Press Release

Benchmark and Starfish Space Team to Enable Precision On-Orbit Services

Duo testing Starfish CEPHALOPOD RPOD software with Benchmark's Halcyon thruster
powering first-ever Orbit Fab tanker maneuvers in space

Burlington, VT and Kent, WA – May 18, 2021 – The future of the space economy relies heavily on servicing infrastructure and vehicles that can make precision maneuvers to successfully approach, inspect and dock with spacecraft in need of refueling, maintenance and a wide range of on-orbit services.

Starfish Space, a satellite servicing company, and Benchmark Space Systems, a leading provider of in-space mobility systems and services, today announced a strategic collaboration to advance precision on-orbit refueling and docking capabilities, beginning with demonstrations during Orbit Fab's Tanker 1 mission launching next month aboard a SpaceX Falcon 9 rocket.

Starfish is integrating and testing its CEPHALOPOD rendezvous, proximity operations and docking (RPOD) software with Benchmark's non-toxic hydrogen peroxide-fueled Halcyon thruster, the primary propulsion system for Orbit Fab's Gas Stations in Space™ tanker, to optimize spacecraft control accuracy in preparation for the first-ever tanker maneuvers in space during simulated docking demonstrations.

Both Benchmark's green chemical Halcyon propulsion system, set to power four separate spacecraft missions bound for launch in 2021, and Starfish's autonomous CEPHALOPOD RPOD software will accomplish flight heritage during the inaugural Orbit Fab mission aboard a tanker built by Astro Digital.

"This CEPHALOPOD mission is an exciting step for Starfish Space. Our RPOD operations will validate our novel capabilities and set the stage for a new era of affordable and available satellite servicing," said Dr. Trevor Bennett, Starfish Space Co-Founder. "Working with Benchmark and using the Halcyon thruster for part of our tests is an important step as we demonstrate the unique performance of CEPHALOPOD. We're also very excited to be working with our partners Orbit Fab and Astro Digital, who help make the mission possible."

"This collaboration between Benchmark Space Systems and Starfish Space is all about leveraging our complementary strengths to drive toward precision on-orbit maneuvers that open the door to exciting new possibilities for the emerging space economy," said Ryan McDevitt, Benchmark Space Systems CEO. "These in-space maneuvers and simulated refueling docking demonstrations with Orbit Fab will mark Benchmark's flight heritage, advancement toward our RPO chipset offerings, and the pivotal role we're playing in providing spacecraft control authority and extending missions in space."

"Orbit Fab is thrilled to see the enthusiasm and expertise driving innovative collaborations like this one between Starfish Space and Benchmark Space Systems focused on honing capabilities that will fuel the future of space," said Daniel Faber, Orbit Fab CEO. "The more partnerships there are pushing new ideas and innovations, the sooner the broader space industry will catch the wave of new in-space services like our Orbit Fab Gas Stations in Space™ tanker set to launch RPOD maneuver demonstrations in a matter of days."

Earlier this year, Benchmark and Orbit Fab announced a green, hydrogen-peroxide-based refueling and servicing infrastructure alliance to extend missions and provide the essential fuel for the evolving ecosystem in space. Orbit

Fab and Benchmark are bundling integrated refueling and thruster systems, the RAFTI Fueling port and the Halcyon thruster, which offers a simple solution allowing satellites to receive their initial fuel on the ground and subsequent refuels on-orbit, which is an essential building block for satellite servicing and space commercialization.

Orbit Fab and Starfish Space are also exploring further integration of CEPHALOPOD and Orbit Fab's SPARK RPOD hardware kit, an opportunity to move cooperative docking capabilities forward. Starfish plans to leverage its RPOD software aboard its own small, versatile space tug known as the Otter, which is designed to support satellite servicing missions such as life extension and active debris removal. The CEPHALOPOD software being tested will enable Otter to be uniquely affordable and rapidly deployed.

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About Benchmark Space Systems
Benchmark Space Systems is a full life cycle in-space mobility provider, delivering products and partnerships from mission planning through decommission. Founded in 2017 to develop green propulsion technologies and flexible product configurations to market, the team's rapid growth and focus on the development and sustainability of a democratized space domain has resulted in a product lineup suitable for a multitude of CubeSat through ESPA operations. Benchmark's patented and proprietary innovations focus on eliminating customer pain-points and increasing asset value for unparalleled ROI. To explore how Benchmark can help improve your mission, from rapid orbit insertion to advanced RPO (Rendezvous and Proximity Operations) – visit www.benchmark-space.com.

About Starfish Space
Starfish Space is giving life to on-orbit services. Founded by former Blue Origin and NASA engineers, Starfish is developing the Otter, the first small and versatile space tug that will lower costs and increase availability for satellite servicing missions including life extension and active debris removal. Starfish technologies, including its proprietary CEPHALOPOD software, are key logistics, autonomy, and robotics infrastructure for the developing off-world economy and orbital industries like manufacturing, assembly, tourism, and mining. Additional details at www.starfishspace.com

About Orbit Fab
Orbit Fab is a venture-backed startup, established in 2018 in San Francisco, which plans to provide a ubiquitous supply of satellite propellant in Earth Orbit, expanding the operational potential of new and existing space assets. In the future, valuable satellites will no longer be sent to the graveyard orbit when they run out of fuel. Orbit Fab's goal is to be an important part of the infrastructure that provides fuel and other materials, when and where they are needed, providing unprecedented business model flexibility to satellite operators and increasing sustainability of space assets. For more information, visit www.orbitfab.space.