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The Modern Day Space Elevator as a Permanent Transportation Infrastructure (3)

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GALACTIC HARBOURS DEFINE PERMANENT SPACE ACCESS TRANSPORTATION INFRASTRUCTURES

Abstract

Research into Modern-Day Space Elevators has lead to some remarkable conclusions driven by the perceived customer needs at the architectural level. These conclusions are driving the architecture towards commercial entities distributed around the equator enabling competition between companies or governments while lifting between 30,000 and 170,000 tonnes per year [Initial to Full Operations] to GEO and beyond. These architectures, called Galactic Harbours, include two space elevators functioning in parallel as a single operational entity. Variation in functionality allows for up/down operations, up/up operations, as well as a backup for a single up space elevator. This paper will describe recent research into various factors of Galactic Harbours and explain the benefits inherent in these permanent infrastructures. These space elevator benefits will then be shown to directly lead to future customers' requirements / needs. The strengths and resilience come from the dominant characteristics of modern-day space elevators which are: Galactic Harbours are permanent space access transportation infrastructures for daily, safe, routine, inexpensive with environmentally neutral operations.