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Annette Froehlich
Editor

Legal Aspects Around Satellite Constellations

Editor

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Preface

In view of the proliferating activities in the field of satellite constellations, the European Space Policy Institute (ESPI), the European Centre for Space Law (ECSL), and the German Aerospace Centre (DLR) invited students and young professionals worldwide to submit a paper on “Legal aspects around satellite constellations” as these are becoming increasingly important. Indeed, these groups of coordinated satellites evoke a wide range of interesting topics from various fields (environment, economy, security, licencing, control, etc.), which highlight the relevance of this topic.

The main focus was placed on the management of scarce orbital resources, including geostationary orbit (GSO) and low Earth orbit (LEO), in order to guarantee efficient use and equitable access while taking into account the needs and interests of the whole international community. Indeed, with the rise of private actors and their announced mega constellations, LEO seems to be particularly in high demand. Therefore, the frequency assignments should be management without discrimination to avoid a domination of LEO by some major space actors. In addition, even if private companies from established space-faring nations like the US currently intend to set up satellite constellations to provide Internet for the benefit of humanity, this should nevertheless not lead to a situation where relevant orbits are no longer available for new actors from emerging space countries.

With the emergence of private actors, coupled with the fact that States are no longer the primary actors, a review of the legal situation is furthermore envisaged to enhance legal certainty. Therefore, proposals include a harmonization of the legal regimes and the elaboration of flexible solutions, even a separate regime, through analysis of the link and interconnectivity between the legal telecommunication regimes provided by the International Telecommunication Union (ITU) and the use of outer space as guaranteed by the UN treaties in the context of satellite constellations. The flexible mechanism of the ITU may especially allow more timely action and an efficient system to avoid warehousing of frequency assignments. In addition, regulations to ensure protection from technical interference are of utmost importance, especially for mega constellations, to avoid interfering incidents.

Finally, while satellite constellations present new opportunities, they can also compound challenges related to space debris, especially with the emergence of small satellite constellations. Therefore, end-of-life disposal activities have to be envisaged for such an extensive amount of satellites, while existing guidelines in this regard are scrutinized, especially as to whether they are sufficient for further satellite constellation projects.

The sustained support of Mari Amanda Eldholm, Executive Secretary of the European Centre for Space Law (ECSL), was invaluable to the success of this project, and sincere gratitude and appreciation for her enthusiastic cooperation is hereby expressed.

Vienna, Austria
October 2018

Annette Froehlich

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