

SPACE SYSTEMS SYMPOSIUM (D1)
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STAKEHOLDER COSTS AND VALUE ALONG SPACE SYSTEMS LIFE CYCLE

Abstract

This paper aims to propose a reference model for managing cost and value to stakeholders along a complex space product life cycle. Complex systems development such as those of space products involves a great number of stakeholders. These stakeholders are key players in project success because the space products projects last for years or even decades, may involve utilization of public funding, requires multiple development organizations arrangements and affect the lives of the common citizen. In order to sustain such projects, their value and cost to the stakeholders must be continuously monitored, demonstrated and communicated. One of the things that are so difficult to know when we start a new product project is how much value it will deliver to the stakeholders and at what cost it will be during its life cycle. A less complex task is to calculate and make a forecast for the earned value during the project life cycle but during the product life cycle the complexity increases due to several factors that we propose to discuss in this paper. As the stakeholders have changes during the product life cycle and together with the stakeholders, values and costs expected from them, also suffers changes. In a world of constant changes, with increasingly demanding stakeholders, a very big issue for product project is to map the values versus costs, optimizing the transfer of those two aspects during the whole product life cycle. This paper analyzes the factors and searches for the ways it could be treated during the project starting phase searching for the optimization of the value delivered to the stakeholders at the cost they acknowledge that the product continues to accomplish their needs. This paper demonstrates the aspects of costs and values for a complex project which involves a big diversity of stakeholders as also many different interests and it is being developed on a university satellite development program sponsored by the Brazilian Space Agency, called ITASAT. ITASAT is a small satellite with the mission of testing new technologies for ACDH (Attitude Control and Data Handling) and keep the current operational communication features existing in other satellites developed in Brazil. Conclusions are that value perception by the stakeholders takes a diversity of aspects which sometimes are directly correlated to the costs involved and other times not.