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LEGAL ISSUES RELATING TO UNAUTHORISED SPACE DEBRIS REMEDIATION

Abstract

Following loss of contact with the earth observation satellite Envisat on April 2012, the European Space Agency declared the end of its mission a month later in May 2012 after failed attempts to restore control. This minibus-sized satellite weighing 8 metric tons is currently drifting uncontrolled in the low Earth orbit. The increasing proliferation in the population of uncontrollable man-made objects in the earth orbit poses severe navigational threats to functional satellites and other space assets. Studies conducted on achieving long-term security and sustainability of outer space activities reflect the consensus of the scientific community that space debris remediation in the form of active removal of debris is essential to prevent cascading collisions between the space debris in orbit. While private enterprises such as MDA, CleanSpace One, ViviSat are trying to make a foray in the realm of space debris remediation, the public sector and the government agencies have been equally interested in the development of this technology by establishing initiatives such as the Phoenix program (United States DARPA), DEOS (German DLR).

This paper will explore the body of space law and its implications on space debris remediation. Relying on the example of Envisat, it will be demonstrated that the existing framework of international space law does not authorise interception with space objects without the prior consent of the State of Registry. In the case of a removal of an object without the authorisation of the State of Registry, it would constitute an internationally wrongful act. However, it will be argued that such wrongfulness may be precluded by the defence of necessity under the given circumstances.

This paper will further draw attention to the need to effectuate unambiguous interpretation of the existing provisions of international space law and the need for close cooperation between members of the international space community for the smooth operation of space debris remediation. Finally, it will conclude that the current provisions of international space law are adequate to address any potential legal controversies arising in this context and there is no need for any amendment or reform in the current legal framework by concluding a new treaty.