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PRACTICAL METHODS FOR SUSTAINABILITY OF SPACE RELATED INVESTMENT REGARDING DEVELOPMENT OF FUSION-PROPELLED INTERSTELLAR PROBE

Abstract

This projects' study group's objective is to design a mainly fusion-propelled interstellar probe, based on the results of the Daedalus study, which was conducted by the British Interplanetary Society during the 1970's. As the Daedalus study already indicated, interstellar probes will be the result of a large scale, decade-long development program. To sustain a program over such long periods, the commitment of key stakeholders is vital. Although previous publications identified political and societal preconditions to an interstellar exploration program, there is a lack of more specific scientific and political stakeholder scenarios. This paper develops stakeholder scenarios which allow for a more detailed sustainability assessment of future programs. For this purpose, key stakeholder groups and their needs are identified and scientific and political scenarios derived. Political scenarios are based on patterns of past space programs but unprecedented scenarios are considered as well. Although it is very difficult to sustain an interstellar exploration program, there are scenarios in which this seems to be possible, e.g. the discovery of life within the solar system and on an Exoplanet, a global technology development program, and dual-use of technologies for defense and security purposes.

The project also focuses on considering the decade long project as an academic endeavor and to provide the Stakeholders a sense of security or a sense of satisfaction on investing in such endeavors. This project would analyse on the core ideas on the investor's mind set which includes the social standards and psychological perspectives that may drive them to take up stakes as such. It is as well to be noted on the changes on global scenario from commercial aspects to community based aspects on assuming that such stakeholders are persuaded for such an investment. The possibilities of combining such community based mega project with ample commercialization is also considered. Another approach of providing various utilities to the Stakeholders are also given a perspective.

This project being a long term, will be provided with a scheme of investment offers with which the stake holders can be flexible in planning their ambitious investments needed for this ambitious mission. The stake could be treated as a partially liquid investment also. This would provide a higher sustainability with perpetual transfer facility monitored electronically. The full paper would discuss the above mentioned scenarios on funding the fusion powered interstellar probe in economic detail and would also address the innovative stake holding scenarios.