

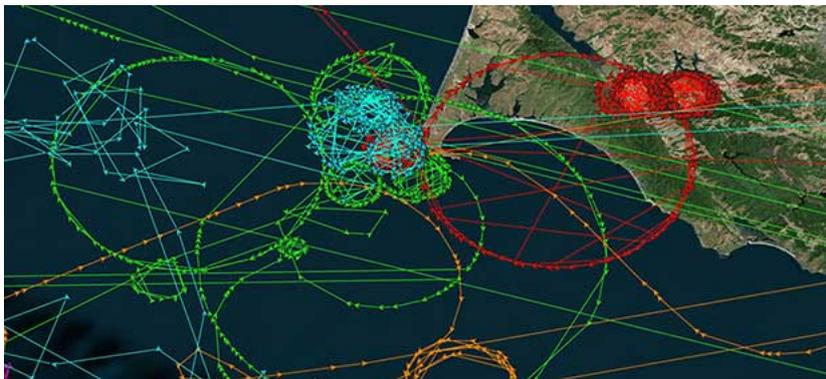
New GPS ‘Circle Spoofing’ Moves Ship Locations Thousands of Miles

New research by Bjorn Bergman of the environmental non-profit SkyTruth has found ships in various parts of the world reporting locations thousands of miles away and circling at precisely 20 knots. Bergman’s findings were first reported at the annual meeting of the Resilient Navigation and Timing Foundation on May 5.

Bergman previously observed and reported on circling phenomena with GPS-based reporting systems from vessels and fitness trackers in China ports. It has also been observed in Tehran, Iran. In all those cases, though, it was clear that the real location was fairly nearby the false and circling locations. In the most recent observations, the actual locations of the ships were thousands of miles away. In most cases, literally halfway across the globe.

Read more in *GPS World* article. https://www.gpsworld.com/new-gps-circle-spoofing-moves-ship-locations-thousands-of-miles/?utm_source=Navigate%21+Weekly+GNSS+News&utm_medium=Newsletter&utm_campaign=NCMCD200520003&oly_enc_id=1784A2382467C6V

2020-05-26



Geoscience Australia Seeks Contractor For PNT Capabilities

Geoscience Australia is seeking a prime contractor for a new satellite-based augmentation system (SBAS) that Australia and New Zealand have committed to implement. The SBAS will improve position, navigation and timing (PNT) capabilities to end-users in Australia and New Zealand.

The system, which will be called the Southern Positioning Augmentation Network, will augment standard positioning capability provided by GPS and Galileo across all of Australia and New Zealand, with expected user applications in agriculture, construction, resources, utilities and other industries; with decimetre accuracy.

Read more in *GPS World* article. https://www.gpsworld.com/geoscience-australia-seeks-contractor-for-pnt-capabilities/?utm_source=Navigate%21+Weekly+GNSS+News&utm_medium=Newsletter&utm_campaign=NCMCD200520003&oly_enc_id=1784A2382467C6V

2020-05-20



Australian Government

Geoscience Australia

Securing GNSS – A Trip Down Cryptography Lane

The meteoric rise from the first use of GPS in the 1990s to billions of users of multiple constellations 30 years later can be understood from several key design choices made by GPS early on. GNSS is a one-to-many broadcast service, with signal power is below the noise floor and clever signal processing techniques to make use of them. The civilian signals have publicly available Interface Specifications (ISs) or Interface Control Documents (ICDs) that allow anyone to develop and market GNSS receivers. These aspects of GNSS that encouraged mass adoption come with consequences, however.

With the means to receive and demodulate GNSS signals made publicly available, enough information is present that allows individuals to generate GNSS signals of their own.

Read more in *Inside GNSS* article. <https://insidegnss.com/securing-gnss-a-trip-down-cryptography-lane/>

2020-05-20



32 US Senators Urge Stay On FCC’s Ligado Decision

Thirty-two United States senators wrote to the Federal Communications Commission (FCC) on May 15 expressing concerns with the commission’s determination on Ligado Networks. The senators also asked the FCC to address these concerns and stay their order while they were doing so.

The five-member FCC voted unanimously in April to approve an order to allow Ligado Networks to deploy a low-power nationwide 5G network.

“The hurried nature of the circulation and consideration of the Order itself — during a national crisis, no less — was not conducive to addressing the many technical concerns raised by affected stakeholders,” wrote the senators.

Read more in *GPS World* article. https://www.gpsworld.com/32-us-senators-urge-stay-on-fccs-ligado-decision/?utm_source=Navigate%21+Weekly+GNSS+News&utm_medium=Newsletter&utm_campaign=NCMCD200513003&oly_enc_id=1784A2382467C6V

2020-05-18



Australia, New Zealand Stand to Benefit From Major ESA Advances in Satellite Navigation

The European Space Agency has awarded two contracts to Thales Alenia Space, a joint company between Thales and Leonardo, for the European Geostationary Navigation Overlay Service – EGNOS.

These contracts draw on Thales Alenia Space's 25 years of expertise as a prime contractor to study and develop upgrades for the EGNOS satellite navigation system and support the \$127 million upgrade of the Thales Alenia Space EGNOS system announced in December 2019, which will expand the EGNOS SBAS coverage zone, see the installation of a new generation of reference stations, improved algorithms in the computation centre to boost performance and enhanced system security.

Benoit Broudy, head of the navigation business at Thales Alenia Space, said, "Our successes on export markets, as in South Korea, validate our innovative approach that allows us to offer increasingly powerful and agile solutions to meet the evolving requirements of customers from around the world."

These advances offer significant benefits for regional aviation in Australia and New Zealand along with broader industry benefits across many sectors including, mining and resources as well as agriculture and transport.

