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ON-ORBIT SERVICING: FROM INTERNATIONAL SPACE LAW TO NATIONAL LAWS: CURRENT  
STATE OF PLAY

**Abstract**

The development and emergence of unmanned on-orbit servicing (OOS) technologies play a major role in today's discussions on the sustainability of outer space activities. With OOS, the lifetime of satellites in orbit can be prolonged, preventing space debris and limiting further congestion of outer space. The possibilities and benefits of OOS provided by commercial entities and governments give rise to a multitude of legal questions on various levels. This article has a twofold approach, addressing international space law and EU law aspects relevant for OOS, before focusing on the important role of national space laws in authorising and supervising OOS. While no EU laws or policies directly mention OOS, some of its elements - especially security and data related provisions - play an important role, both in its Lisbon 2009 EU treaties, TEU and TFEU, as well as the Regulation establishing the EU Space Programme. The EU's competence in space matters, regulated by Article 189 TFEU, highlights the importance of national space laws in general, also as applied to OOS, and clarifies the lack of competence of the EU to harmonise space laws at national level. National space laws have to comply with Article VI Outer Space Treaty and the established principle of international responsibility for State Parties over their national space activities. This treaty provision is regulated in a more detailed way at national level. Nevertheless, national laws should not be seen as limitation, but as a facilitating element, providing legal certainty. National space laws may also serve well as a tool to enable OOS, e.g. through requirements on collision avoidance and de-/re-orbiting, as well as other space debris mitigation measures. OOS involves manoeuvres and actions that can all be considered as being subject to formal approval and licensing - refuelling, repairing, repositioning, reallocation of orbits etc. The national licensing requirements in French and US jurisdictions are looked at more closely in this paper. The 2008 French Space Operations Act and several domestic laws and regulations in US space law, spread across differing competent agencies, both do not explicitly address OOS but regulate authorisations and space licensing whilst setting requirements for insurance and liability and fulfilling obligations laid down in Article VI under international law. This paper looks at the requirements for approving OOS with a view to discussing how national statutes can increase legal certainty regarding OOS activities, and contribute to its further development at commercial level.