

SPACE DEBRIS SYMPOSIUM (A6)

Political, Economic and Institutional Aspects of Space Debris Mitigation and Removal (Joint with Space Security Committee) (6)

Author: Mr. Philipp Maier

Space Generation Advisory Council (SGAC), The Netherlands

Ms. Minoo Rathnasabapathy

Space Generation Advisory Council (SGAC), Austria

Ms. Zhuoyan Lu

University of Lapland, Finland

ACTIVE DEBRIS REMOVAL: A MULTINATIONAL POLICY OPTION

Abstract

Representing a major challenge for the space community in the near future, the issue of space debris was discussed in the 2011 Space Generation Congress' (SGC) Industry Session in order to collect the youth's perspective on this pressing topic. The work described in this abstract is a follow-up on these discussions. Following the growing consensus on the necessity of Active Debris Removal (ADR), various suggestions have been made on policy and organizational implementations for ADR. Among the proposals, there is a distinction between unilateral options, arguing for independent initiatives from single nations, and truly international approaches often including international treaties. The former approach allows for the advantage of evading difficult legal issues that would need to be treated in an international environment, possibly leading to a comparatively earlier start of ADR operations. Alternatively, an international approach would ensure shared burdens, maximized transparency and potentially more funds, making it a desirable long-term solution. This paper aims at analyzing and promoting a feasible approach in between the two extremes, combining advantages of both. The suggested framework revolves around a limited number of willing governments or space agencies that cooperate on a voluntary basis such as that of the Inter-Agency Debris Coordination Committee. Acknowledging the potential efficiency of a commercial market, debris objects on the registry of cooperating states would be removed by commercial providers utilizing finances from a shared fund. Motivation to contribute would be partly drawn from the general interest to maintain space safety, partly from voting weights on objects to be removed, depending upon the contribution and possibly also from return flow of financial investments to contributors. The foreseeable limitation to a relatively small number of willing contributors would elude many legal challenges associated with international approaches, such as the currently ambiguous legal definition of space debris. Furthermore, time-consuming international consensus-reaching processes would be replaced by discussions in a smaller forum, while greater transparency would be maintained. Assuming that the first states to join such an effort would be the current "big players" in space, this approach also takes into account the role of emerging space actors in ADR operations. Through the creation of a platform for commercial ADR technology demonstrations, such an approach could help to quickly take the next step on a technological level, marking a quick diplomatic success and an organizational step, it could also serve as a "kick" for international cooperation for further ADR operations.