15th IAA SYMPOSIUM ON BUILDING BLOCKS FOR FUTURE SPACE EXPLORATION AND DEVELOPMENT (D3)
Systems and Infrastructures to Implement Future Building Blocks in Space Exploration and Development (2)

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HOW THE ALINA SPACECRAFT COULD ENABLE DEVELOPMENT OF A SCALABLE LUNAR COMMUNICATION AND NAVIGATION INFRASTRUCTURE

Abstract

PTScientists are working on an innovative technology demonstration mission to the Moon. This mission will include a number of elements to be tested as proof of concepts for building future lunar (and further exploration) infrastructure. A significant part of the mission is to show how our flexible launch and delivery concept - a vehicle that can be launched as secondary payload on a wide range of commercially available rockets - can also be used as a navigation and communication point for future landings. The limitations of communications technologies currently in use on the lunar surface reduce the range of exploratory missions by robotic vehicles. PTScientists have been working on an innovative solution to this issue, which will act as an important building block for future lunar exploration and potential future settlement. Further details of this concept will be released in spring, and once the embargo has lifted, this paper will detail our road-map for an upgraded lunar communications system. We will detail our plans to test the system on the lunar surface in 2018 as part of our mission to the lunar surface to revisit the final Apollo 17 landing site and conduct further scientific research and data collection in the region.