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Modern Day Space Elevators Customer Design Drivers (3)

Author: Mr. Giorgio Gaviraghi
Unispace Exponential Creativity, Italy, giogavir@yahoo.it

THE BELT A CONNECTED SPACE SETTLEMENT

Abstract

Population growth in our planet is estimated at around 80 Million new inhabitants per year. Since our planet has a limited and fixed dimension we must find territories for this population unless limiting birth rates in the entire planet. Our proposal wants to demonstrate that doubling our planet population capacity through the utilization of new instruments such as the space elevator and the creation of a new space settlement category is possible. The Belt is a space settlement that would create a ring, at geostationary distance around our planet and permanently connected to the surface through a system of space elevators that would allow transportation of people and cargo as needed. Being fixed, it will allow the rotation of the habitat cylindrical modules between geostationary terminals, to generate 1G gravity for its population. The Belt, installed on our planet, would be composed of several space elevators that would connect ring like cylindrical rotating (allow 1G gravity) space settlement modules to support human activities in the geostationary location where installed. The Belt will represent a new category of space settlement, being physically connected to a natural body. Its main components are: -Space Elevator infrastructure and terminals at ground and at geo level -Belt settlement modules. A cylinder, of a radius of approx. 2 Km, will connect these infrastructures that will be fixed. The settlement module, would rotate around its axis to generate centrifugal force to allow 1G gravity at its perimeter with a speed adequate to its radius as per the specific formula. The system will be powered by energy generated by solar sails when feasible. Once finished the Belt would circle the entire natural body. In our planet it could allow the presence of billions of future inhabitants. In other bodies it will avoid the construction of complicated underground bases and cities for human utilization and allowing a habitat with all terrestrial conditions including gravity with easy access from space.

The benefits Possibility to allow human habitats with advanced space settlement technology to be easily connected to the ground allowing population growth in our planet and /or terrestrial type of cities in hostile bodies eliminating the need for underground facilities for human habitats. An all new space settlement category the connected one will allow human colonization and safe presence of all celestial bodies.