



SPACE CYBERSECURITY WEEKLY WATCH

Week 21

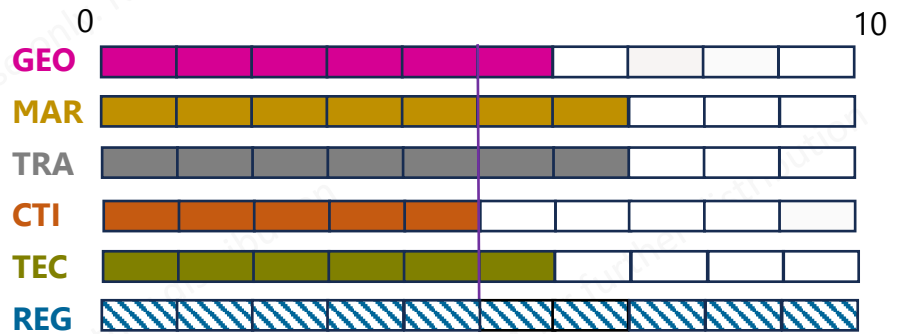
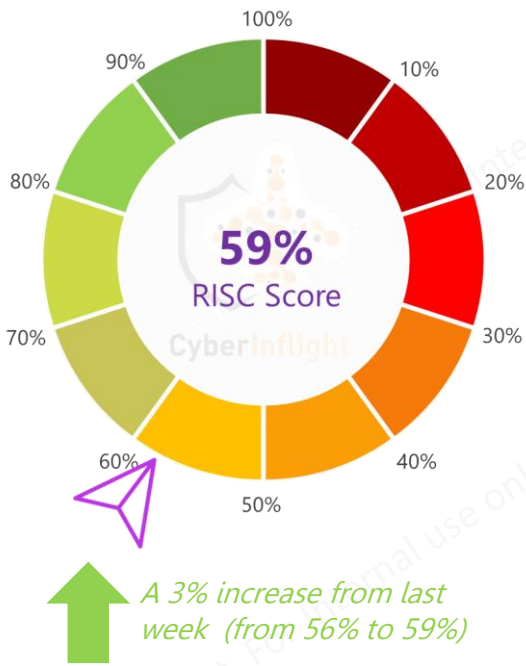
May 21 - 27, 2024

Timeframe : Weekly
of articles identified : 25
Est. time to read : 45 minutes

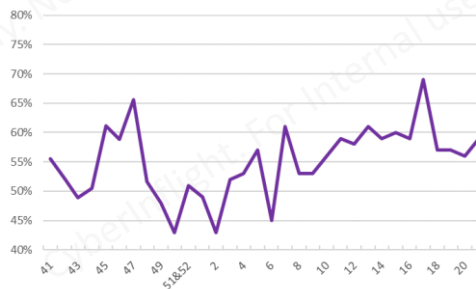
Articles, company's communications, whitepapers, academic works, podcast, and sources not to be missed on the topic of space cybersecurity over a specified timeframe.

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

Overview & Resilience Index for Space Cybersecurity



RISC Score Evolution



After a peak in W17, there was a period of decline from W18 to W20. This W21 shows a slight increase of the RISC score which is a tool to assess space cybersecurity resilience from information category in this report.

This week's RISC score is 59%. This week, an article discussed the competition for space dominance among the US, Russia, and China, with each country accusing the others of disrupting them using electronic warfare tactics such as jamming and spoofing. In addition, Virginia SATCOM has received a contract to develop a 5G anti-jamming prototype for the US Defense Innovation Unit or DIU. This project aims to leverage DIU's Communication Signal Interference Removal to reduce, isolate, and eliminate unwanted signals from an authorized network. On the market front, EU ministers call for more public and private investment in space to encourage innovation and to boost European competitiveness. On another note, Sticky Fingers' effectiveness has been tested under interference and jamming attacks. This experiment affirms that including a fingerprinting system to authenticate satellite communication is safe without opening up the system to easier denial-of-service attacks. Finally, the Euro-Atlantic Resilience Center notes that Russia has triggered an electronic jamming war on Romania's territory, which manifests itself, especially in Iasi and Galati counties that border the Republic of Moldova.



GEOPOLITIC

Space Force is restructuring all missions into 'integrated' units to boost readiness

The United States Space Force is restructuring its units to boost readiness and efficiency. The Space Force will be reorganized into integrated units, which will combine space operations and cyber operations. This will allow the Space Force to better coordinate its efforts and respond more quickly to threats. The reorganization is expected to be completed by the end of the year.

Link: [https://www.spaceforce.mil/News/News-Details/Space-Force-is-restructuring-all-missions-into-integrated-units-to-boost-readiness](#)

Russia's military increases frequency of tests in outer space

Russia's military has increased the frequency of its tests in outer space. The Russian military has conducted several tests in the past few months, including tests of its anti-satellite capabilities. The tests have been conducted in the vicinity of the International Space Station (ISS). The Russian military has also conducted tests of its space-based radar and communication systems. The tests are part of Russia's ongoing efforts to develop its space capabilities.

