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Cyber-security threats to space missions and countermeasures to address them (4)

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CYBERSECURITY FOR SPACE AS PART OF SECURITY POLICY IN EUROPE

Abstract

Cybersecurity or the security of network and information systems plays an essential role to keep the online economy running and to ensure prosperity by taking advantage of opportunities in the new digital age. The objective of this paper is to examine and provide a comprehensive analysis of cybersecurity strategies in Europe, focusing on the role of the European Union, the European Space Agency and their respective Member States. The first part of the paper summarizes the European Union's cybersecurity strategy and initiatives currently in place, with specific attention to space, taking into consideration the role of the European Union Agency for Network and Information Security (ENISA) as well as other EU institutions. The second part of the paper is focused on the cybersecurity aspects of ESA's policies and programs contributing in strengthening cybersecurity in Europe. The third part of the paper describes Member States' policies, needs and initiatives related to cybersecurity, with a focus on space activities. The paper describes the main challenges and vulnerabilities in the frame of cybersecurity for space and identifies specific developments and tailored security, industrial and procurement policy measures which are needed to address the cyber-threats to which space missions are exposed. The main purpose of this paper is therefore to draw conclusions on the various legal and policy aspects of cybersecurity for space as part of security policy in Europe.