## Using GPS? Scientists Find it's "Bad For Your Brain"

If you find that using GPS to get around in your car has become second nature, you might want to rethink that. Relying on GPS and turning off our own internal navigation systems may actually damage the brain and inhibit memory overall. That's the suggestion of a study by neurological researchers, who found that the brains of frequent GPS users were different in a critical way than people who weren't so reliant on the technology.

A 2020 study published in the journal *Scientific Reports* looked at 50 drivers. Researchers found that those who used GPS more often had worse spatial memory—the ability to remember the position of objects and places—when trying to navigate without the mapping technology. When 13 of the participants were retested three years later, more frequent GPS usage was associated with worse spatial memory.

Read more in *article*…

https://bestlifeonline.com/news-scientists-revealed-this-major-negative-side-effect-of-using-gps/

2022-08-20

## Senators Launch Last-minute Push to Overturn Ligado 5G Decision

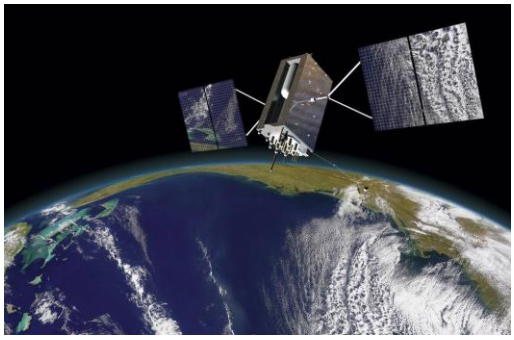
A bipartisan group of US senators — led by the chairman and top Republican on the Armed Services Committee — is urging the Federal Communications Commission to overturn a two-year-old decision establishing a new 5G network the lawmakers say could interfere with GPS.

The bipartisan push against Ligado Networks comes as the company prepares to launch its terrestrial wireless network as soon as October. The FCC in 2020 granted Ligado's application to do so.

Read more in *article*…

https://www.federaltimes.com/congress/2022/08/18/senators-launch-last-minute-push-to-overturn-ligado-5g-decision/

2022-08-19



## Couple Draw Giant 4,500-mile GPS Bicycle Across Europe

Faced by the threat of the climate emergency, some people recycle more, or turn down the central heating thermostat a notch. Daniel Rayneau-Kirkhope and Arianna Casiraghi drew a 600-mile wide GPS bicycle across Europe. While accompanied by their dog.

The couple gave up their jobs as physics researchers to undertake the 4,500-mile cycle trip through seven countries, a route painstakingly planned to plot the outline of a giant bicycle over the continent.

Speaking to the Guardian from Switzerland, en route back to their home in Piedmont, north Italy, the Anglo-Italian pair said their hope had been to draw attention to the scale of climate breakdown and persuade people to think about using bikes instead of cars for shorter trips.

The journey has won them three somewhat niche world records: the largest GPS drawing ever made, the biggest such image drawn only by cycling, and – perhaps unsurprisingly – the biggest bicycle ever drawn.

Read more in *article*…

https://www.theguardian.com/lifeandstyle/2022/aug/18/couple-draw-giant-4500-mile-gps-bicycle-across-europe

2022-08-18

**How Scientist Facilitated the Development of LEO Mega Constellations**

The rapid development of Low Earth Orbit (LEO) mega constellations has significantly contributed to several aspects of human scientific progress, such as communication, navigation, and remote sensing. However, unrestrained deployment of constellations has also strained orbital resources and increased spacecraft congestion in LEO, which seriously affects the safety of in-orbit operations of many space assets.

For the long-term and sustainable development of space activities in LEO regions, space environment stability must be maintained using more rational surveillance and governance mechanisms. In a review paper recently published in Space: Science and Technology, Jingrui Zhang from School of Aerospace Engineering, Beijing Institute of Technology, analysed the research gap and facilitated the development of LEO mega constellations.

Read more in *Space Daily* article.
https://www.spacedaily.com/reports/How_scientist_facilitated_the_development_of_LEO_mega_constellations_999.html
2022-08-18

## Lockheed Martin Invests in Xona's Commercial Navigation Constellation

Xona Space Systems, a company developing navigation technologies from low-Earth orbit (LEO), has received investment backing from numerous companies, including Lockheed Martin. Its latest financing round was oversubscribed, bringing the start-up's total funding to more than $25 million.

