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NANOSATELLITES AND THEIR DEMAND FOR CHANGES IN SPACE POLICY

Abstract

In recent years, thanks to system miniaturization and decreasing expenses in development and launch, the nanosatellite market has grown exponentially. Concerns also grown over the unsafe practices of new actors, like start-ups, universities, nongovernmental organizations and even amateurs supported by crowd-funding campaigns, particularly in Earth's most crowded orbit: low Earth orbit (LEO). Lawmakers and policymakers have been unable to keep up with the rapid advance. The October 2016 Space Generation Congress Policy Working Group, with the support of the Secure World Foundation, attempted to address the core issues surrounding nanosatellites. Over the course of three days, 18 space professionals and students from 13 different countries discussed and debated issues surrounding nanosatellites and in particular the long-term sustainability with the issues brought by future constellations and mega-constellations. The Working Group produced a set of recommendations, presented at UNCOPUOS in February 2016, including a specific orbital range for nanosatellites where short-lived craft without debris mitigation systems onboard or potential onboard operational capabilities would have a commensurate orbit lifetime.

This paper will focus on a detailed definition of the recommendations and best practices necessary to mitigate the space debris issue caused by nanosatellites' poorly regulated deployment in LEO.