

IAF SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)
Emerging Global Space Ventures, including Reusability and other Innovations (9-D6.2)

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THE OUTLOOK OF HUMAN SPACEFLIGHT IN 2070: THE OUTLOOK, CONSIDERATION AND
ARISING LEGAL ISSUES.**Abstract**

Human spaceflight in 2070 without change to International Space Law will remain very much the same. The Outer Space Treaty, Liability Convention and Rescue Agreement remain an essential element to all space activities. Luckily the application of these treaties were considered so as to allow some form of the evolutionary process in their interpretation. This paper will discuss the use of these treaties to the question of human spaceflight in 2070; what obstacles may be produced; and how humanity at an international level can adhere to the law while forming a mutually cooperative approach to space governance. As the United Nations have stood the test of time, this paper will assume that in 2070 the UN elements of space governance will remain. This paper will argue that with the delegation of activities to an international body, such as UNOOSA, spaceflight and sustainable living on celestial bodies may be possible. The approach of this paper will be to focus on the national and multinational agencies such as NASA and ESA, which are proactive and holding their own weight in space governances. This paper will, therefore, examine the international view, with a more focused approach on corporations and multinational agencies. Space colonisation is the forefront of visionaries such as Elon Musk. At today's rate, the likelihood of closer platforms such as the Moon and larger habitable stations such as the ISS may be afforded as more reasonable as a first stage colonisation experiment before Mars. This paper will consider the positive approach to living in closer proximity to Earth and what is needed to fuel such a drive to live in a sustainable environment on the Moon and in Orbit. The future element of Mars will be hypothesis-based humanity being able to agree and focus on these 'forward stations' in the first attempt of colonisation. Through the likes of astrobiology, astrophysics and exoplanet research may humanity be able to consider terraforming or even creating a streamlines approach to colonisation and increase the readiness and hypervigilant of technology to carry on exploration for suitable alternatives to Earth and cleaner of better alternative technology. It is therefore proposed that this paper will consider all of the above with a focus on space governance, technology advancement and nearby space colonisation with the forward concept of widespread expansion for the betterment of humanity of the human race.