

30th IAA SYMPOSIUM ON SPACE POLICY, REGULATIONS AND ECONOMICS (E3)
Private Endeavour in Space Exploration (2)

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POSSIBLE LEGAL IMPLICATIONS OF A PRIVATE LUNAR POWER INFRASTRUCTURE

Abstract

While no manned missions have gone beyond Low Earth Orbit since the end of the Apollo Program, recent years have seen a renewed interest in manned exploration, and in permanent settlements in space. Companies and space agencies from around the world are now trying to reach the Moon again, with the aim of establishing a permanent presence. Notable examples include ESA's Moon Village proposal and the numerous private teams competing in the Google Lunar X Prize. The O'Moon project aims to provide a technical solution to create a power infrastructure on the surface of the Moon and enable a permanent settlement. This project also raises several legal questions due to its proposed position as a privately run enterprise as part of a publicly led initiative. O'Moon positions itself as a utilities service, providing electric power for several applications which may include lunar exploration, human habitats, resource utilization, debris monitoring, NEO mitigation and communications systems. This paper discusses the legal implications of O'Moon's position with regards to these applications. It addresses O'Moon potentially profiting indirectly from these applications and implications regarding agreements such as the Outer Space Treaty, the Liability Convention, and the Moon Agreement. This paper also discusses the O'Moon's liability exposure in the event that an accident or technical issue were to arise on the surface of the Moon, as well as O'Moon's responsibility towards the preservation of the Moon as a natural resource and as part of our space heritage. Finally, this paper tackles the issues of the ownership and freedom of exploitation of the infrastructure which O'Moon aims to build. The role of Public Private Partnerships in this project are discussed, most notably in the context of ESA's proposed Moon Village. Ultimately, this paper aims to shed light on the numerous legal aspects to be taken into consideration, and to provide some recommendations for the future development of the project and its implementation within the existing international legal regimes. This paper is part of the O'Moon Youth Research Program, which led a series of studies centered on some of the key aspects of the project, including engineering, business, legal and organizational aspects of the project.