GPS OCX Delays Continue

New GPS ground stations that are contracted by Raytheon Technologies to replace the current ground stations have been delayed until July 2025, the Pentagon's testing office reported.

The Next Generation Operational Control System (OCX) is facing a new delay of 16 months, according to the 2023 Annual Report of the Director of Operational Test & Evaluation (DOT&E).

More than seven years behind schedule, the continuous delays have caused the U.S. Department of Defense (DOD) to go over its yearly budget and have sparked discussions as to future budget allocations for the U.S. Space Force (USSF) to continue to control and enhance the GPS constellation.

"These delays increase the risk that U.S. and allied warfighters will be unable to conduct successful operations in future contested environments due to the lack of access to modernized GPS position, navigation, and timing (PNT) information," the Pentagon's testing office said in a statement.

The M-Code can now be broadcast on 21 of the 31 GPS satellites in orbit. However, it is only available to a small number of military personnel due to both the OCX issue and a lack of radios and receivers equipped to access it.

Read more in *GPS World* article. https://www.gpsworld.com/gps-ocx-delays-continue/?utm_source=Navigate%21+Weekly+GNSS+News&utm_medium=Newsletter&utm_campaign=NCMCD240214002&oly_enc_id=1784A2382467C6V

2024-02-16

SSC Launches Inquiry For GPS Prototype Development

The U.S. Space Systems Command (SSC), part of the United States Space Force, is actively seeking insights from the GNSS industry through a Request for Information (RFI) regarding the development of a Global Positioning System (GPS) Rapid Prototype Demonstration, Tranche 0.

This initiative is part of a strategic effort to upgrade GPS capabilities to meet modern challenges in space navigation and ensure continued operational superiority. This RFI aims to collect information about the industry's capacity to innovate and deliver solutions that can enhance the GPS infrastructure. The focus is on identifying technologies and approaches that can reduce the size, weight, power and cost (SWaP-C) of future GPS satellites, streamline their production and launch processes and improve compatibility with a variety of launch vehicles.

According to the SSC, the goal of Tranche 0 is to create a prototype satellite that can emit certain GPS signals that are compatible with existing user equipment.

Read more in *GPS World* article. https://www.gpsworld.com/space-system-command-launches-inquiry-for-gps-prototype-development/?utm_source=Navigate%21+Weekly+GNSS+News&utm_medium=Newsletter&utm_campaign=NCMCD240214002&oly_enc_id=1784A2382467C6V

2024-02-14

SouthPAN Dishes Taking Shape in New Zealand

Two 11-metre satellite dishes have recently been hoisted into place at the SouthPAN uplink and ground control centre being constructed at Awarua on New Zealand's South Island.

The centre is one of two being built for the New Zealand and Australian governments. The first opened at Uralla, New South Wales, in December 2023.

SouthPAN is a collaboration between Geoscience Australia and Toitū Te Whenua Land Information New Zealand to deliver Satellite-Based Augmentation System services to Australia, New Zealand and their maritime regions.

Lockheed Martin Australia was awarded a $1.18 billion contract In September 2022 to enhance precise positioning within the SouthPAN service areas. In December of that year, the company chose New South Wales communications specialist Av-Comm to establish a network of ground station uplink facilities for SouthPAN.

Read more in *Spatial Source* article. https://www.spatialsource.com.au/southpan-dishes-taking-shape-in-new-zealand/?utm_campaign=SS%20-%20Overall%20Publication%20-%20Master&utm_medium=email&_hsmi=294976061&_hsenc=p2ANqtz-839pPOvYHx4krx6aJMtpZi0anHRvM3M7_5jXzQkmsKB4nyfKn1cUARLHRPr8uAUUemCB6mJqu6uqAKtl68gd6CCJcW7w&utm_content=294976061&utm_source=hs_email
2024-02-21

US DOJ Moves To Dismiss Ligado Lawsuit

The United States Department of Justice (DOJ) has filed to dismiss satellite communications firm Ligado Network's October 2023 lawsuit against the federal government, arguing that the court does not have jurisdiction and the company's claims have no legal basis.

Ligado's $40 billion suit alleged that officials at the U.S. Department of Defense (DOD) took "unlawful actions" to, in effect, improperly seize the firm's L-band spectrum without compensation. Ligado was granted to build a 5G communications network by the Federal Communications Commission (FCC) in 2020.

Ligado plans to use the L-band spectrum — normally used by satellites — to develop a wireless cell phone network. However, the DoD, and several other federal agencies, including the Department of Transportation (DOT), have expressed concerns that Ligado's terrestrial operations could have harmful effects on GPS.

