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CAPTURING SPACE DEBRIS: AN ANALYSIS OF OVERARCHING INITIATIVES

Abstract

The increased usage of and expanded presence in Outer Space has led to the rapid growth of debris cluttering Outer Space, which will more than likely pose a safety risk as space travel becomes more accessible and subsequently frequent in the foreseeable future. Although there are no universal or legally binding laws set into place regarding the mitigation or remediation of space debris, international organizations such as the Inter-Agency Space Debris Coordination Committee (IADC) and the United Nations Office for Outer Space Affairs (UNOOSA) have established their own space debris mitigation guidelines to suggest ways for member states to mitigate space debris. As the space debris problem grows in nature, private companies have begun to create their own space debris remediation methods, to reduce the current space debris problem while overall mitigation guidelines are still being determined. Of these private companies, Astroscale is focusing on space debris remediation with its successful launch and test of their spacecraft, ELSA-d, and its satellite capture technology. Astroscale and other private companies have become more involved in the process of contributing towards space debris related regulations. This paper will analyze the current guidelines, best practices and technologies implemented by private companies to mitigate and remediate space debris. These findings will be significant in understanding the current space debris mitigation and remediation methods recommended and implemented today, as well as what this implies for the future of space debris.