



SPACE CYBERSECURITY WEEKLY WATCH

Week 24

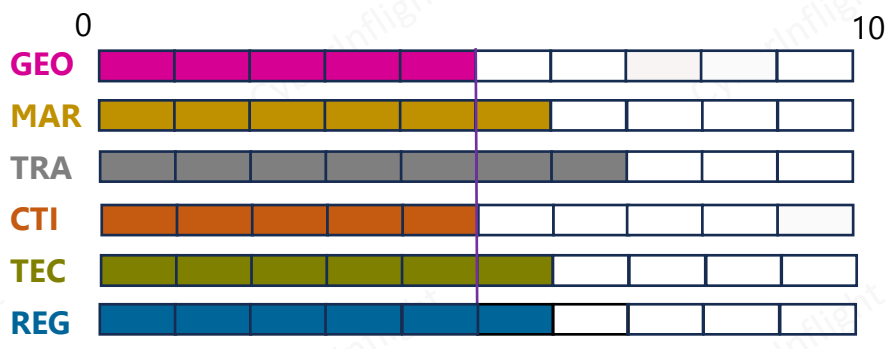
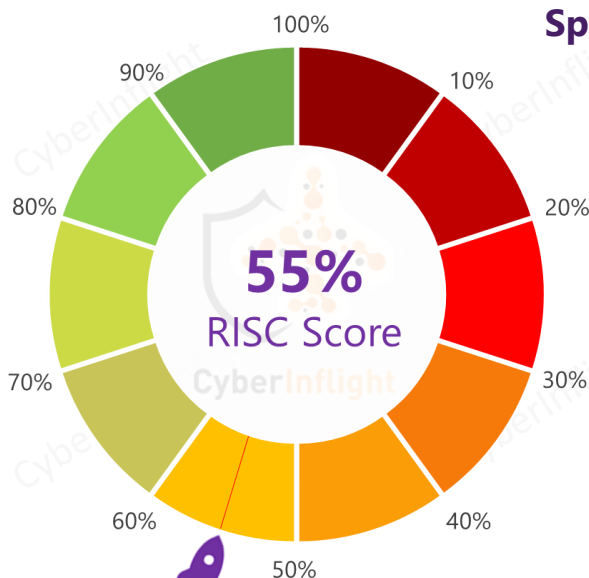
June 11 – 17, 2024

Timeframe : Weekly
of articles identified : 26
Est. time to read : 50 minutes

Articles, company's communications, whitepapers, academic works, podcast, and sources not to be missed on the topic of space cybersecurity over a specified timeframe.

- GEOPOLITIC
- MARKET INTELLIGENCE
- TRAINING & EDUCATION
- THREAT INTELLIGENCE
- TECHNOLOGY
- REGULATION
- ★ IMPORTANT NEWS

Overview & Resilience Index for Space Cybersecurity (RISC)



RISC Score Evolution



After a peak in W17, there was a period of decline from W18 to W20, followed by an increase until W22. This W24 maintains the decreasing trend in the RISC score (the tool assessing space cybersecurity resilience).

↓ A 2% decrease from last week (from 57% to 55%)

This week's RISC score is 55%. This week, with electronic warfare at the heart of the tactical and technical concerns of modern conflict, the French 'Armée de l'Air et de l'Espace' renames its electronic squadron EPIGE as AUBRAC (a reference to an old squadron), reinforcing its crucial role in the mastering of the electromagnetic field. On the technology front, Tern AI created an Independently Derived Positioning System (IDPS) that can recognize the position of a vehicle or person without relying on satellite signals. The goal is to reduce the reliance on GPS with a low-cost navigation alternative. On the market front, Thales, Spire Global and ESSP have signed a Memorandum of Cooperation to introduce a range of global satellite-based surveillance services to the air traffic management industry and broader aviation market. In addition, a research conducts a comprehensive analysis of the cybersecurity landscape surrounding Starlink, with a focus on identifying potential threats, assessing associated risks, and proposing mitigation strategies to bolster the resilience of the network. On the regulatory front, disagreement happened between the US Space Force and the House Appropriations Defense Subcommittee on US Space Force effort to GPS system resilience and Space Force's plan. Lastly, a Finnair aircraft traveling from Helsinki to Joensuu was unable to land due to GPS interference, which lasted longer than it usually does, resulting in the decision to return to Helsinki.



GEOPOLITIC



The Air and Space French Army (AAE) brings back the name of the electronic squadron 'Aubrac'

In addition to its airborne units and parachute commandos, the AAE has a number of specialist formations that rarely come under the spotlight. But with electronic warfare at the heart of the tactical and technical concerns of modern conflict, control of the electromagnetic spectrum is crucial in today's contested environments, and the new EPIGE 'AUBRAC' is a key operational force of the Air and Space Force. **#AAE #Aubrac**

Link: <https://www.opex360.com/2024/06/12/larmee-de-lair-et-de-lespace-fait-revivre-les-traditions-de-lescadron-electronique-aubrac/>



US Army deploys a completely new type of cyber missile with as part of Arctic Alliance

The US Army has deployed a completely new type of cyber missile with as part of Arctic Alliance. This missile is designed to be used in a variety of environments and is capable of being launched from a variety of platforms. It is a key part of the Army's cyber warfare capabilities and is expected to play a major role in future operations.



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2024 2nd Space Security Conference

The 2024 2nd Space Security Conference is a key event in the space security community. It brings together experts from around the world to discuss the latest developments in space security and to share best practices. The conference is expected to be a major success and to provide valuable insights into the future of space security.



