Fiscal 2024 Defence Budget, Continues Push for Greater GPS Capability

The U.S. Department of Defense (DOD) is continuing a major update for the GPS system, requesting $1.3 billion in the fiscal 2024 budget for GPS III satellite support and continuing the upgrade to the GPS III Follow On (GPS IIIF) enhanced satellite series and the next-generation control system. The upgrade will include greater accuracy and more military capability.

GPS III satellites, of which six are in orbit, already have a strengthened anti-jam capability and improved accuracy, along with the ability to tap into other civil GNSS signals, such as Europe's Galileo. Planned upgrades will usher in a new search and rescue feature and a much more robust anti-jamming capability for troops in theatre.

Especially with the fortified anti-jam capability, "this isn't your grandmother's GPS," said Eric Brown, vice president of space mission strategy and advanced capabilities for GPS satellite builder Lockheed Martin.

The $1.3 billion fiscal 2024 request was significant enough for Secretary of Defense Lloyd J. Austin III to include it in his top-line highlights for the $842 billion fiscal 2024 defence budget. The funding, which must still be approved by Congress, continues support for GPS III satellites along with the planned upgrade, GPS IIIF.

Read more in *Inside GNSS* article.
https://insidegnss.com/washington-view-fiscal-2024-defense-budget-continues-push-for-greater-gps-capability/

2023-05-12

New BeiDou Satellite Launches Into Orbit

China launched a Long March 3B carrier rocket on 17 May to transport a satellite into space for the country's BeiDou Navigation Satellite System, marking the first deployment of a BeiDou satellite in three years.

As the countdown ticked down to zero at 10:49 am at the Xichang Satellite Launch Center in the southwestern mountainous region in Sichuan province, eight engines on the Long March 3B's first stage and four boosters sprang to life and unleashed dazzling orange flame as they lifted the 20-story-tall gigantic vehicle into clear skies.

Shortly after the liftoff, the rocket successfully placed the satellite, the 60th in the BeiDou system and the first backup craft for the third-generation BeiDou network, into a geostationary orbit, announced Deng Hongqin, director of the Xichang center.

Designed and built by the China Academy of Space Technology, the satellite has typical functions of any third-generation BeiDou satellite - positioning, navigation and timing. Compared with previous BeiDou satellites, it has some upgraded hardware and features stronger signal, faster transmission speed and higher operational stability, said Chen Zhonggui, chief designer of BeiDou's third-generation satellites.

Read more in *article*…

https://www.spacedaily.com/reports/New_Beidou_satellite_launches_into_orbit_999.html

2023-05-18

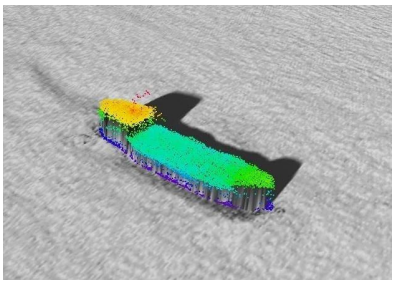
Ending a 50-year Maritime Mystery

Early in the evening on Friday, 12 October 1973, the 44-metre coastal freighter MV *Blythe Star* cast its lines and departed Hobart bound for Currie on King Island. Aboard were 10 crew and a cargo of beer and fertiliser, the latter of which filled the vessel's hold and was stacked atop its hatch covers.
In the days that followed, the ship and disappeared without a trace. This triggered the largest maritime search ever conducted in Australia to that time and led to important changes in maritime safety laws in Australia, improving safety at sea for future mariners.

Unbeknown to the rest of the world for nearly two weeks, the *Blythe Star* had suddenly listed then sunk off the southwest coast of Tasmania on the morning of 13 October. All 10 crew were able to escape the sinking vessel and climb into an inflatable life raft. Tragically, three crewmembers died before the survivors — who, at

the mercy of ocean currents, drifted up and down the Tasmanian coast in the life raft — were rescued on 24 October. No trace of the *Blythe Star* was found.
A few months shy of the 50th anniversary of its disappearance, the location of the wreck of the *Blythe Star* was confirmed by scientists aboard the CSIRO research vessel RV *Investigator* during a voyage off the west coast of Tasmania.
Read more in *Spatial Source* article.
https://www.spatialsource.com.au/ending-a-50-year-maritime-mystery/?utm_campaign=SS%20-%20Overall%20Publication%20-%20Master&utm_medium=email&_hsmi=258628888&_hsenc=p2ANqtz-8pz1xTOANCs0Exzb5EsKue4ooospZM9h8YlYo4otWNLXD-Sb_PcZRMHqidAPsBho02IfVM2XDk6JW_a4cagn0ay7c7eA&utm_content=258628888&utm_source=hs_email

2023-05-16



Japan Plans Expansion of Homegrown GPS Network to 11 Satellites

Japan intends to increase the number of satellites in its GPS-style system to 11 from four, letting users determine their precise location virtually anywhere in the country without relying on the American network.

Tokyo's space policy committee has set a goal to expand the Michibiki Quasi-Zenith Satellite System, a network of satellites in geosynchronous orbit above Japan and Australia.

Receiving signals from Michibiki as well as American GPS satellites allows users in the Asia-Oceania region to know their locations with an accuracy of several centimetres. GPS alone is said to be accurate to within several metres for civilian use.

Read more in *article*…

https://asia.nikkei.com/Business/Aerospace-Defense-Industries/Japan-plans-expansion-of-homegrown-GPS-network-to-11-satellites

2023-05-08

Start Your Engines: How F1 Drivers Use GPS

GPS plays a quiet, but integral role in Formula 1 (F1) racing. In a sport where split-second reactions are vital, GPS helps drivers and their teams to improve race to race and navigate tracks safely.

