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Author: Ms. Neta Palkovitz
ISIS- Innovative Solutions In Space B.V., The Netherlands, n.palkovitz@isispace.nl

Mrs. Tanja Masson-Zwaan
International Institute of Air and Space Law, Leiden University, The Netherlands,
t.l.masson@law.leidenuniv.nl

ORBITING UNDER THE RADAR: NANO-SATELLITES, INTERNATIONAL OBLIGATIONS AND
NATIONAL SPACE LAWS

Abstract

Nano-satellites are small size, lightweight satellites, used mostly for scientific and educational purposes. They are usually launched into low Earth orbit as an auxiliary payload, thereby reducing the cost of the launch significantly. Thus, nano-satellites are an ideal platform for peaceful exploration of outer space for states and educational organizations which are lacking in resources. Additionally, these satellites are increasingly used by the space industry to test newly developed products, components and technology in outer space, thus lowering the financial risk for a mission's failure when introducing these innovations into commercial missions. While there is no reason why these satellites would not be considered as "space objects" under international space law, they are in practice excluded from the scope of some national space laws. The reason for such exclusion lies in the interpretation of the words "national activities in outer space" in Article VI of the Outer Space Treaty. It is argued by some states that, since (some of) these satellites cannot be maneuvered once deployed in orbit, they are in fact not "active" in outer space, and hence do not constitute a space activity subject to the obligations set forth under the international space treaties. The above-mentioned exclusion from national space laws has led to a practice where the launch and operation of nano-satellites is not licensed by any of the "launching states" involved. This also usually implies a refusal to register the satellite in the relevant national and international registry of space objects. On the other side of the legal spectrum, some national space laws do consider the launch of nano-satellites as a space activity, and impose licensing and sometimes also insurance requirements. While taking out insurance may be suitable for commercial missions, scientific-educational missions carried out by universities generally lack funding for insurance. These situations create a regulatory obstacle which calls for a solution, especially since this niche-market within the space sector is gaining in popularity amongst a broad spectrum of stakeholders, both new and established in the space domain. In order to secure the long term sustainability of the nano-satellite segment, a legal compromise has to be reached between affordable peaceful exploration and use of outer space and fulfilling international obligations. The aim of this paper is to raise awareness about these issues and propose ingredients for a solution.