

16th IAA SYMPOSIUM ON SPACE DEBRIS (A6)
Policy, Legal, Institutional and Economic Aspects of Space Debris Detection, Mitigation and Removal
(Joint Session with IAF Space Security Committee) (8)

Author: Mr. Kiran Nair
Institute of Air and Space Law, McGill University, Canada, nairkkcaps@gmail.com

EMPLOYING LEX LATA AND LEX FERENDA FOR REGULATING THE SURGE IN SMALL
SATELLITES

Abstract

Small satellites are cheap, expendable and practical in many more ways than one. Despite being introduced by the Soviet Union in the 1960s, it is only due to recent advances in modern technology and miniaturisation that they have become practical and popular. For well around four decades there were very few small satellites, even during the years 2000- 2012, the total number of small satellites launched were barely in the ranges of 20-25. The figures suddenly shot up to 92 small satellites in 2013, and the next year, it peaked at 158 and the pace continues at over 100 launches per year.

The rise in swarms of small satellites is astonishingly rapid, unprecedented and unruly as of now. It is a revolution by itself and far outstrips the pace of review, reform and regulation possible by the lone regulatory body on the issue, the United Nations and herein lies the danger of continuing with *lex lata*. As of date, no legal research addresses this aspect. It is critical that the issue be given its due and solutions be explored both within *lex lata* and *lex ferenda*.

The issues are manifold; there exists no legal definition of a small satellite, registration issues are vague, spectrum, frequency, slot allocation issues are heavily contested and with swarms of small satellites are a potential nightmare. Further, these rising numbers translate into overcrowding in useful orbits and increased potential for conflict over scarce space resources. It also adds to space debris.

The magnitude of the problem is enormous, global in scope and unless steps are taken today to regulate the plethora of problems likely with the profusion of small satellites, all of humanity tomorrow might lose access to space.

This paper attempts to assuage the magnitude of the problem and look for solutions in both *lex lata* and *lex ferenda*. While doing so, it seeks to draw and apply the doctrinal underpinnings of the Outer Space Treaty, UN charter and the concept of Global Space Governance. These qualitative methods would be contrasted against the empirical data of the past and present to support inferences. Overall, the study is reform based and draws on both qualitative and quantitative methodology.