to integrate data from VicRoads, Public Transport Victoria, the City of Melbourne, City of Yarra with traffic updates from global giant HERE Maps, to deliver insights into traffic planning, pedestrian flows, public transport efficiency and freight movements.

A 1.2 square km 'test bed', taking in busy freight and commuter routes and shopping strips — including Australia's most congested road, Hoddle Street —will be fitted with thousands of sensors, enabling communication between thousands of devices and data sets that have until now been islands — such as tram and train movements.

http://newsroom.melbourne.edu/news/coming-commute-near-you-melbourne-launches-world-first-connected-living-transport-lab

2017-01-06



### Singapore to Start Trials of Driverless Trucks for Port Transport

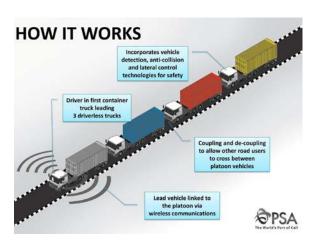
Following various trials on the use of driverless cars and buses, Singapore is now ready to put driverless trucks to the test. The trucks will be used to transport containers from one port terminal to another.

Agreements were signed on Jan 9 with two automotive companies, Scania and Toyota Tusho, to develop and test-bed an autonomous truck platooning system. This involves a human-driven lead truck leading a convoy of driverless trucks.

"Efficient freight movement is critical to the competitiveness of our port. Truck platooning will also alleviate our shortage of manpower, and allow more freight movement to be conducted at night to ease traffic congestion," said the joint release.

http://www.channelnewsasia.com/news/singapore/singapore-to-start-trials-of-driverless-trucks-for-port/3424270.html

2017-01-09



# Cars the Stars at Las Vegas Tech Show

Futuristic cars powered by voice controls that can read passenger emotions and drive themselves drew the biggest crowds on the first day of CES.

The technology trade show in Las Vegas opened its doors for the first time on 5 January, with about 170,000 visitors expected across four days.

Many flocked to car giant Toyota's booth to see the firm's Concept-i car, which instead of buttons and screens is interacted with using voice. The built-in virtual assistant Yui uses artificial intelligence to measure emotions based on passenger responses and alters the car's settings according, Toyota says.

Start-up Faraday Future also publicly showcased their first production car, an electric vehicle it says is capable of reaching 60mph in less than 2.4 seconds. The car also has autonomous features and can park itself. However only 300 of the FF91, which the firm says will challenge Tesla, have so far been announced as going into production.

There were also concept cars on show from less traditional sources, as appliance firm Bosch presented a car it says could become the "third living space" alongside home and work.

https://nz.news.yahoo.com/technology/a/33734057/cars-the-stars-at-las-vegas-tech-show/#page1

2017-01-06



# Geocaching: GPS Treasure Hunt On Shifting Ground As Australia Changes Coordinates

Australia is on the move.

The continent drifts in a north-north-east direction at rate of 7cm a year. But, from this year, its recorded latitude and longitude will move 1.8 metres – a scheduled update to the local coordinate system to reflect the movement of the Earth's tectonic plates.

The transition to the new datum, overseen by Geoscience Australia, will be gradual over the next two years. But for the 10,000 or so Australians who use coordinates for geocaching, it has sparked much discussion.

Geocaching began in the early 2000s as a sort of real-world treasure hunt, or high-tech orienteering, in which players hunt for registered "caches" hidden and recorded

by other players.

The cache itself is a box, often a reusable food container, though the only requirement is that it is watertight and large enough to hold a logbook. A player hides it and records its location with enough detail for it to be found by another player, who will then take something out of the box and replace it with an item of equal or greater value.

https://www.theguardian.com/technology/2017/jan/01/geocaching-gps-treasure-hunt-on-shifting-ground-as-australia-changes-coordinates 2017-01-01



# **Directions 2017: GPS Navigates the Future**

I'm proud to be a part of the accomplishments of the men and women of the Space and Missile Systems Center's Global Positioning System Directorate at Los Angeles Air Force Base in El Segundo, California. The year has been extremely challenging, but looking back on 2016, we have taken real steps forward to modernize the GPS Enterprise and the way we do business – Col. Steven Whitney.

Read more in *GPS World* article. http://gpsworld.com/2016-in-review-gps-navigates-the-future/

2016-12-02



# **Directions 2017: New GLONASS Capabilities for Users**

In October 2017 we will celebrate the 35th anniversary of the first GLONASS satellite launch. Since 1982, the capabilities provided by GLONASS satellites have multiplied and the system's ground infrastructure has expanded beyond the Russian Federation.

Growing demand for satellite navigation services and increasing user requirements call for continuing modernization, which is only possible if advanced, technically complex solutions are employed, thorough efforts on design and in-orbit validation are made, and continuing dialogue with users is maintained to promptly react to their needs – Sergey Karutin, Nicolay Testoedov and Andrey Tulin

Read more in *GPS World* article. http://gpsworld.com/directions-2017-new-glonass-capabilities-for-users/

2016-12-08







#### Directions 2017: BeiDou's Road to Global Service

An effective approach has been taken by the BeiDou Navigation Satellite System (BDS), and significant progress has been witnessed in 2016, from the aspects of launching new satellites, verifying new technologies, promoting applications and industrialization, strengthening international cooperation, and formulating fundamental policies – Li Wang

Read more in *GPS World* article. http://gpsworld.com/directions-2017-beidous-road-to-global-service/

2016-12-06



#### **Directions 2017: The Year of Galileo**

I write at an especially exciting moment for the Galileo satellite navigation system, as two flagship European programmes combine for the very first time.

Mid-November will see the very first Galileo launch using an Ariane 5 launcher from Europe's Spaceport in French Guiana, in place of the Soyuz that has served the constellation up until now. Four instead of two Galileo satellites will be launched at a time: The number of satellites girding the globe will rise at a single stroke from 14 to 18.

Meanwhile, the European Union is set to declare Galileo operational for initial services at the end of this year, bringing the system to the point where it can finally start serving users – Paul Verhoef

Read more in *GPS World* article. http://gpsworld.com/directions-2017-the-year-of-galileo/

2016-12-09

