Death by GPS

One early morning in March 2011, Albert Chretien and his wife, Rita, loaded their Chevrolet Astro van and drove away from their home in Penticton, British Columbia. Their destination was Las Vegas, where Albert planned to attend a trade show. They crossed the border and, somewhere in northern Oregon, they picked up Interstate 84.

If Albert had been navigating the route in the daytime, he might have noticed that it was taking them through the high desert as it rose toward shimmering snowy peaks in the distance. In the dark, the changes were so subtle that they barely registered. And besides, he was on a road—“a pretty good road,” the Elko County sheriff would later say, that “slowly goes bad.” Through the night, it carried them higher into the Jarbidge Mountains, deeper into the backcountry. The road twisted, dipped, rose again, skirting canyons walled with sagebrush. It was the kind of terrain for which the Chretiens’ van was not designed.

Several days passed before their family and friends realized that Albert and Rita had never arrived at the trade show. The couple had not informed anyone of their detour, so nobody knew where to look for them. The manhunt involved police agencies in four states, scouring 3,000 miles of highway, with the most intense efforts in eastern Oregon, where they had used a credit card in a convenience store. On April 8, just shy of three weeks since Albert Chretien left Highway 51, authorities announced they were scaling back search and rescue efforts, a tacit admission that wherever the Chretiens had gone, it was too late to find them.

What happened to the Chretiens is so common in some places that it has a name. The park rangers at Death Valley National Park in California call it “death by GPS.” It describes what happens when your GPS fails you, not by being wrong, exactly, but often by being too right. It does such a good job of computing the most direct route from Point A to Point B that it takes you down roads which barely exist, or were used at one time and abandoned, or are not suitable for your car, or which require all kinds of local knowledge that would make you aware that making that turn is bad news.

http://arstechnica.com/cars/2016/05/death-by-gps/

2016-05-03

Timing Matters – GPS and the Stock Exchange Tell Us Why

What does the Global Positioning System (GPS) and the New York Stock Exchange (NYSE) have in common? As experts would say, “It’s all in the timing.” Last week, I got the chance to attend a demonstration at the NYSE on Enhanced Loran (eLoran), a precision-timing technology for financial transactions. eLoran is one of several technologies being considered to provide a complementary timing solution to existing GPS technology.

As the lead civil federal agency for GPS, the U.S. Department of Transportation has a huge responsibility to represent the myriad of civil GPS applications, not only for transportation, but applications ranging from operations of first responders, search and rescue, weather forecasting, earthquake monitoring, surveying and mapping, precision agriculture, and…of course…financial transactions. We accomplish this through our Office of Positioning, Navigation and Timing & Spectrum Management (PNT).

https://www.transportation.gov/fastlane/timing-matters-–-just-ask-your-gps-device

2016-04-29

India Gets its Own GPS After Successful Launch of Seventh Navigation

Satellite

India has completed the mission for developing its own navigation system, along the lines of the US's Global Position System. The Indian Space Research Organisation (ISRO) successfully launched the IRNSS-1G, the last in a series of seven navigation satellites that make up the constellation.

IRNSS-1G was launched on PSLV-C33 from the Satish Dhawan Space Centre on the Sriharikota Island at 12.50 p.m. 28 April. With the Indian Regional Navigation Satellite System (IRNSS), the country has joined the league of five other countries or blocs with their own navigational systems, including the US, Russia, China, and the European Union. Until now, India had been largely using the GPS developed by the US.

http://mashable.com/2016/04/28/irnss-1g-india-gps/#pNXZVQiOsgqV

2016-04-28

Volvo Will Test Driverless Cars on London Roads Next Year

Driverless cars are coming to the streets of London, with Volvo announcing plans to put autonomous vehicles in the hands of real people on the UK capital's roads.

The scheme, dubbed Drive Me London, will begin in early 2017 and comes alongside autonomous vehicle testing on the congested roads of China, as well as the streets of Gothenburg in Volvo's native Sweden, as the car manufacturer looks to research the practicalities of driverless cars in live environments.

