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Contribution of Space Activities to Solving Global Societal Issues (2)

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PROMOTING INTERNATIONAL CO-OPERATION IN THE AGE OF GLOBAL SPACE
GOVERNANCE - A STUDY ON ON-ORBIT SERVICING OPERATIONS

Abstract

Outer space exploration has been an area where the international community demonstrated a significant level of co-operation, successfully transcending geographical, national and cultural boundaries. In the age of global governance, international co-operation has never been more important in resolving today's global challenges. One of such challenges is the growing amount of space debris in orbits, which, if unresolved, will not only undermine global information and communications technology (ICT) system, but will also hinder areas of sustainable development where outer space activities contributed to. (e.g. satellite imaging for disaster warning and management, satellite imaging for agricultural purpose)

This paper proposes to conceptualize space orbit as an essential global common, whose governance requires international co-operation. In examining potentials and challenges in moving forward space orbit governance, the paper pays particular focus on ensuring space safety and sustainability through the introduction of on-orbit servicing (OOS) operations, both by international, regional, national agencies and private operators. The paper will identify aspects of OOS that warrant further collaborations, specifically, the standardization of docking practices that could facilitate future space activities. Recognizing the potential rapid commercialization of refueling, repairing and debris removal operations in orbits, this paper argues that a standardization of docks and docking practices would be the first step towards enhancing international co-operation and strengthening the existing regime of peaceful use of outer space. Ultimately, it could play a role in addressing one of today's most imminent challenges – ensuring sustainability of global commons.