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FROM AVIATION TOURISM TO SUBORBITAL AND ORBITAL SPACE TOURISMS: LEGAL AND REGULATORY ISSUES

Abstract

The major purposes of this paper are to investigate and discuss the current development status of legal and regulatory issues for suborbital space tourism (SST) and orbital space tourism (OST), and to discuss the worldwide demands. On 27 February 2017, the SpaceX Company announced to send two tourists to round the Moon by using its Dragon spacecraft in 2018. On 1 August 2016, the U.S. Federal Aviation Administration's Office of Commercial Space Transportation (FAA-AST) awarded the operator license for SpaceShipTwo (SS2) to Virgin Galactic, meant which will ultimately permit commercial operations of SS2. Before this, in 12 years ago, the FAA-AST had issued a launch license for Scaled Composite's SpaceShipOne (SS1) on 1 April 2004, the first license ever issued for a manned reusable suborbital vehicle. So far, there are still many issues for the enhancement from aviation tourism to suborbital and orbital space tourism: consumer attitude, screening and training of tourists, space port facilities, suborbital reusable launch vehicles (SRLV), pilots, laws and regulations, marketing, insurance, operations, etc. Besides USA, the Civil Aviation Authority (CAA) of the United Kingdom (UK) has released an extensive report on the regulation of suborbital flights on 6 August 2014, which forms part of the country's efforts to attract operations of suborbital vehicles to its territory. The report contains a thorough analysis of the regulatory landscape and makes very interesting recommendations. Since spaceflight operations are expected to start in 2018, the report recommends that the short-term regulatory framework should be in place at least one year before. Other than USA and UK, there is still very seldom similar policy elsewhere worldwide. The regulations and legalization aspects of commercial suborbital and orbital spaceflights are challenging due to the fact that up to today there is still no international consensus. It is in a grey area that is very difficult to define, as both aviation and spaceflight for activities take place between air and space. The solution is very difficult to attain without a clear and formal boundary being defined. As such, investigation and discussion on the current development status of legal and regulatory issues for SST and OST are mandatory, especially to discuss the demands worldwide.