Link: [https://www.spaceforce.mil/News/News-Details/Russia-s-military-increases-frequency-of-tests-in-outer-space](#)

Could new space force cyber warfare unit lead to NATO expansion?

The establishment of a new space force cyber warfare unit could lead to NATO expansion. The unit would be responsible for conducting cyber operations in space, which could be used to disrupt the operations of other countries. This could lead to a new arms race in space, which could be destabilizing. NATO expansion could be a way to address this issue.

Link: [https://www.spaceforce.mil/News/News-Details/Could-new-space-force-cyber-warfare-unit-lead-to-NATO-expansion](#)

America's military has the edge in space, China and Russia are in a counterspace race to disrupt it

This article discusses the competition for space dominance among the US, Russia, and China, with each country accusing the others of disruption using electronic warfare tactics such as jamming and spoofing. **#Cyberattacks #Space**

Link: <https://kesq.com/news/national-world/cnn-world/2024/05/26/americas-military-has-the-edge-in-space-china-and-russia-are-in-a-counterspace-race-to-disrupt-it/>

North Korea plans to launch a rocket soon, likely carrying its second military spy satellite

North Korea has announced plans to launch a rocket soon, likely carrying its second military spy satellite. The satellite would be used to monitor the activities of other countries in space. This could be a significant development in the space race between North Korea and other countries.

Link: [https://www.spaceforce.mil/News/News-Details/North-Korea-plans-to-launch-a-rocket-soon-likely-carrying-its-second-military-spy-satellite](#)



TECHNOLOGY



Virginia SATCOM firm to build 5G anti-jamming prototype for DIU

Virginia-based satellite communication provider iDirect Government has received a contract to develop a 5G counter-interference prototype for the US Defense Innovation Unit. Under the project, the company will leverage its proprietary Communication Signal Interference Removal (CSIR) solution, a co-channel capability that reduces, isolates, and eliminates unwanted signals from an authorized network. **#iDirect #DIU**

Link: <https://www.thedefensepost.com/2024/05/23/us-5g-anti-jamming-prototype/>





MARKET & COMPETITION



EU ministers call for more public and private investment in space

EU ministers call for increased public and private investment to support innovation in the space sector, as they pledge to use space to boost European competitiveness. The joint resolution, issued at a ministerial meeting on May 23rd, highlights the potential of space services to help various industries gain a technological edge, to support climate protection and to safeguard critical infrastructure. #EU #SpaceInvestments

Link: <https://sciencebusiness.net/news/european-space-agency/eu-ministers-call-more-public-and-private-investment-space>



TRAINING & EDUCATION



Ball, Industry leads connectivity and service challenges at defense meeting
A meeting exploring the current state of the industry and the future of satellite connectivity and service...
Link: [https://www.ndss-symposium.org/ndss-paper/auto-draft-440/](#)



Sticky Fingers: resilience of satellite fingerprinting against jamming attacks

This paper evaluates the effectiveness of radio fingerprinting techniques under interference and jamming attacks, usually intended to deny service. It also assesses the attacker power required in order to disrupt the transmitter fingerprint such that it can no longer be recognized. Finally, it compares this to Gaussian jamming on the data portion of the signal, obtaining the remarkable result that transmitter fingerprints are still recognizable even in the presence of moderate levels of noise. #SatelliteResilience #Jamming



Link: <https://www.ndss-symposium.org/ndss-paper/auto-draft-440/>

NDSS 2024 security operations research on space operations cybersecurity
Security operations research on space operations cybersecurity...
Link: [https://www.ndss-symposium.org/ndss-paper/auto-draft-440/](#)

The impact of 5G on satellite and space systems
The impact of 5G on satellite and space systems...
Link: [https://www.ndss-symposium.org/ndss-paper/auto-draft-440/](#)



Analysing cyber threats to satellite and space systems through strategic systems thinking
Analysing cyber threats to satellite and space systems through strategic systems thinking...
Link: [https://www.ndss-symposium.org/ndss-paper/auto-draft-440/](#)



Interconnectivity gaps with Earth-orbiting satellites
Interconnectivity gaps with Earth-orbiting satellites...
Link: [https://www.ndss-symposium.org/ndss-paper/auto-draft-440/](#)





THREAT INTELLIGENCE



Russia's hybrid warfare in space of GPS waves along the Prut River

A report by the Euro-Atlantic Resilience Center, a body affiliated to the Romanian Ministry of Foreign Affairs (MFA), notes that Russia has triggered an electronic jamming war on Romania's territory, which manifests itself especially in Iasi and Galati counties that border the Republic of Moldova. **#Russia #GPS**

Link: <https://dnyuz.com/2024/05/13/enemies-may-disrupt-us-satellites-by-hacking-ground-stations-pentagon-says/>

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Global navigation jamming will only get worse, the US must be aware

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How GPS warfare is playing havoc with civilian life

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Training in Poland puts stress pressure in hands of US troops as NATO's eastern flank

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Russia GPS jamming in regions of geopolitical conflict

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US supplies NATO completely sufficient against Russian Russian jamming technology

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