## IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1) Space Culture: New Processes of Public Engagement in Space through Culture and Art (9)

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## LUNAR EXPLORATION TECHNOLOGY AS CULTURAL HERITAGE: RAISING AWARENESS THROUGH GAMING AND DIGITAL ARCHIVING

## Abstract

Currently more than 800 man-made objects are scattered across the lunar surface, going back to the Soviet Luna 2 probe which was the first object to ever make physical contact with another celestial body. With lunar exploration in full swing, more and more technology will be brought to the Moon. Human exploration of the Moon is scheduled to resume in a few years, and this will inevitably lead to the development of infrastructure for long-term habitation. From a historical and cultural viewpoint, it is important to highlight the value of such artifacts. These are not merely wasted objects, but cultural heritage that is a testament to the never-ending curiosity and ingenuity of humankind. From this perspective, it is key to carefully consider how to manage this legacy.

'Lunar Strike: Bring Down the Sky' is a computer game that is developed around this premise, and aims to raise awareness of this topic. In a setting 100 years from now, the player is navigating different locations on the Moon during political upheaval, all the while digitally archiving artifacts related to the history of lunar exploration. The core objectives of the game are (1) introducing the notion of lunar infrastructure and technology as cultural heritage that is worthwhile preserving, (2) introducing the player to photogrammetry and digital archiving, and (3) teaching the player about the history and future of lunar exploration.

By using a dynamic platform for storytelling and intrigue, we intend to engage a vast and highly diverse audience in the realm of space education, utilizing the interactive nature of games to promote interest and knowledge in science and technology. Employing the latest in innovative game development techniques enables us to build a comprehensive arena for engaging storytelling and learning experiences. The core objectives of the game are supported by a strong emotional narrative. The narrative's classic 4-act dramatic structure lends a framework for a highly interactive yet cinematic experience. By immersing players in a virtual world in which endangered cultural artifacts and heritage sites are brought to life, the game bridges the gap between space history, technology, and speculative fiction. The resulting game experience offers players a unique opportunity to explore complex and controversial topics such as the ever-present ethical question of spending resources (money, time, imagination, innovation) on space rather than on Earth, the need for extraterrestrial environmental protection, human/machine augmentation, and what it means to be "post-human."