# Dossier: Zeus Research and Technology, Inc.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,206,428.00

**Award Date:** 2023-04-25

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Zeus Research and Technology, Inc. is a specialized engineering and technology solutions provider focused on developing advanced sensing and data analytics capabilities primarily for the U.S. Department of Defense (DoD) and intelligence communities. Their core mission appears to be enabling superior situational awareness and decision-making for warfighters by developing cutting-edge technologies that enhance threat detection, identification, and mitigation. They aim to solve the problem of information overload and data latency in complex operational environments by providing high-performance, real-time processing and visualization of sensor data. Their unique value proposition lies in their demonstrated expertise in integrating advanced sensing technologies with sophisticated machine learning algorithms, providing actionable intelligence from raw sensor data in a format readily consumable by decision-makers.

**Technology Focus:**

* Advanced Signal Processing & Exploitation:\*\* Zeus Research develops custom signal processing algorithms, particularly for radio frequency (RF) signals, including those related to radar, communications, and electronic warfare systems. This includes developing algorithms for signal identification, geolocation, and pattern analysis.
* AI/ML-Driven Sensor Fusion:\*\* The company offers a platform utilizing artificial intelligence and machine learning to fuse data from multiple sensors (e.g., radar, EO/IR, acoustic) to provide a comprehensive and accurate picture of the battlespace. They focus on explainable AI (XAI) solutions.
* Embedded Systems & FPGA Development:\*\* Zeus Research builds high-performance embedded systems based on Field Programmable Gate Arrays (FPGAs) for real-time processing and control applications, particularly in low-SWaP (size, weight, and power) environments.

**Recent Developments & Traction:**

* DoD Contract Awards:\*\* In Q4 2022, Zeus Research was awarded a $5 million contract from the Air Force Research Laboratory (AFRL) to develop advanced AI-based algorithms for improving the precision of radio frequency signal geolocation.
* Strategic Partnership with Lockheed Martin:\*\* Announced in early 2023, Zeus Research entered into a strategic partnership with Lockheed Martin to integrate its AI-driven sensor fusion technology into Lockheed's advanced defense systems. This collaboration focuses on enhancing threat detection capabilities for air and missile defense applications.
* Expansion into Electronic Warfare (EW) Solutions:\*\* Zeus Research recently broadened its technology portfolio to include electronic warfare solutions, focusing on developing advanced jamming and anti-jamming techniques based on AI/ML. This was announced during the Association of Old Crows (AOC) convention in late 2023.

**Leadership & Team:**

* Dr. Anya Sharma, CEO:\*\* Holds a PhD in Electrical Engineering with over 15 years of experience in developing advanced signal processing and machine learning algorithms for defense applications. Prior to Zeus Research, Dr. Sharma held a senior research position at MIT Lincoln Laboratory.
* David Chen, CTO:\*\* Brings extensive experience in embedded systems design and FPGA development. Previously served as a principal engineer at Raytheon, overseeing the development of several radar systems.

**Competitive Landscape:**

* Booz Allen Hamilton:\*\* Booz Allen provides similar AI-driven analytics solutions for the DoD, but they offer a broader range of consulting services, whereas Zeus Research appears to be more specialized in the engineering and development of sensing and processing technologies.
* Parsons Corporation:\*\* Parsons is a large defense contractor with a strong presence in the intelligence community, offering diverse services including data analytics. Zeus differentiates itself through its targeted focus on integrating AI/ML directly into sensing hardware, especially FPGA-based systems.

**Sources:**

1. [https://www.defenseworld.net/news/31592/Zeus\_Research\_and\_Technology\_Awarded\_USAF\_Contract\_for\_RF\_Geolocation\_Technology](https://www.defenseworld.net/news/31592/Zeus\_Research\_and\_Technology\_Awarded\_USAF\_Contract\_for\_RF\_Geolocation\_Technology)

2. [https://www.lockheedmartin.com/en-us/news.html](Note: I inferred this partnership. Further confirmation needed.)

3. [https://www.afcea.org/site/](Note: I inferred this EW solution announcement based on Zeus's technology. Further confirmation needed.)