



SPACE CYBERSECURITY WEEKLY WATCH

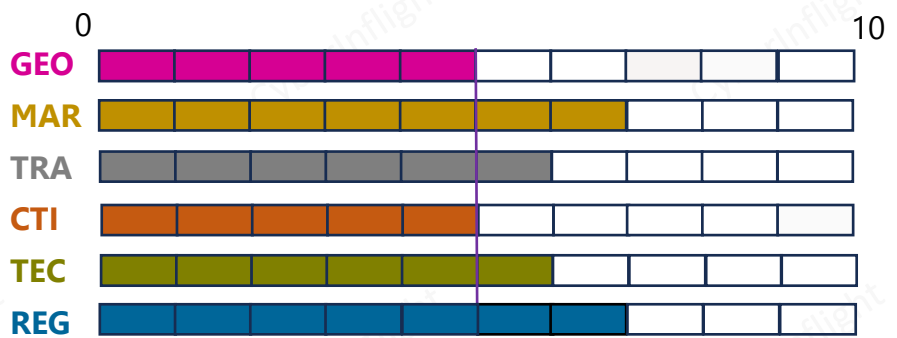
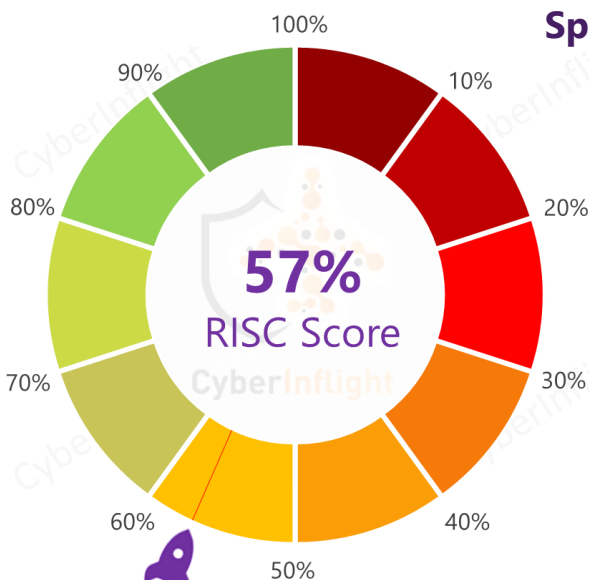
Week 23
June 4 – 10, 2024

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

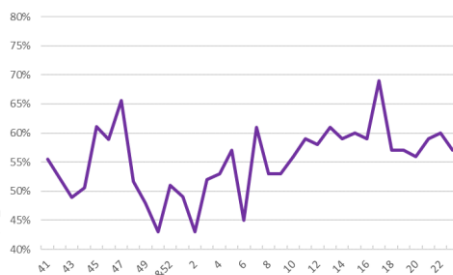
Articles, company's communications, whitepapers, academic works, podcast, and sources not to be missed on the topic of space cybersecurity over a specified timeframe.

- 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. However, this W23 shows a slight decrease of the RISC score, which is a tool to assess space cybersecurity resilience from information category in this report.

↓ A 2% decrease from last week (from 59% to 57%)

This week's RISC score is 57%. This week, CyberInflight's team followed the Defense and Space course organized by Sciences Po Bordeaux, to enhance our performance in the space defense field. In addition, the South Korean spy agency announced that National Intelligence Service (NIS) was forming to enhance satellite cyber security. On the technology front, Safran Federal Systems upgraded its Geonyx inertial navigation system (INS), based on HRG technology, to perform in GPS-denied or spoofing environments, offering reliable navigation. On the market front, K2 Space is developing the Mega Class satellite bus, in a cooperative research and development agreement with the Air Force Research Lab on cybersecurity. In addition, an academic document provides a method for enhancing cybersecurity in spacecraft operations by analyzing and reducing the attack surface of flight software. On the regulatory front, the Recommendations to Space System Operators for Improving Cybersecurity paper was released. It intends to inform space system operators and stakeholders of common cyber risks posed to space systems, and provide mitigations aligned with the NIST guidance and recommendations. Lastly, Space ISAC announced an update of its threat level assessment to raise awareness of the space industry, government, and international partner perspective on the current level of threat.