"We're trying to understand how to bring the technology of self-driving cars to the real world and we believe that the real world is the best place where you can learn," Erik Coelingh, senior technical leader for safety and driver support technologies at Volvo, told ZDNet.

http://www.zdnet.com/article/volvo-will-test-driverless-cars-on-londons-roads-next-year/

2016-04-27

Singapore to Roll Out Automated Transit Pods

Following the recent announcement that Singapore will begin testing autonomous taxis on its roads, public transport operator SMRT has detailed its plans to roll out driverless transit systems by the end of 2016.

Partnering with automated travel company 2getthere, SMRT is looking to introduce Group Rapid Transit (GRT) 'pods' onto Singapore's roads. The vehicles can carry up to 24 passengers each and, according to SMRT, will offer a low-cost, automated transport solution with the capacity to cater for as many as 8,000 passengers per hour.

"The new Singapore-based joint venture, called 2getthere Asia Pte Ltd will market, install, operate and maintain the Automated Vehicle systems for customers in Singapore and the Asia-Pacific. The joint venture aims to showcase 2getthere's 3rd Generation Group Rapid Transit (GRT) vehicle capabilities in Singapore by the end of the year," a SMRT statement noted today.

The GRT pods will be able travel at a speed of 40km/h, and have been pegged as potential transit vehicles for use in airports, campuses, residential areas, resorts and industrial parks.

https://thestack.com/iot/2016/04/20/singapore-to-roll-out-automated-transit-pods/

2016-04-20

The IGNSS Society runs the SE Asian region's premier conference on Global Navigation Satellite Systems (GNSS) and related Position, Navigation and Timing (PNT) technologies. This year's IGNSS conference will be in Sydney, Australia from 6 to 8 December 2016 and will bring together leaders in GNSS and PNT to examine the latest technology, present cutting edge research and discuss in open forums the implications for policy, market development and positioning infrastructure deployment.
IGNSS 2016 will showcase a number of contemporary topics including, the role of PNT in automated land and aerial vehicles, the growing range of commercial precise positioning services, hard infrastructure issues such as space based augmentation systems, and soft infrastructure issues such as datum modernisation and mitigation of system vulnerabilities. These hot topics will be discussed in the context of the latest system developments fuelling the Multi-GNSS Era.

Closing date for submission of abstracts 4 July 2016

Closing date for papers requiring peer review 26 September 2016

http://ignss2016.unsw.edu.au

2016-04-22

EU, UK Resolve Galileo Signal Patent Dispute

The European Union (EU) has reached a deal with the British Ministry of Defense resolving a patent issue that could have limited the adoption of signals from the EU's Galileo satellite navigation constellation.

"The European Commission [EC] has secured access to UK-owned patents related to Galileo signal in space technologies which will allow for their use by chipset and receiver manufacturers on a royalty free basis," according to a joint UL/EC statement supplied by a spokesperson for the UK's Defense Science and Technology Laboratory.

"The issue is solved," said Paul Flament, the head of the European Commission's (EC's) Satellite Navigation Unit. He said the commission and the UK Ministry of Defense had concluded a license agreement on December 28.

Read more in *Inside GNSS* article. http://www.insidegnss.com/node/4912

2016-04-15

South Korea Issues Warning Over Suspected North Korean GPS Disruption

South Korea issued a warning on Thursday 31 March after detecting satellite signal disruptions that appeared to be coming from North Korea, according to the Korea Herald. The capital city of Seoul appeared to be the target. Officials said North Korea discharged a large amount of radio waves to jam GPS signals in the region.

“We’ve detected signs that North Korea has been sending radio waves to the capital area since a month ago to disrupt GPS signals,” a senior government official said, speaking on condition of anonymity. “North Korea had been sending test waves since last month, but today, they discharged the largest amount.”

The disruptions could cause mobile phones to malfunction and affect planes and ships that rely on GPS for navigation. No damage has so far been reported in the military or among civilians, officials said.

