

IAF SYMPOSIUM ON COMMERCIAL SPACEFLIGHT SAFETY ISSUES (D6)
Commercial Spaceflight Safety and Emerging Issues (1)

Author: Mr. Gianpiero Buzzo
CIRA Italian Aerospace Research Centre, Italy, g.buzzo@cira.it

Dr. Lidia Travascio
CIRA Italian Aerospace Research Centre, Italy, l.travascio@cira.it

Ms. Angela Vozella
CIRA Italian Aerospace Research Centre, Italy, a.vozella@cira.it

COMMERCIAL SPACEFLIGHT: REGULATORY FRAMEWORK ASSESSMENT AND SAFETY
PERSPECTIVES

Abstract

Recent years are witnessing the rapid technological development in airspace domain, actually paving the way to the development of a commercial space market. Until the recent past, space operations have been essentially performed by research centres or military agencies, in usually segregated areas to ensure third parties' safety, governed by launch base regulations and organized in an unscheduled manner. However, with the entry of private companies into the space domain, a new market niche is being created: that of commercial space transportation. For example, a promising area is the one related to operations performed by commercial suborbital flights, whether aimed at space tourism or simply transporting things and/or passengers from one point to another on the Earth's surface. The traffic volumes are supposed to increase in next years and segregating airspace does not represent a sustainable solution for the future. The present paper will first assess the state of the art of the regulatory framework currently applicable to operators in order to obtain authorization to perform space missions for commercial use, then propose a comparison between the United State of America and European regulatory frameworks. Main challenges related to regulatory aspects will be identified and perspectives on possible higher airspace operations integration in the medium-long term will be derived. Finally, safety considerations deriving from a seamless accommodation of higher airspace operations for some specific higher airspace platforms in current Air Traffic Management will be derived for the medium-long term.