Read more in *GPS World* article. https://www.gpsworld.com/us-doj-moves-to-dismiss-ligado-lawsuit/?utm_source=Navigate%21+Weekly+GNSS+News&utm_medium=Newsletter&utm_campaign=NCMCD240214002&oly_enc_id=1784A2382467C6V

2024-02-19

Galileo, Now Fit For Aviation

Galileo, already the world's most precise satellite navigation system, now meets international standards to guide civil aviation from take-off to landing, complementing Europe's EGNOS for the most critical operations. Galileo was not designed to comply with these strict safety requirements, so how did engineers at ESA achieve this feat? This is a tale of engineering excellence.

In civil aviation, especially for critical stages such as final approaches, navigation systems need to be extremely reliable. The International Civil Aviation Organization (ICAO) defines the strict requirements that systems need to fulfil to be used in these so-called Safety-of-Life operations, where a malfunction of the system would lead to major human or environmental catastrophes.

Galileo was never designed to comply with these rigorous integrity standards as Europe already had EGNOS, a dedicated Safety-of-Life system for navigation. EGNOS 'augments' GPS signals for critical operations in aviation, maritime navigation, agriculture and more. But in 2016, ESA joined forces with the European Commission (EC) and the EU Agency for the Space Programme (EUSPA) to elevate Galileo's reliability and make it fit for civil aviation, as a standalone support system during en route and augmented by EGNOS at take-off and landing.

Read more in *Space Daily* article.
https://www.spacedaily.com/reports/Galileo_now_fit_for_aviation_999.html

2024-02-12

DOT Issues Solicitation For CPNT Services

The Volpe National Transportation Systems Center of the U.S. Department of Transportation (DOT) has issued a solicitation to obtain proposals from vendors with operationally ready complementary positioning, navigation and timing (CPNT) services to be used for testing and evaluation in the Rapid Phase of the DOT's CPNT Action Plan.

The Volpe Center is seeking proposals from industry professionals to deploy PNT services with a technical readiness level (TRL) of eight or higher.

The evaluation conditions will include situations where GPS/GNSS service is disrupted or manipulated, and CPNT-specific threat vectors are introduced. Proposals are encouraged to be tailored to critical infrastructure PNT user requirements with the expectation that Rapid Phase evaluation results will be shared with sector risk management agencies (SRMAs) through the Federal interagency process to drive CPNT adoption.

Read more in *GPS World* article. https://www.gpsworld.com/dot-issues-solicitation-for-cpnt-services/?utm_source=Navigate%21+Weekly+GNSS+News&utm_medium=Newsletter&utm_campaign=NCMCD240207004&oly_enc_id=1784A2382467C6V

2024-02-13

Interview: Matt Higgins on 50 years of GPS

Matt Higgins has been intimately involved with the surveying and positioning sector in Australia for more than four decades, and in that time has served with many domestic and international boards, panels and organisations. He is currently the president of the International Global Navigation Satellite Systems (GNSS) Association and a member of the US Government's National Space-Based PNT

Advisory Board. Last year he was awarded the Public Service Medal in the King's Birthday 2023 Honours List, for outstanding public service to Queensland and for achievements internationally in the fields of surveying, geodesy and spatial sciences. We spoke with Matt to learn more about his career and to get his thoughts on the past, present and future of positioning, navigation and timing (PNT).

Read more in *Spatial Source* article. https://www.spatialsource.com.au/interview-matt-higgins-on-50-years-of-gps/?utm_campaign=SS%20-%20Overall%20Publication%20-%20Master&utm_medium=email&_hsmi=294019490&_hsenc=p2ANqtz--iDrgNk-C3cvkEglOoUoVnYoEE0aVX0JtpBrMN9jYNfvM1-5UHTt1Y7o6CT09pGDUaP1KEy8032_7BEYzZbtZaMytQ5A&utm_content=294019490&utm_source=hs_email

2024-02-12

Korea's Satnav System Certified By National Authorities and Enters Operational Service

The Korea Augmentation Satellite System (KASS), a pivotal development in satellite navigation technology, has officially commenced operations following certification by Korean authorities. This marks a significant achievement in the collaborative effort between Thales Alenia Space, acting as the prime contractor, and the Korea Aerospace Research Institute (KARI) under the aegis of the Korean Ministry of Land, Infrastructure, and Transport (MOLIT).

KASS, leveraging the MEASAT-3d geostationary satellite launched in 2022, is poised to enhance the precision of GPS services across South Korea. This initial operation will soon be bolstered by the addition of KOREASAT 6A, currently under development by Thales Alenia Space for KT SAT Corporation Ltd., the nation's premier satellite communications operator. This upcoming satellite will carry a payload specifically designed to augment service continuity and operational availability.

This system, aligning with international standards set forth by the International Civil Aviation Organization (ICAO), primarily focuses on aviation applications, particularly those critical to flight safety such as landing operations.