Read more in *GPS World* article. http://gpsworld.com/south-korea-issues-warning-over-suspected-north-korean-gps-disruption/

2016-03-31

ESNC 2016 Opens Submissions for Galileo-enabled Applications

The European Satellite Navigation Competition (ESNC) — the largest international competition for the commercial use of satellite navigation — is once again looking for outstanding ideas and business models. Renowned institutions and regional partners

are set to award prizes worth a total of 1 million euros in more than 25 categories.

The deadline for submissions is **June 30**.

“In our modern, data-driven economy, satellite navigation is a crucial technology that facilitates constant and reliable object localisation — the bedrock of the Internet of Things,” states an ESNC press release. “Since 2004, the ESNC has evolved into a leading fixture in the New Space Economy by provided a public innovation platform for turning promising ideas into market-ready products.

Read more in *GPS World* article. http://gpsworld.com/esnc-2016-opens-submissions-for-galileo-enabled-applications/

2016-04-04

Convoy of Self-driving Trucks Completes First European Cross-border Trip

Six convoys of semi-automated “smart” trucks arrived in Rotterdam’s harbour on Wednesday (6 April) after an experiment its organisers say will revolutionise future road transport on Europe’s busy highways.

More than a dozen self-driving trucks made by six of Europe’s largest manufacturers arrived in the port in so-called “truck platoons” around midday, said Eric Jonnaert, president of the umbrella body representing DAF, Daimler, Iveco, MAN, Scania and Volvo.

“Truck platooning” involves two or three trucks that autonomously drive in convoy and are connected via wireless, with the leading truck determining route and speed.

Wednesday’s arrival concluded the first-ever cross-border experiment of its kind, with self-driving trucks leaving factories from as far away as Sweden and southern Germany, Jonnaert said.

“Truck platooning will ensure cleaner and more efficient transport. Self-driving vehicles also contribute to road safety because most accidents are caused by human failure,” said the Dutch infrastructure and environment minister, Melanie Schultz van Haegen.

https://www.theguardian.com/technology/2016/apr/07/convoy-self-driving-trucks-completes-first-european-cross-border-trip

2016-04-07

CASA Loosens Requirements for Commercial UAVs

Last week Australia's federal governing body for flight safety, CASA, released new regulatory requirements for unmanned aircraft, or as CASA officially calls them, Remotely Piloted Aircraft Systems (RPAS). Despite the 1 April release date, the changes are not an April Fool's joke, but a welcome relaxing of regulations for small scale applications of RPAS – and in effect the support of a valuable and burgeoning industry.

CASA has opted for a more risk-based process of regulation, allowing small scale operations to proceed without the existing red-tape. Commercial operators of very small remotely piloted aircraft (less than 2 kilograms) will no longer need to obtain a number of regulatory approvals, such as an operator's certificate and a remote pilot licence. CASA claims that in addition cutting regulatory costs for operators by thousands of dollars, it also frees up a significantly growing part of the economy.

The changes to contain some new requirements, including that operators will now be required to notify the CASA that they intend to use very small remotely piloted aircraft for commercial flights according to a set of standard operating conditions. These mandatory conditions include flying only in day visual line of sight, below 120 metres, keeping more than 30 metres away from other people, flying more than 5.5 kilometres from controlled aerodromes and not operating near emergency situations.

Read more in *Spatial Source* article.
http://www.spatialsource.com.au/2016/04/05/casa-changes-requirements-for-small-uavs/

2016-04-05

China Launches 22nd BeiDou Navigation Satellite

China launched a satellite to support its global navigation and positioning network at 4:11 a.m. Wednesday 30 March.

The satellite, launched from the Xichang Satellite Launch Center in the southwestern province of Sichuan, was taken into orbit by a Long March-3A carrier rocket.

It is the 22nd satellite in the BeiDou Navigation Satellite System (BDS), which is being developed as an alternative to U.S. GPS.

It was the 225th launch of the Long March carrier rocket.

Read more in *GPS Daily* article.
http://www.gpsdaily.com/reports/China_launches_22nd_BeiDou_navigation_satellite_999.html

2016-03-31