Read more in *article...*

https://www.spaceconnectonline.com.au/operations/4351-australia-new-zealand-stand-to-benefit-from-major-esa-advances-satellite-navigation?utm_source=SpaceConnect&utm_campaign=22_05_20&utm_medium=email&utm_content=1&utm_emailID=7b4c7db616168fe865f3a2f96500fa1904548b5145c6ae1709d81f43459c19a2

2020-05-22



Will Britain Launch Its Own Galileo? Maybe Not

When Brexit happened, many in Britain thought the country should have its own satellite navigation system, because it was no longer going to be a participant in Galileo, created and run by the European Union. Now the Telegraph reports that

officials have concluded that such plans should be scrapped because the £5 billion project would be a waste of taxpayer funds.

The Telegraph reports that members of the Cabinet Office and Department for Business are pressing ministers to shut down work on the program, which was set up after Brussels froze the U.K. out of the EU's Galileo satellite program.

In 2018, then-Prime Minister Theresa May announced £92m for a feasibility study into the UK satnav, [reports Engineering & Technology](#). Much of that money has already been spent, it is believed. In March 2020, it was reported that the project had been delayed for at least six months over concerns about its scope and multi-billion-pound cost.

Read more in *GPS World* article. <https://www.gpsworld.com/will-britain-launch-its-own-galileo-maybe-not/>

2020-05-12



New BeiDou Satellite Starts Operation In Network

The 45th satellite of the BeiDou Navigation Satellite System (BDS) has started operation in the network after completing in-orbit tests, according to the Satellite Navigation System Management Office.

The satellite will provide services in place of the 3rd BeiDou satellite, a geostationary earth orbit satellite of the BDS-2 system. The replacement will help reinforce the BDS-2 system and support a smooth transition from the BDS-2 system to the BDS-3 system. The third satellite will stay in orbit after the replacement, said a source of the office.

The third and the 45th satellite were launched at the Xichang Satellite Launch Center on Jan. 17, 2010 and May 17, 2019, respectively. Both were developed by the China Academy of Space Technology.

Read more in *GPS Daily* article.

https://www.gpsdaily.com/reports/New_BeiDou_satellite_starts_operation_in_network_999.html

2020-05-14



Space Threat Report Catalogs China, Russia, Jamming and GPS

America's space assets are in danger from an array of kinetic, non-kinetic, electronic and cyber threats. These are wielded by nation states, primarily China, Russia, Iran and North Korea, though there are other countries as well as non-state actors. On March 30, the Center for Strategic and International Studies (CSIS) Space Threat Assessment 2020 released a catalogue that highlights the ways essential space-based services Americans rely upon can be degraded or eliminated. But it doesn't do much to "assess threats."

That said, it is still an impressive, useful and informative document. Some of what it doesn't say can be inferred, and it provides a clear conclusion for policy makers and others. Threat assessments are typically undertaken to:

- Identify potential dangers,
- Evaluate their credibility,
- Weigh potential impact, and
- Estimate the probability of the threat turning into an incident

This CSIS report generally stops after accomplishing the first two tasks.

Read more in *GPS World* article. https://www.gpsworld.com/space-threat-report-catalogs-china-russia-jamming-and-gps/?utm_source=Navigate%21+Weekly+GNSS+News&utm_medium=Newsletter&utm_campaign=NCMCD200429003&oly_enc_id=1784A2382467C6V

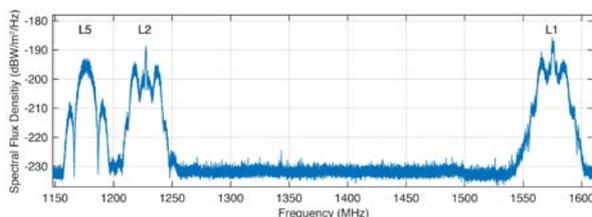
2020-04-29

satellite, nicknamed “Magellan,” was launched on Aug. 22, 2019, on a Delta IV rocket from Cape Canaveral, Florida.

Magellan, also identified by its space vehicle number (SVN) 75 (here referred to as GPS-75), started signal transmission with standard pseudorandom noise code (PRN) number 18 (here referred to as G18) on March 13. The L1 C/A, L1 P(Y), and L2 P(Y) signals were activated at 17:16:30 GPS Time (GPST), while the L1C, L2C and L5 signals followed less than two hours after Vespucci’s launch at 18:59:30 GPST. Transmission of navigation messages started at 19:00:00 GPST with GPS-75 (G18) marked as unhealthy.

Read more in *GPS World* article. <https://www.gpsworld.com/gps-iii-magellan-starts-signal-transmission/>

2020-04-28



Galileo Green Lane, Easing Pressure at the EU's Internal Borders

The European GNSS Agency (GSA) is working together with the European Commission (EC) on an app to facilitate the movement of goods and freight within the EU in support of the COVID-19 pandemic response. The "Galileo Green Lane" app will ease the flow of freight through borders and enable the efficient transit of critical goods.

The COVID-19 outbreak represents a serious threat not only to public health, but also to the European economy. Lockdowns and other restrictive measures that are necessary to save lives also severely slow down the economy and may delay the transport of goods and services.

With a view to ensuring the uninterrupted transport of critical goods across the EU's internal land borders, the GSA and the Commission are working on the "Galileo Green Lane" app - a solution to monitor and facilitate freight traffic and reduce waiting times at Green Lane border crossings.

Read more in *GPS Daily* article.

https://www.gpsdaily.com/reports/Galileo_Green_Lane_easing_pressure_at_the_EUs_internal_borders_999.html

2020-04-28

