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Author: Mr. George Anthony Long
United States, gal@spacejurist.com

TREATING SPACE JUNK AS A SPACE RESOURCE

Abstract

United States law allows its citizens to engage in the "commercial recovery of an asteroid resource or a space resource" and grants property rights in such recovered resources. The legislation does not limit its application to natural resources like Article 11 of the Moon Treaty as it defines "space resource" to mean an "abiotic resource in situ in outer space." Moreover, the Act specifically clarifies that "space resource" includes water and minerals. The broad definition of "space resource" indicates that it can encompass resources which are of artificial origin. The U.S. legislation may have the collateral benefit of providing a commercial incentive for the harvesting of space debris, decommissioned satellites and aging satellites.

The space industry appears to be on the cusp of engineering the convergence between "space junk" and "space resource." For example, an Australian company has developed technology for transforming aluminum into fuel rods which can be used as a power source for satellites. Since most space objects are composed of aluminum and the aluminum fuel rod technology can be employed in the outer space environment, this technology can potentially transform what is now considered "space junk" into a fuel source. In other words, what is now considered "space junk" can be construed as a "space resource" as defined by U.S. law.

This paper will analyze the concept of "space junk" being construed as a "space resource" and explore the implications of how such a shift in perspective may affect the removal of existing space clutter as well as mitigate against the creation of additional space junk by offering a "recycling" alternative for end of life satellite disposal.