

Tethers Unlimited Wins NASA Contract on Manufacturing Structures In Space

Bothell, WA, 7 March 2014 – NASA announced today that it has selected Tethers Unlimited, Inc. (TUI) for award of a \$750,000 contract to continue development of its “Trusselator” technology. The Trusselator is a device for in-space additive manufacture of high-performance truss structures for systems such as large solar arrays and antennas.

Under funding from NASA’s Innovative Advanced Concepts (NIAC) program, and now NASA’s Small Business Innovative Research (SBIR) program, Tethers Unlimited is developing a set of technologies called SpiderFab™ to enable on-orbit fabrication of spacecraft components. The SpiderFab architecture integrates elements of 3D printing, automated composite layup, and robotic assembly to create large, lightweight structures. The SpiderFab robotic systems will integrate these structures with solar cells, reflectors, and other elements to create football-stadium sized antennas, multi-hundred kilowatt solar arrays, and other large components for space systems. Manufacturing them on-orbit will enable affordable creation of space systems that are larger and provide higher performance than current technologies, which require antennas and arrays to be built on the ground and then launched inside a rocket.

“Developing the Trusselator device is the key first step in implementing the SpiderFab capability for in-space manufacturing. Our goal with this effort is to dramatically reduce the costs of building large systems in space,” said Dr. Rob Hoyt, TUI’s CEO and Chief Scientist. “In the new SBIR effort we will develop a prototype Trusselator designed to operate in the vacuum environment of space and test it in our new space simulation facility.” Under a parallel NIAC-funded effort, TUI is developing techniques to enable robotic systems to assemble these trusses into larger structures, such as antenna dishes and solar arrays. Dr. Hoyt said that manufacturing spacecraft components on-orbit will provide dramatic performance and cost benefits for systems ranging from commercial communications satellites to manned missions to Mars.

About Tethers Unlimited, Inc.

Tethers Unlimited, Inc. develops innovative technologies to enable transformative capabilities and dramatic cost savings for Space and Defense missions. Its technology portfolio includes advanced space propulsion systems, high-performance radios for small satellites, and methods for additive manufacturing of multifunctional spacecraft structures. To learn more about TUI and its products, please visit www.tethers.com.

MEDIA CONTACT:

information@tethers.com or **Rob Hoyt** at **425-486-0100x111**



Caption: TUI’s “Trusselator” technology enables on-orbit additive construction of high-performance composite truss structures to support solar arrays, antennas, and other space system components.