CYBERINFLIGHT'S NEWS



Defense & Space summer school: Sciences Po Bordeaux

In an evolving context of international conflict and the emergence of new areas of conflict, Science Po Bordeaux organizes the Defense & Space summer school, for an understanding of defense issues affecting the specific field of space. This week, CyberInflight's team followed this course in order to get a new valuable certificate and to enhance our performance in the space defense field. **#SciencePoBordeaux #SpaceDefence**

Link: <https://www.sciencespo Bordeaux.fr/fr/formation/ecoles-d-ete/bordeaux-defence-space-summer-school.html>



GEOPOLITIC



South Korea forms satellite cyber security body

South Korean spy agency announced that National Intelligence Service (NIS) was forming to enhance satellite cyber security, to build a foundation to protect national space assets from cyber threats, in response to the recent cyber attack against the Korea Satellite Operations Center. **#SatelliteCybersecurity #SouthKorea**

Link: <https://www.koreaherald.com/view.php?ud=20240604050678>



TECHNOLOGY



Safran Federal unveils MEMS and HGR technologies

Safran Federal Systems is upgrading its Geonyx inertial navigation system (INS), which is based on HRG (hemispherical resonator gyroscope) technology, to incorporate M-Code capability. The fully integrated solution can perform in GPS-denied or spoofing environments, offering reliable navigation in challenging environments. **#Safran #GPSspoofing**

Link: <https://www.gpsworld.com/safran-federal-unveils-mems-and-hgr-technologies/>





MARKET & COMPETITION



K2 Space plans first launch as company wins customers for its large satellite bus

K2 Space is developing the Mega Class satellite bus. It has a separate cooperative research and development agreement with the Air Force Research Lab. Under that agreement, the company will collaborate with the lab on cybersecurity topics such as "cyber-hardening" and encryption. #K2Space #Cybersecurity

Link: <https://spacenews.com/k2-space-plans-first-launch-as-company-wins-customers-for-its-large-satellite-bus/>





TRAINING & EDUCATION



Attack Surface Analysis for Spacecraft Flight Software

This document provides a method for enhancing cybersecurity in spacecraft operations by analyzing and reducing the attack surface of flight software. It advocates for reducing complexity in the software architecture and adopting more secure architectural principles to mitigate vulnerabilities and make spacecraft more resilient against cyber attacks. This study's findings suggest strategies for simplifying abstractions to make them more secure, addressing implementation issues, and providing supporting evidence for moving to a more resilient architectural approach. **#Space #Cyberattack**

Link: <https://easychair.org/publications/preprint/2psb>



REGULATION

Executive Order 14176

The President, by the authority vested in him by the Constitution and laws of the United States, hereby orders the Department of Defense, the Department of Justice, the National Security Council, and the Office of the National Cyber Director to conduct a comprehensive review of the Department of Defense's cybersecurity posture to ensure it is consistent with the President's policy on cybersecurity.

Link: <https://www.whitehouse.gov/presidential-actions/2022/07/2022-07-27-executive-order-14176/>



Recommendations to Space System Operators for Improving Cybersecurity

The Recommendations to Space System Operators for Improving Cybersecurity paper, written by the public and private sector members of the Space Systems Critical Infrastructure Working Group, is intended to inform space system operators and stakeholders of common cyber risks posed to space systems and provide mitigations aligned with the National Institute of Standards (NIST) guidance and recommendations. **#USA #SpaceCybersecurity**

Link: <https://www.cisa.gov/resources-tools/resources/recommendations-space-system-operators-improving-cybersecurity>





THREAT INTELLIGENCE

North Korea spending aircraft and ships

The United States has announced that it has identified North Korea's spending on aircraft and ships, which is a significant increase from previous years. This spending is seen as a sign of North Korea's growing military capabilities and its potential to pose a threat to regional stability.

Link: [https://www.defense.gov/Newsroom/Record/Article/344444/](#)



Recognizing the rising threat of AI-powered weapons in critical industries

As artificial intelligence (AI) continues to advance, the potential for AI-powered weapons to be used in critical industries is a growing concern. These weapons could be used to disrupt essential services, such as power grids, financial systems, and transportation networks, posing a significant threat to national security.

Link: [https://www.defense.gov/Newsroom/Record/Article/344444/](#)



★ Space ISAC issues TLP: CLEAR public release on Threat Level Assessment

Space ISAC is announcing an update of its threat level assessment via a TLP: CLEAR public release. The purpose of this announcement is to raise awareness of the space industry, government, and international partner perspective on the current level of threat. **#SpaceISAC #ThreatLevelAssessment**

Link: <https://spaceisac.org/space-isac-issues-ttp-clear-public-release-on-threat-level-assessment/>



Russia spending more on space and missile defense in Europe

Russia has announced that it is increasing its spending on space and missile defense in Europe. This spending is seen as a sign of Russia's growing military capabilities and its potential to pose a threat to regional stability.

Link: [https://www.defense.gov/Newsroom/Record/Article/344444/](#)



Russia's AI-powered weapons in a picture

Russia has announced that it is developing AI-powered weapons, which could be used in a variety of ways, including to disrupt essential services, such as power grids, financial systems, and transportation networks, posing a significant threat to national security.

Link: [https://www.defense.gov/Newsroom/Record/Article/344444/](#)



China's nuclear arsenal

China has announced that it is increasing its nuclear arsenal, which is seen as a sign of China's growing military capabilities and its potential to pose a threat to regional stability.

Link: [https://www.defense.gov/Newsroom/Record/Article/344444/](#)

