

Reconfigurable Structure

Case Number: GSC- 14762-1

Patent Number: 7,769,488

Patent Exp. Date: 4/8/2025

DESCRIPTION

This is a reconfigurable structure for wheeled vehicles. The structure has a set of extensible and retractable limbs, and a node with a set of balls and socket joints for pivotably receiving ends of the respective limbs. An actuator is associated with each limb for extending and retracting the limb. A cable and pulley actuator causes shaft segments to extend and retract simultaneously. An addressable module is associated with each actuator to control the actuator.

FEATURES AND BENEFITS

- The cable and pulley actuator causes the shaft segments to extend and retract simultaneously, thus allowing smooth movement for the structure.
- The nodes and limbs on the structure enable the structure to change its form to optimize its function and adapt to contingencies arising in its operating environment with greater flexibility.

APPLICATIONS

- Aerospace
- Aviation

FOR MORE INFORMATION

If you are interested in more information or want to pursue transfer of this technology, GSC-14762-1, please contact:

Darryl Mitchell
Technology Manager
NASA Goddard Space Flight Center
Innovative Partnerships Program Office
darryl.r.mitchell@nasa.gov
301-286-5169