Read more in *Space Daily* article.
https://www.spacedaily.com/reports/Koreas_satnav_system_certified_by_national_authorities_and_enters_operational_service_999.html
2024-02-06

Testing SouthPAN and Commercial GNSS Services

Following the production of an exhaustive test-bed technical report coupled with a trial economic benefits analysis in August 2019, plus a competitive tender process and finally the awarding of a contract to Lockheed Martin, the SouthPAN service was switched on in September 2022.
SouthPAN is the new Satellite-Based Augmentation System (SBAS) for Australia and New Zealand, supported by both countries' federal governments. A $1.4 billion investment over 20 years is expected to yield $7.6 billion benefit over 30 years from enhanced positioning across the agriculture, construction, transport and maritime sectors, as well as a host of other geospatial applications.

I attended the Locate conference in May last year and asked several exhibitors, "Hey, what's your SouthPAN solution?". The response was variations on "South what?," combined with some quizzical looks and awkward shuffling. To be fair, it is a very new system, and I was being deliberately provocative.

Salivating, I thought, "What a great idea for a student project!".

Read more in *Spatial Source* article. https://www.spatialsource.com.au/testing-southpan-and-commercial-gnss-services/?utm_campaign=SS%20-%20Overall%20Publication%20-%20Master&utm_medium=email&_hsmi=293026249&_hsenc=p2ANqtz--JKINcXzy9yq2yLnFXsFFzVh5Y2QQYY9rYxFHoe4gyxEustz9gHT1ceIoS5SYm21lbmXN2dJFJH-R_i4-IH3V28Hirdg&utm_content=293026249&utm_source=hs_email

2024-02-02

Qualinx Partners with European Union Space Agency for GNSS Receiver Development

Qualinx, a company specialising in ultra-low power wireless tracking and connectivity semiconductors, has announced a partnership with the European Union Agency for the Space Programme (EUSPA). This collaboration, under the Fundamental Elements EU R&D funding mechanism, aims to develop a consumer-grade, low-power GNSS receiver for EUSPA's GNSS authentication service.

The project focuses on the Galileo Open Service Navigation Message Authentication (OSNMA) service, which is designed to verify that users are receiving data from Galileo satellites. This service was introduced in response to an increasing number of spoofing incidents, where malicious actors have disrupted GNSS services. Qualinx was selected for this project following a six-month selection process conducted by EUSPA.

Qualinx's technology, known as Digital Radio Frequency (DRF), transforms most analog functions of a wireless chip into digital circuits, which can be customised for each application through software.

Read more in *Inside GNSS* article. https://insidegnss.com/qualinx-partners-with-european-union-space-agency-for-gnss-receiver-development/
2024-01-29

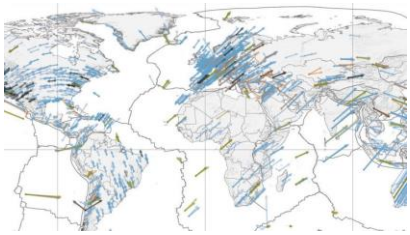
The Importance of Geodetic Reference Frames

Global reference systems such as the International Terrestrial Reference Frame provide the foundation for determining positions on Earth and in space, as well as for reliably quantifying our planet's changes due to geodynamic processes and ongoing climate change. A global reference frame ensures a uniform basis for geospatial data. Moreover, it is needed for all positioning and satellite navigation applications, and thus plays an elementary role in modern society.

Numerous media reports inform us that the global sea level is rising. According to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC Report 2021), the current mean sea level rise is 3.7mm per year, whereas over the last century it was 'only' approximately 1.5mm per year. This significant increase in mean sea level rise is not surprising, since global warming is accelerating the melting of ice masses and the thermal expansion of ocean water.

Read more in *GIM International* article. https://www.gim-international.com/content/article/the-importance-of-geodetic-reference-frames?utm_source=newsletter&utm_medium=email&utm_campaign=Newsletter+%7C+GIM+%7C+01-02-2024+&sid=46052

2024-02-01



The Institute of Navigation (ION) Names 2023 Award Winners

The Institute of Navigation (ION) has recognized distinguished professionals in the field of positioning, navigation, and timing (PNT) with its prestigious 2023 Annual Awards. The awards were presented during the International Technical Meeting (ITM) and Precise Time and Time Interval (PTTI) Systems and Applications Meeting, held in Long Beach, California, from January 22 to 25, 2024.

The ION's Annual Awards Program aims to acknowledge significant contributions and exceptional performances in the advancement of PNT. This year's recipients represent a diverse group of individuals who have made notable impacts in their respective areas.

Read more in *Inside GNSS* article. https://insidegnss.com/the-institute-of-navigation-ion-names-2023-award-winners/

2024-01-26