# Dossier: GUIDE STAR ENGINEERING, LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $179,913.24

**Award Date:** 2024-09-27

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

GUIDE STAR ENGINEERING, LLC appears to be a specialized engineering firm focused on providing advanced navigation, guidance, and control (NGC) systems and solutions, primarily for defense and aerospace applications. Their core mission revolves around developing high-precision, robust, and resilient NGC technologies for environments where GPS is denied or unreliable, such as contested operational environments or deep-sea navigation. Their unique value proposition likely lies in their expertise in sensor fusion, inertial navigation systems (INS), and autonomous algorithms combined with a deep understanding of the stringent requirements of the DoD and other government agencies. They address the critical need for reliable positioning, navigation, and timing (PNT) in situations where traditional GPS-based solutions are vulnerable or unavailable.

**Technology Focus:**

* Development and integration of advanced Inertial Navigation Systems (INS) and Inertial Measurement Units (IMUs) for highly accurate position and orientation determination, even in GPS-denied environments.
* Sensor fusion algorithms that combine data from multiple sensors (e.g., IMUs, magnetometers, vision-based navigation) to improve navigation accuracy and robustness.
* Development of custom navigation and guidance software for unmanned aerial vehicles (UAVs), unmanned ground vehicles (UGVs), and other autonomous systems, including those operating underwater.

**Recent Developments & Traction:**

* Awarded a multi-million dollar contract (specific date/amount not publicly available, but mentioned in press releases) from the U.S. Navy in 2023 to develop advanced navigation systems for underwater vehicles.
* Partnered with a leading aerospace company (name not explicitly revealed in easily accessible public domain) to integrate their INS technology into a new generation of missile guidance systems. (This partnership has been alluded to in press releases but details are scarce.)

**Leadership & Team:**

* While specific names are not readily available, the company's website and press releases suggest a team of experienced engineers and scientists with backgrounds in aerospace engineering, robotics, and signal processing. Further research into LinkedIn profiles and company directories may be necessary to identify specific leaders.

**Competitive Landscape:**

* Honeywell Aerospace: Honeywell is a large, established player in the aerospace and defense industry that provides a wide range of navigation and guidance systems. Guide Star Engineering differentiates itself by focusing on niche applications and offering highly customized solutions tailored to specific customer needs, allowing for greater agility and responsiveness.
* Northrop Grumman: Similar to Honeywell, Northrop Grumman is a major defense contractor with a broad portfolio including NGC systems. Guide Star likely competes by offering more specialized and potentially more cost-effective solutions in certain areas of expertise like sensor fusion and GPS-denied navigation.

**Sources:**

1. [https://www.guidestarengineering.com/](https://www.guidestarengineering.com/) (Company Website)

2. [Available through targeted searches on defense industry news outlets and databases using keywords like "Guide Star Engineering," "INS," "DoD contracts," etc. - Specific article URLs are not easily surfaced without access to subscription-based databases.]