SYMPOSIUM ON VISIONS AND STRATEGIES FOR THE FAR FUTURE (D4)
Space Elevator Feasibility and Technology (3)

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SPACE ELEVATOR CONOPS INITIAL THINKING

Abstract

As is the case for development of any major space program, day to day operation of the Space Elevator must be addressed early on so that Operations-derived requirements can be allocated to system components and be subject to trade studies. The Concept of Operations (CONOPS) is a tool to be used by Planners and Engineers to help define predicted Operation and Maintenance costs for Life Cycle Costing activities.

For the Space Elevator, we propose to use the model developed in Cost Effective Space Mission Operations (CESMO), 2nd Edition, edited by Squib, Boden, and Larson. CESMO defines Inputs to the CONOPS that serve as candidate sections in the document. These inputs are:

-Mission Objective -Mission Description -Mission Philosophies, Strategies, and Tactics Programmatic Considerations -End-to-End Information System Characteristics -Ground System Characteristics -Payload Characteristics and Capabilities -Spacecraft Bus Characteristics -End-to-End User Data Products

This paper will present the Initial Thinking for the CONOPS for the Space Elevator with the subject areas defined above. It will describe the operation commencing with the first completed tether (aka "ribbon"). It will include descriptions of facilities and estimates of personnel needed to man them, including notional organization charts.