

IISL COLLOQUIUM ON THE LAW OF OUTER SPACE (E7)
Space Law in a Networked World (7)

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THE REGULATORY IMPACT OF THE INTERTWINING BETWEEN OUTER SPACE AND THE
CONNECTED BORDERLESS WORLD

Abstract

The advent of new technologies such as blockchain/DLT and AI, as well as the continuous development of IoT facilitated by 5G, is playing a leading role in societal change. Fourth Industrial Revolution's market projections for 2025 show the growth of cloud computing, autonomous cars, drones and precision medicine. At the same time, cyber-attacks and data vulnerability bring geopolitical, societal and economic risks, all of which are demanding global regulatory approaches to common challenges. Such common challenges cover sectors such as electronic communications, energy, transportation and health, as well as privacy, data storing and sharing. Not only innovations in these areas impact space technology, products and services, but space is also set to play an increasingly important role in such sectors (for instance, internet satellites, blockchain space nodes, space data storage). This paper examines the legal and regulatory impact of the use of space capabilities in the regulatory frameworks more closely related with the networked world – especially as regards electronic communications, autonomous and shared systems, and the data economy. Indeed, legal, regulatory and policy approaches in these areas do not often address space infrastructures and services, not the least because of the legal best practice of technological neutrality. It so happens, however, that space capabilities have features that may require a more careful look at their impact on the above areas, such as placement of technical resources in outer space not subject to a country's sovereign powers, the specificities of support tasks mainly through OTA updates and the challenges of systems' decommissioning. The paper examines if and to what extent such regulatory frameworks shall be clarified in light of the increasing use of space technology and their integrated use with terrestrial infrastructure, taking into special consideration the EU approach. On the other hand, the development of new technologies is impacting the space sector, allowing more and more space objects to be launched into space and to be used for everyday life. This paper analyses to what extent the increasing use of space resulting from technological development, and the trend of “smart space devices”, may impact space law especially in light of the challenges of satellite launching and operation, orbit congestion, traffic management, debris mitigation and cybersecurity. This paper briefly examines to what extent international space law, but also national laws, may address these new challenges resulting from a world increasingly connected by outer space.