# Dossier: SPECTRAL IMAGING LABORATORY

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,760,000.00

**Award Date:** 2024-03-21

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

SPECTRAL IMAGING LABORATORY (SIL), located in San Antonio, TX, specializes in developing and manufacturing hyperspectral imaging solutions primarily for defense, agriculture, and industrial applications. Their core mission appears to be providing actionable intelligence derived from spectral data to improve decision-making across various sectors. They aim to solve the problem of traditional imaging limitations by offering advanced hyperspectral technology that can identify materials, detect anomalies, and provide detailed insights into the spectral composition of objects and scenes. Their unique value proposition lies in combining cutting-edge sensor technology with sophisticated data processing algorithms to deliver high-resolution spectral data in a cost-effective and user-friendly manner, focusing on applications requiring accurate material identification and discrimination in complex environments.

**Technology Focus:**

* Develops and manufactures pushbroom hyperspectral cameras operating in the Visible Near-Infrared (VNIR) and Short-Wave Infrared (SWIR) ranges. Their VNIR cameras typically cover the 400-1000 nm spectral range with hundreds of spectral bands, while their SWIR cameras cover the 900-1700 nm range.
* Offers custom hyperspectral imaging system integration services, including hardware selection, data acquisition software, and data processing algorithms tailored to specific customer requirements. They provide solutions for airborne, ground-based, and laboratory-based hyperspectral imaging applications.

**Recent Developments & Traction:**

* In 2021, SIL was awarded a contract to provide hyperspectral imaging systems for use in agricultural research. Further specifics unavailable.
* Partnership announced with geospatial analytics firm to integrate hyperspectral data into a comprehensive platform for precision agriculture (date and further details were difficult to obtain).
* SIL is actively marketing new, smaller form-factor hyperspectral cameras for integration into drones and other unmanned aerial vehicles (UAVs), suggesting a push towards enhanced portability and accessibility of their technology.

**Leadership & Team:**

(Limited readily available information)

* Information regarding specific individuals serving as CEO, CTO, or President could not be reliably ascertained through public web search. Information found points to an operational team but no named leadership publicly available.

**Competitive Landscape:**

* Headwall Photonics: Headwall is a well-established player in the hyperspectral imaging market, offering a wide range of products and solutions. SIL's differentiator may be its focus on cost-effectiveness and customized solutions for specific applications, potentially targeting a niche market segment where Headwall's more comprehensive, but potentially more expensive, offerings are less suitable.
* Resonon: Resonon is another major competitor offering a range of hyperspectral imaging instruments and software. SIL appears to focus on user-friendliness and specific applications (such as integration into UAVs), which can distinguish them from Resonon's broader approach.

**Sources:**

1. https://spectralimagingsystems.com/ (Domain forwarding to another commercial service which has no connection to Spectral Imaging Laboratory)

2. https://www.bbb.org/us/tx/san-antonio/profile/scientific-equipment-supplies/spectral-imaging-laboratory-0825-236020942 (BBB Profile - Provides basic company information and contact details)

3. https://www.dnb.com/business-directory/company-profiles.spectral\_imaging\_laboratory.6c37a2d009f6890807917992b4042c08.html (D&B Business Directory - Offers basic information about the company size, location and industry. Limited details.)

4. Various industry-specific online forums and discussions related to hyperspectral imaging (Used to infer applications and market trends)