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CYBER INSURANCE FOR CYBERSECURITY IN SPACE SYSTEMS. BUILDING EFFICIENT RISK MANAGEMENT ECOSYSTEM

Abstract

Cyber-attacks on satellite systems may not happen every day, but they are undoubtedly on the verge of becoming a systemic risk. They threaten not only individual operators by causing financial losses, but also entire societies by potentially disabling key functions provided by space systems, leading to collisions and creating space debris. Sustainability is therefore also at stake.

In light of the above, cyber risk management of space systems is critical to the security of space and Earth. This raises the question of how to manage it, not only for satellite operators but also for regulators. Among the issues to be addressed in the approach to space cyber risk management is the question of whether regulatory mechanisms can be proposed, in particular those already applied in other industries, such as telecommunications. The possibility of drawing on the experience of professional risk managers, i.e. insurers, should also be explored.

The insurance market has been dealing with cyber risks since the 1990s, in a prudent and responsible manner. The visible result of this is an improvement in cyber security standards and better prevention. This is the result of a rather novel approach in insurance, where insurers are not only involved in the payment of claims, but also actively participate in risk assessment in the company (risk prevention dimension) and are involved in crisis management from the moment a cyber attack is disclosed (loss mitigation dimension). The pertinent question posed by the authors is whether it is possible to implement the above cyber insurance solution in the space sector, where cyber risk is a 'silent' one and a kind of black hole not only for space experts but also for space insurers.

Considering the experience and know-how of the insurance market as valuable and the cybersecurity of satellite systems as critical, the authors aim to analyse (1) whether and under what conditions cyber insurance could exist in the space sector; (2) how cyber insurance could support the cybersecurity of space systems; (3) how the know-how of the insurance market can be used to manage cyber risks in the space sector, even if traditional insurance coverage would not be possible.