

ABSTRACT AND BIOGRAPHY

Improving Life-Cycle Cost Management of Spacecraft Missions

The typical NASA space science mission will exceed both the initial estimated and the confirmed life-cycle costs by the end of the mission. In a fixed-budget environment, these overruns translate to delays in starting or launching future missions, or in the worst case can lead to cancelled missions. Some of these overruns are due to issues outside the control of the project; others are due to the unpredictable problems (unknown unknowns) that can affect any development project. However, a recent study of life-cycle cost growth by the Discovery and New Frontiers Program Office identified a number of areas that are within the scope of project management to address. The study also found that the majority of the underlying causes for cost overruns are embedded in the project approach during the formulation and early design phases, but the actual impacts typically are not experienced until late in the project life cycle. Thus, project management focus in key areas such as integrated schedule development, management structure and contractor communications processes, heritage and technology assumptions, and operations planning, can be used to validate initial cost assumptions and set in place management processes to avoid the common pitfalls resulting in cost overruns.

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Mr. Clardy is the Program Manager of the Discovery and New Frontiers Program Office at Marshall Space Flight Center. In this capacity, he is responsible for planning, directing, coordinating and managing the overall execution and performance of the Discovery and New Frontiers Programs. The Program Office is responsible for implementation of a series of planetary science missions for the Planetary Science Division of the NASA Science Mission Directorate. These missions include the MESSENGER mission currently on its way to Mercury, the New Horizons mission currently on its way to Pluto and the Juno and GRAIL missions both currently in development.

In his 20 year career with NASA, Mr. Clardy has served in a number of systems engineering, project management and program management positions. These include systems engineer on the first flight of the Tethered Satellite System; Deployer Chief Engineer for the re-flight of the Tethered Satellite System; Chief Engineer for the USMP-4 (Spacelab) mission; Chief Engineer/Project Manager for the Vapor Compression Distillation Flight Experiment; Deputy Project Manager in the Space Launch Initiative (SLI) Program; and Deputy Project Manager in the Orbital Space Plan (OSP) Program. Since joining the Discovery and New Frontiers Program Office in 2004, he served as a Mission Manager and Deputy Program Manager before becoming the Program Manager in 2009. Mr. Clardy also served a detail assignment to NASA Headquarters as the Associate Director of the Planetary Science Division.

Mr. Clardy has received Federal Acquisition Certification as a Program Manager. He has been awarded the NASA Silver Snoopy Award and the NASA Exceptional Achievement Medal.