

ROBOTIC SKY TRAIN FOR SPACE APPLICATIONS

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Introduction

Sky Train Inc, is strategically investigating different state of the art concepts with magnetically levitated transport systems. These systems are environmentally friendly and can be implemented for variety of applications from coal mining to entertainment rides. Recently Sky Train has been interested in space applications for maglev systems especially for future Moon or Mars bases. This report describes supporting robotics technology for one such concept.

Current Configuration

The current sky train technology supports a state of the art manned capsule on magnetic bearings as shown in figure 1.

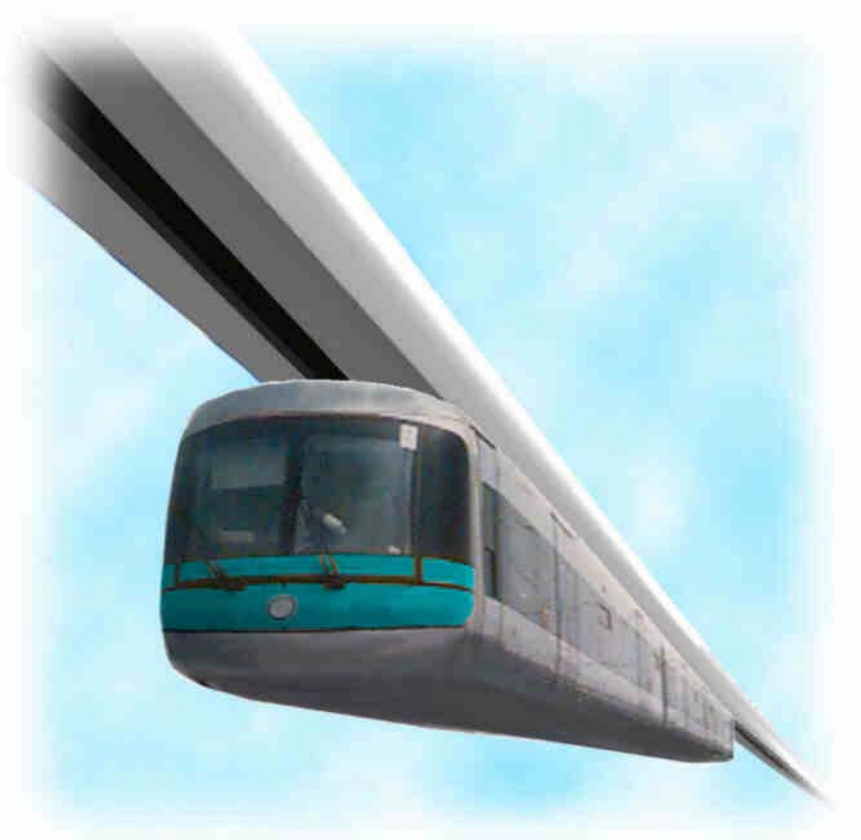


Figure 1 Sky Train with human module

When implemented between bases on Moon and Mars the purpose of skytrain will be multifold. It will carry astronauts and payload and will accomplish scientific missions from point to point

transfer. This will save a large amount of time and power by multitasking. The skytrain of the future especially for the space habitats will be designed to incorporate the following science goals:

1. Search for water
2. High speed photography
3. Radar based scanning

The skytrain of the future will accomplish following general purpose tasks:

1. Transport astronauts
2. Transport payload (food, water, materials, fuel, equipment)
3. Act as an inertia capacitor during frequent braking

To accomplish the scientific and general purpose goals the sky train of the future will incorporate a robotics module along with the human module. The robotics module is shown schematically in figure 2

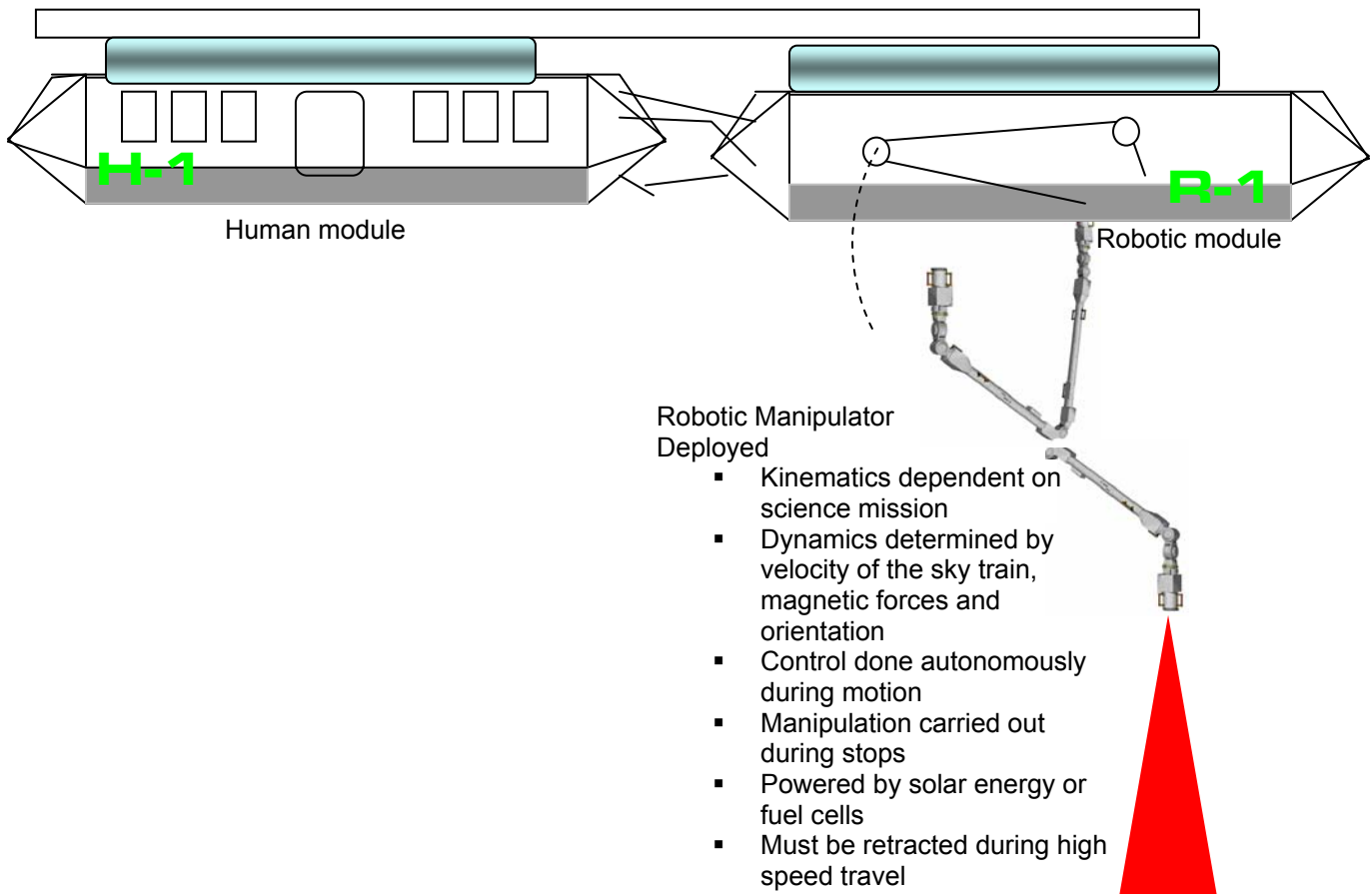


Figure 2 Sky Train for space applications showing Robotic Module