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IISL COLLOQUIUM ON THE LAW OF OUTER SPACE (E7)
A new look at (how far are we with) Space Traffic Management (3)

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REGULATORY APPROACHES FOR A SUSTAINABLE GLOBAL ON-ORBIT SERVICING MARKET

Abstract

A variety of new commercial space technologies, capabilities, and services support both domestic and international space policy and regulatory agendas. These include technologies and capabilities for on-orbit life-extension, repair, refueling, manufacturing, assembly, and end-of-life disposal of satellites, and active debris removal. Additional capabilities include on-orbit space situational awareness (SSA) capabilities to track orbital debris, characterize space objects, and perform inspections of satellites to help resolve on-orbit anomalies and monitor the impact of the space environment on satellite hardware. Collectively, these capabilities will help usher in a new era of innovative space activities, increase the economic return from space activities, and improve the sustainability of the space environment, leading to a cumulative revenue opportunity by 2030 of $6.2 Billion USD, according to a recent report by Northern Sky Research.$

The "Consortium for the Execution of Rendezvous and Servicing", or CONFERS, is an industry group representing enterprises and organizations involved in these on-orbit activities and is preparing for this new market. CONFERS is taking a leading role in global discussions to set standards, norms of behavior, and to advance on-orbit servicing.

A robust and sustainable space environment will require on-orbit services, and governments have a responsibility to authorize and supervise these new space activities. To ensure a sustainable servicing market, the emerging rendezvous and proximity operations (RPO) and on-orbit servicing (OOS) sector requires a regulatory and licensing environment that is clearly defined, efficient, allows for services flowing between States, and promotes the growth of innovative commercial space activities, while ensuring safety of operations and clarity of liability. This paper will evaluate the key tenets that operators identify as important in implementing an effective regulatory approach for RPO and OOS, including licensing frameworks, non-Earth imaging restrictions, export control requirements, space debris mitigation practices, liability sharing among participating States, and spectrum allocation needs. Each of these regulatory issues requires certainty in regulatory authority and licensing to create a stable and successful global OOS industry.