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Space Elevator as Transportation Infrastructure to Access Space (3)

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VISIONS OF MANY DEMAND SPACE ELEVATORS START NOW

Abstract

Space Elevator development must be started immediately for three critical reasons: 1) the promises of Space Elevators are so revolutionary 2) we can now build an Earth Space Elevator as the tether material will be available for construction, and 3) Space Elevators are essential to the future of mankind. The Space Elevator community, with its large body of knowledge collected over the past 23 years (1998-2021), has concluded: "We should start today and move Space Elevators into Engineering Development with segment level testing." As such, the community has announced: "Earth Space Elevators are ready to start engineering development now!"

Rationale: Earth Space Elevators will take massive amounts of freight to orbit on the Green Road to Space. Space Elevators can fulfill the needs and visions of many; and, the engineering readiness of Space Elevator technologies is high. ISEC believes a testing and demonstrations based Space Elevator developmental program can start now. What kind of specific benefits can we expect to see from a functioning Space Elevator? As with the transcontinental railway, it's impossible to foretell all the uses of such a permanent infrastructure, but there are unlimited possibilities. The delivery of 170,000 tonnes per year to GEO and beyond will revolutionize the capability and capacity necessary to enable critical missions.

The strategy for the future should be a Dual Space Access Architecture. We must leverage both advanced rockets and Space Elevators leading to a compatible and complementary approach using the strengths of both future rockets and Space Elevators. Rockets to Open up the Moon and Mars with Space Elevators to supply and grow the colonies.