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RISK PREVENTION IN OUTER SPACE: THE SYNERGISTIC ACTION OF ARTIFICIAL INTELLIGENCE AND SPACE LAW

Abstract

The use of Artificial Intelligence (AI) in the space sector promises to revolutionize it, paving the way for ever-new application scenarios.

The disruptive development of this technology emphasizes a challenge which the Law, especially Space Law, has faced since time immemorial: to keep up with innovation and bridge the regulatory gaps it creates, in a frantic race towards a horizon that technological progress continues to push away.

Nonetheless, AI can also be a valuable resource for jurists if used in synergic action with law.

For instance, AI applications in collision avoidance and telemetry help mitigate risks and strengthen space sustainability needs, reducing consequently the difficulties related to the identification of the responsibilities in case of damages caused by space objects and the unavoidable disputes that these incidents involve.

Such uses of AI, in synergy with ad hoc regulation that implements and generalizes their use, can contribute to the creation of a regulatory framework in which actors can operate and interact more safely.

In this regard, this paper aims to shed light on the contribution that this synergistic action of AI and space law can bring to the matter of liability in the event of collisions in orbit. This will be done by examining the possible uses of AI in this field and determining what is the most effective declination that space regulation should take.

On this subject, the paper will analyse the long-standing dichotomy between Hard and Soft Law, to understand which is best suited to operate in synergy with the aforementioned AI applications.

The paper will conclude with a reflection on the desirability of harmonization of space law to create the basis for an increasingly stable operational environment for space actors.