TECHNOLOGY



Tern AI wants to reduce reliance on GPS with low-cost navigation alternative

The most critical systems of our modern world rely on GPS. In today's geopolitical reality, threats from foreign adversaries who have shown capabilities to jam, to destroy, to spoof the signals of GPS increase. Tern AI created Independently Derived Positioning System (IDPS) that can recognize the position of a vehicle or person without relying on satellite signal. That means no threat of jamming, construction or dead zones getting in the way of a precise position. **#IDPS #GPS**

Link: <https://techcrunch.com/2024/06/12/tern-ai-wants-to-reduce-reliance-on-gps-with-low-cost-navigation-alternative/?ref=biztoc.com>



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MARKET & COMPETITION

Space agencies awarded more \$100M production space contracts

Space agencies awarded more \$100M production space contracts. The U.S. Space Force awarded a \$100 million contract to Lockheed Martin for the production of 100,000 space-qualified integrated circuits. The U.S. Space Force also awarded a \$100 million contract to Lockheed Martin for the production of 100,000 space-qualified integrated circuits. The U.S. Space Force also awarded a \$100 million contract to Lockheed Martin for the production of 100,000 space-qualified integrated circuits.



Link: [https://www.space.com/58123-space-agencies-awarded-more-100m-production-space-contracts](#)

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Thales, Spire Global, ESSP to develop a space-based air traffic surveillance service

Thales, Spire Global and ESSP have signed a Memorandum of Cooperation with the foal of introducing a range of global satellite-based surveillance services to the air traffic management (ATM) industry and broader aviation market. These services will be powered by a specialized constellation of more than 100 satellites collecting Automatic Dependent Surveillance-Broadcast (ADS-B) messages broadcast from aircraft and transmitting the data back to Earth in real-time.



#Thales #SpireGlobal #ESSP

Link: <https://news.satnews.com/2024/06/13/thales-spire-global-essp-to-develop-a-space-based-air-traffic-surveillance-service/>

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TRAINING & EDUCATION

The Role of Communications for Space Domain Awareness

Space domain awareness (SDA) is the ability to track, identify, and understand objects in space. Communications play a critical role in SDA, providing the data and information needed to track and identify objects in space. This research explores the role of communications in SDA, focusing on the challenges of tracking and identifying objects in space and the importance of communications in supporting SDA. **IEEE Aerospace & Electronic Systems Magazine**



Implementation and Accuracy of Satellite Navigation with GPS Spoofing

GPS spoofing is a technique used to deceive GPS receivers by transmitting false signals. This research explores the implementation and accuracy of satellite navigation with GPS spoofing, focusing on the challenges of spoofing and the importance of accurate navigation. **IEEE Aerospace & Electronic Systems Magazine**



Algorithmic methods based multi feature methods for GNSS spoofing detection

GNSS spoofing is a technique used to deceive GNSS receivers by transmitting false signals. This research explores algorithmic methods based multi feature methods for GNSS spoofing detection, focusing on the challenges of spoofing and the importance of accurate navigation. **IEEE Aerospace & Electronic Systems Magazine**



Learning metrics between non-cooperative range contributions based on satellite network topology

This research explores learning metrics between non-cooperative range contributions based on satellite network topology, focusing on the challenges of spoofing and the importance of accurate navigation. **IEEE Aerospace & Electronic Systems Magazine**



GNSS spoofing in space

GNSS spoofing is a technique used to deceive GNSS receivers by transmitting false signals. This research explores GNSS spoofing in space, focusing on the challenges of spoofing and the importance of accurate navigation. **IEEE Aerospace & Electronic Systems Magazine**



Understanding Cybersecurity in Space

Space cybersecurity is the ability to protect space systems from cyber threats. This research explores understanding cybersecurity in space, focusing on the challenges of spoofing and the importance of accurate navigation. **IEEE Aerospace & Electronic Systems Magazine**



Cyber threat landscape analysis for Starlink Assessing Risks and Mitigation Strategies in the global satellite internet infrastructure

This research endeavors to conduct a comprehensive analysis of the cybersecurity landscape surrounding Starlink, with a focus on identifying potential threats, assessing associated risks, and proposing mitigation strategies to bolster the resilience of the network. Through analysis of the current cyber threat landscape facing satellite internet networks, this study aims to provide valuable insights into the cybersecurity challenges inherent in the operation of global satellite internet infrastructure. **#Starlink #SpaceCybersecurity**



Link: <https://arxiv.org/abs/2406.07562>



REGULATION



Space Force's Resilient GPS program draws skepticism from lawmakers

This article demonstrates disagreement between US Space Force and House Appropriations defense subcommittee on US Space Force effort to GPS system resilience and Space Force's plan. **#USSF #SpaceBudget**

Link: <https://www.defensenews.com/battlefield-tech/space/2024/06/12/space-forces-resilient-gps-program-draws-skepticism-from-lawmakers/>



THREAT INTELLIGENCE



GPS interference prevented Finnair's airplane from landing in Joensuu

On June 11, a Finnair aircraft traveling from Helsinki to Joensuu was unable to land due to GPS interference. Finnair's chief of communications, explained that Joensuu airport is one of few airports in Finland that only uses satellite based GPS navigation in guiding aircraft during the approach. He noted that GPS interference usually lasts only a few minutes, but this time it persisted, resulting in the captain's decision to return to Helsinki. **#Finnair #GPS**

Link: <https://www.rcinet.ca/eye-on-the-arctic/2024/06/11/gps-interference-prevented-finnairs-airplane-from-landing-in-joensuu/>

