# Dossier: SPACE FOUNDRY INC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $149,987.00

**Award Date:** 2023-03-20

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Space Foundry Inc. is a materials engineering and manufacturing company focused on enabling in-space manufacturing of high-performance components for satellites and other space-based systems. Their core mission is to overcome the limitations of traditional Earth-based manufacturing and enable on-demand production of complex, high-precision parts directly in the space environment. They aim to solve the challenges of mass limitations, long lead times, and performance compromises associated with launching pre-fabricated components from Earth. Space Foundry’s unique value proposition lies in its microgravity-optimized electrochemical deposition (ECD) technology, which allows for the creation of components with enhanced material properties and geometries not easily achievable on Earth, leading to lighter, more efficient, and more resilient space systems.

**Technology Focus:**

* Microgravity-Optimized Electrochemical Deposition (ECD):\*\* Space Foundry utilizes a proprietary ECD process tailored for the microgravity environment. This allows for the precise deposition of metals and alloys onto various substrates, creating complex 3D structures with high density and controlled grain size. Reported material performance improvements include increased strength-to-weight ratios compared to traditionally manufactured parts.
* In-Space Manufacturing Platform:\*\* The company is developing an integrated in-space manufacturing platform designed to autonomously produce components using the ECD process. This platform will include robotic handling, automated material management, and real-time process monitoring for quality control. Target applications include satellite antennas, structural components, and electronic interconnects.

**Recent Developments & Traction:**

* NASA SBIR Awards:\*\* Space Foundry has secured multiple Small Business Innovation Research (SBIR) awards from NASA to advance its ECD technology and develop specific in-space manufacturing applications. These awards support research and development activities related to advanced materials, sensor integration, and platform automation.
* Partnerships:\*\* Space Foundry has engaged in partnerships with other space companies and research institutions to test and validate its technology in relevant environments. These collaborations include working with companies to demonstrate the feasibility of manufacturing specific satellite components in space.

**Leadership & Team:**

* Dr. Ramulu Mamidala (CEO):\*\* Possesses significant experience in materials science and engineering, with a strong background in electrochemical deposition and additive manufacturing. Previously held leadership roles in advanced materials companies.
* Ajay Krishnamurthy (CTO):\*\* Expertise in spacecraft engineering and in-space servicing, assembly, and manufacturing (ISAM).

**Competitive Landscape:**

* Made In Space (Redwire Space):\*\* Focuses on in-space manufacturing using various technologies including additive manufacturing (3D printing) with polymers and metals. Space Foundry differentiates itself with its specialized ECD process, which allows for potentially superior material properties and finer feature resolution in microgravity.
* Varda Space Industries:\*\* Developing a space factory for manufacturing pharmaceutical and high-value materials in microgravity. While not directly competing in the same technology, Varda is in the same adjacent space manufacturing market.

**Sources:**

1. [https://www.spacefoundry.com/](https://www.spacefoundry.com/)