Xona is developing a high-performance commercial satellite navigation network, named Pulsar. Pulsar is a LEO system designed to provide resilient and trusted centimetre level position anywhere on the globe.

Within the past year, Xona more than doubled its number of full-time employees, launched its first orbital mission, and signed agreements with major players across the GPS/GNSS ecosystem such as Hexagon | NovAtel and Spirent Federal.

Read more in *GPS World* article. https://www.gpsworld.com/lockheed-martin-invests-in-xonas-commercial-navigation-constellation/?utm_source=Navigate%21+Weekly+GNSS+News&utm_medium=Newsletter&utm_campaign=NCMCD220803003&oly_enc_id=1784A2382467C6V

2022-08-09

**India's Satellite-based Navigation System 'NavIC' As Good As US' GPS**

India's satellite-based navigation system '*NavIC*' is as good as *Global Positioning System* (*GPS*) of the US in terms of position accuracy and availability in its service region.

Replying to a question in the Rajya Sabha, Union Minister of State (Independent Charge) Science & Technology; Minister of State (Independent Charge) Earth Sciences; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr *Jitendra Singh* said, NavIC can help in navigation on land, air, sea and also in disaster management.

NavIC satellites are placed at a higher orbit than the GPS of United States. NavIC satellites are placed in geostationary orbit (GEO) & geosynchronous orbit (GSO) with an altitude of about 36,000 km; GPS satellites are placed in medium earth orbit (MEO) with an altitude of about 20,000 km.

Read more in *article*…

https://www.timesnownews.com/business-economy/industry/indias-satellite-based-navigation-system-navic-as-good-as-us-gps-govt-article-93353023

2022-08-04

**Australians See Space More As a Danger Than a Benefit**

Australia was at the forefront of the first space race and played a vital role in Apollo 11's iconic Moon landing in 1969. Half a century later, Australians are more likely to see space as a threat than a frontier full of positive possibilities, and just one in ten say they would like to work in the space industry.

According to a new global report from Inmarsat - 'What on Earth is the value of space?', based on a survey of 20,000 people in 11 countries - 49% of Australians are concerned about space junk and collisions and 44% are worried about polluting space, while just over one third (36%) say they feel hopeful about the possibilities of space, one fifth (21%) say they don't understand much about space and 10% say they don't care about space at all.

With the space sector attracting record levels of investment and expanding faster than ever before, it is essential than Australians learn more about an industry that will increasingly impact their lives, according to Inmarsat. According to the report, Australians are twice as likely to associate space with aliens (21%) than with communications and connectivity (10%).

Read more in *Space Daily* article.
https://www.spacedaily.com/reports/Australians_see_space_more_as_a_danger_than_a_benefit_according_to_new_global_research_999.html
2022-08-03

**Europe’s Sharp Eye on Positioning, Navigation and Timing**

The European Space Agency’s new navigation head, Francisco-Javier Benedicto Ruiz, has a lot to say about GNSS, both present and future. We recently spoke with him about his views on satellite navigation, signal vulnerability and authentication, and the agency’s working relationship, or not, with Russia. The technical team behind the Galileo

authentication service and industry representatives developing alternative positioning, navigation and timing solutions also share insights.

GNSS is today's fundamental technology for positioning, navigation and timing (PNT), serving billions of users every day and providing enabling data for all manner of crucial public, private, industrial, commercial and financial applications. Basic GNSS infrastructure, such as GPS and Galileo satellite constellations and ground segments, must continue to be maintained and developed.

At the same time, the inherent weaknesses of these systems have been recognized and European entities are taking action to ensure reliable and accurate PNT remains available under all circumstances and in more and more scenarios.

Earlier this year, Francisco-Javier Benedicto Ruiz became director of navigation of the European Space Agency (ESA), responsible for the definition, planning and execution of the agency's navigation programs.

Read more in *Inside GNSS* article. https://insidegnss.com/brussels-view-europes-sharp-eye-on-positioning-navigation-and-timing/

2022-07-20