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Mitigation - Tools, Techniques and Challenges - SEM (4)

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THE FRENCH SPACE OPERATION ACT TECHNICAL REGULATION AND ASSOCIATED GOOD
PRACTICES IN THE FIELD OF ORBITAL SPACECRAFT'S. WHERE ARE WE AND WHERE DO
WE GO?

Abstract

The French government adopted a Space Law in 2008, and the associated Technical Regulation in 2011, which is now full applicable since beginning of 2021, after 10 years of transient measures. This space Regulation addresses the Launchers operators from Kourou Space Port (French Guyana) or any Launcher operators from non-French territories and all satellites French operators. CNES Toulouse Safety Office conducts, for more than one year, intensive work, in order to upgrade the Technical Regulation, due to the growing activities in Space field and consequent increasing of the orbital traffic. This work is done in closed cooperation with the French satellites operators in a common goal of regulating and protecting the space activities, for the benefit of both institutional (scientific) and commercial field. The emergence of both small satellites (Cubsat) and (Mega) Constellations is taken into account by the proposed evolution of the FSOA , to take care of both the collision risk into orbit (Space sustainability) and the casualty risks associated of the return to earth of the fragments of the satellites after their use in Space. The paper will describe in which way this interesting work is conducted, the efforts done to keep coherent with the international regulation or recommended practices (ECSS, ISO, NASA ..) ,and will highlight the main technical requirements associated to the possible evolution of the FSOA in the coming years. The paper will also provide an overview of the associated methods and tools, deep work from 30 CNES experts in their respective field, which is carefully collected and described in a dedicated handbook to be provided to the satellites operators.