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LOW EARTH ORBITAL ZONES- A LEGAL SHAKEDOWN

Abstract

The importance of Low Earth Orbital (LEO) zones has been emerging as a focal point in the domain of space activities for a while now but with the immense success of the International Space Station and the cost and energy advantages of LEO satellites over other orbits, other technological advancements and the interest of private entrepreneurs to be involved in the space tourism, exploration and lunar mining rising, the utility of the LEO zones is becoming highly coveted. The need for space law regulating the use of LEO zones arises because near-Earth space is a limited and valuable resource. Hitherto Earth-orbital traffic has been low, and the limitations have not caused major problems in LEO, as they have in Geo-stationary Earth orbit (GEO), of which the use is already closely regulated by international agreement. However when launch costs fall far enough to make large-scale near-Earth space activities commercially attractive, the need for law in the field will increase exponentially. However, the implications of obtaining international cooperation to use the LEO slots are complicated and involve a number of factors which need to be considered. Moreover, the fact that the LEO orbits require a network of satellites to provide continuous coverage, unlike a Geo-stationary orbit, means mutual co-operation and international cohesion is necessary between the space-faring nations. The reaching of international agreement to regulate the use of a particular LEO zone would require decisions to be made on quite a few parameters, namely: - 1. Registration of LEO Slots and the process for the same. 2. Legal Rights of Registered Users of LEO Slots. 3. Legal Duties of Registered Users of LEO Slots. 4. LEO Slots and security issues. 5. Creation of space debris and liability issues. This paper highlights and discusses the need and importance of developing an international agreement for the distribution and use of the LEO zones. In determining the effects for the issues listed above, there are many factors, both physical and economic, that would need to be considered. This paper also analyses these issues and factors associated with operating in the LEO zones in detail as well as provides a reasonable set of solutions to avoid the foreseeable legal quandaries associated with this matter.