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FROM A PRACTICAL PROBLEM TO A LEGAL SOLUTION FOR SPACE DEBRIS

Abstract

Decades of space exploration have produced enormous quantities of space debris orbiting the Earth. There are two options to tackle this problem. The first option is focused at implementing and enforcing measures to mitigate the amount of space debris during future missions. The second option consists of actively removing the debris from Earth's orbit. Studies and reports show that the latter option poses the biggest obstacles in terms of financial, technical, and legal feasibility. Although the majority of research focuses on the financial and technical feasibility, it is equally important to look into the legal feasibility as well, which is the subject of this paper.

Four major problems can be identified when looking at legal feasibility of active debris removal. The first is the lack of a clear and generally accepted definition of the term "space debris" in international space law. The second problem is situated in the area of liability when third parties are involved in removing space debris from orbit, which is not properly dealt with in the 1971 Liability Convention. The third problem is situated in article VIII of the Outer Space Treaty of 1967 which states that: "A State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object, and over any personnel thereof, while in outer space or on a celestial body." This entails that the State of registry retains jurisdiction and control over an object launched in space, independent of the usability of that object. The fourth problem is related to export control regulations of certain technologies used in objects launched in space when being removed by a third party. The most famous regulation is the International Traffic in Arms Regulation (ITAR), currently in force in the United States.

This paper tries to find an answer to the question whether it is possible to come to a legal framework that tackles these four main problems, either on the international, regional, or national level. It will put forward clear recommendations by analysing a hypothetical case of active debris removal. This will allow to identify the key legal issues on the basis of which efficient and practical rules can be drafted to tackle one of the most important and urgent problems the space sector faces today.