GPS is used to determine the speed of the car, which is beneficial for such things as straight line aerodynamic testing. It also provides data as to how fast F1 cars accelerate, enabling drivers and their teams to predict how much power their competitors are producing on the track.

The streaming of location data can be converted to telemetry, such as what track maps viewers see on F1 broadcasts, that can determine which driver in a head-to-head scenario was faster on each sector of the track. This data is then used to work out strengths and weaknesses of cars relative to each other.

In addition, GPS plays a large role in creating a safe racing space.

Read more in *GPS World* article.
https://www.gpsworld.com/start-your-engines-how-f1-drivers-use-gps/
2023-05-10

EU Court Dismisses Galileo Satellite Contract Complaint

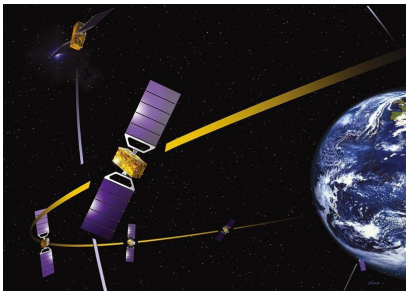
On April 26, the European Union Court of Justice dismissed a complaint from OHB System regarding a contract awarded to Thales and Airbus to supply satellites for the Galileo program, reported Reuters. OHB System supplied most of Galileo's operating satellites.

In 2021, the European Commission rejected OHB System's bid to supply the next-generation Galileo satellites and selected Airbus Defense and Space and

Thales Alenia Space Italia. This follows a 2018 tender by the European Space Agency for next-generation Galileo satellites.

Read more in *GPS World* article.
https://www.gpsworld.com/eu-court-dismisses-galileo-satellite-contract-complaint/?utm_source=Navigate%21+Weekly+GNSS+News&utm_medium=Newsletter&utm_campaign=NCMCD230503004&oly_enc_id=1784A2382467C6V

2023-05-04



China to Launch Up To 3 BeiDou Backup Satellites in 2023

China plans to send one to three network backup satellites for the BeiDou Navigation Satellite System (BDS) into space this year to improve the stability and usability of the constellation, according to the 13th China Satellite Navigation Conference on Thursday 27 April.

As a national major sci-tech project, the BDS is a global navigation satellite system, constructed and operated independently by China. Currently, it has 45 satellites in orbit, including 15 for BDS-2 and 30 for BDS-3.

Read more in *Space Daily* article.
https://www.spacedaily.com/reports/China_to_launch_up_to_3_BeiDou_backup_satellites_in_2023_999.html#gsc.tab=0

2023-04-28

Russia Expands GPS Signal Jamming to 15 Regions

Russian authorities have ramped up their GPS suppression measures following a slew of drone attacks in recent weeks.
Since April, “strong” interference has been observed in at least 15 regions across Russia, according to data from gpsjam.org, which tracks satellite communication based on radio messages from civilian aircraft.
Interference is considered “strong” if more than 10% of the aircraft passing over an area each day experience a signal failure, which can cause planes to deviate from their intended flight paths. However, short-term disruptions may go unnoticed by people on the ground using smartphones and other devices.
While earlier this year GPS signals were mostly jammed around Moscow and regions surrounding the Volga River, by mid-April the interference had expanded to include the Ivanovo, Vladimir, Yaroslavl, Ryazan, Kaluga and Tver regions that encircle Moscow.
Read more in *article*…

https://www.themoscowtimes.com/2023/05/05/russia-expands-gps-signal-jamming-to-15-regions-a81049

2023-05-06

Vast Coalition Seeks Reversal of Ligado Order

The same 91 signers also sent an identical letter to President Biden.

April 24, 2023

Dear Senators and Members of Congress:

Last year, many of the undersigned wrote in reflection of the unprecedented opposition to the Federal Communications Commission’s (FCC’s) Ligado Order *(1)* across the vast federal and commercial user base of Global Positioning System (GPS), satellite communications and weather forecasting services. Three years after adoption of the *Order*, as eight petitions for reconsideration remain pending, *(2)* we again urge you to work together with the FCC to stay and ultimately set aside the Order. *(3)* Critically, this is now necessitated by the crucial, previously unavailable information that was produced at the direction of Congress: the independent technical review undertaken by the National Academies of Sciences, Engineering, and Medicine (NAS) *(4)* analyzing the potential interference issues related to the *Ligado Order*.

Read more in *GPS World* article.
https://www.gpsworld.com/vast-coalition-seeks-reversal-of-ligado-order/?utm_source=Navigate%21+Weekly+GNSS+News&utm_medium=Newsletter&utm_campaign=NCMCD230426002&oly_enc_id=1784A2382467C6V

2023-04-26

Space Force Wants Key Allies to Join 24/7 GPS Ops Center

The Defense Department is inviting seven of the closest US allies — the members of the Five Eyes intelligence coalition, plus France, Germany and Japan — to participate in operations of GPS satellites by assigning their own military personnel to serve alongside the Space Force's 2nd Space Operations Squadron, according to the squadron's commander.

"We'll be offering this as an opportunity to those nations' personnel," Lt. Col. Robert Wray told reporters April 21 on a rare tour of the GPS ops floor here.

With the US, the Five Eyes allies are Australia, Canada, New Zealand and the United Kingdom.

Wray explained that those countries have been involved for a number of years in the US military's Schriever Wargames, which exercise space conflict scenarios, and that the invitation to join in GPS ops kicks this long-standing cooperation up a notch. (All seven of the countries participated in the most recent Schriever games, which ended March 31.)

Read more in *article*…

https://breakingdefense.com/2023/05/space-force-wants-key-allies-to-join-24-7-gps-ops-center/

2023-05-05