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SPACE TRAFFIC MANAGEMENT: A CHALLENGE OF COSMIC PROPORTIONS?

Abstract

Space traffic management has often, for example in the IAA Cosmic Study of 2010, been rather broadly defined as "the set of technical and regulatory provisions for promoting safe access into outer space, operations in outer space and return from space to Earth free of physical or radio-frequency interference". Oftentimes, especially in space law literature, references or even comparisons have been made to traffic management as it has developed in aviation and (to a lesser extent) in maritime transport. However, it should be realized that space traffic management, especially under the definition quoted, comprises a considerably larger range of activities than air or maritime traffic management. If space traffic management is ever to become feasible, therefore, rather than just referring to air and/or maritime traffic management, first a high-level overview should be performed of what space traffic management effectively will comprise, what has already been taken care of and to what extent, and where perhaps guidance from the aviation and maritime realms may after all be useful. The present paper will provide such a first high-level inventory, duly taking into account the various special features of space activities which may provide major obstacles for any truly comprehensive space traffic management regime, much more so than on the seas or in the airspaces of this world.