



Solutions Meeting Read-Ahead Materials

“Enhanced Situational Awareness” Solutions Meeting

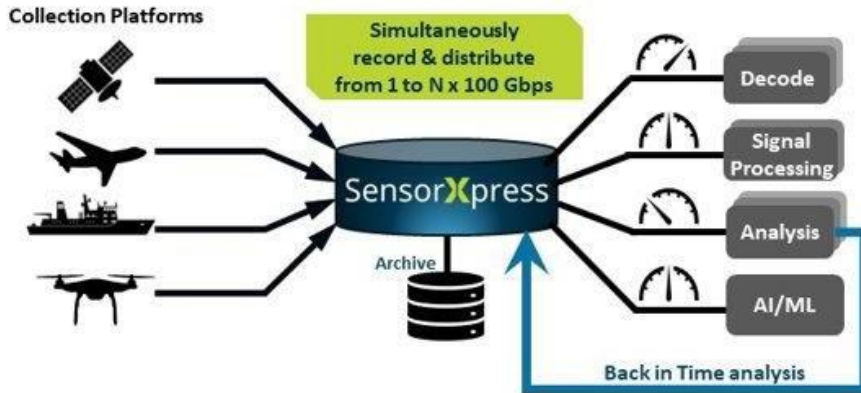
Day 1: 29-October 2024

2280 Historic Decatur Road (Suite #100), San Diego CA 92106



Axellio - SensorXpress

SensorXpress Software



Extreme High-Speed Radio Frequency DVR

Technology Description

SensorXpress is a PED-enabler (Processing, Exploitation, & Dissemination) and improves situational awareness by innovating radio frequency (RF) data collection, storage, and distribution for real-time and on-demand analysis supporting ISR and EW. It dramatically reduces the 'process' portion of the PED cycle via streaming and controlling repeatable data distribution via multiple analysis streams at rates your analysis applications can consume.

- Streams data simultaneously on and off disk at the highest speed and density in the industry – over 200 Gbps sustained
- Frequency, sensor, analysis application, hardware, and protocol agnostic
- Simultaneously and continuously record, store, and distribute from 1 to several 100s of Gbps sustained

Applications: Software enables unconstrained ingestion from sensors, allowing more data collection. Thru simultaneous high-speed storage and distribution, analysis applications can run in parallel or retrieve just the data they need.

- SensorXpress is **TRL 8**

Current Engagements & Contact Information

Major existing customers for this solution:

- MPO – Multiple pilots on-going
- Utilized in 2024 Navy Silent Swarm and Army Cyber Quest
- Packet variant of product (PacketXpress) utilized by ARCYBER, Federal System Integrators, financial community

Basic Company Contact Information

- <https://www.Axellio.com>
- HQ: Colorado Springs, CO
- Point(s) of Contact: Scott Aken, CEO
 - Scott.Aken@axellio.com
 - 703-677-6068

Solution Meeting Goals & Next Steps

Goals and next steps for advancing this solution:

- Identify partners to integrate SensorXpress into operational RF sensor collection and signal analysis systems to allow for mission operations deployment
- Determine unique requirements within INDOPACOM and ensure SensorXpress can meet those requirements

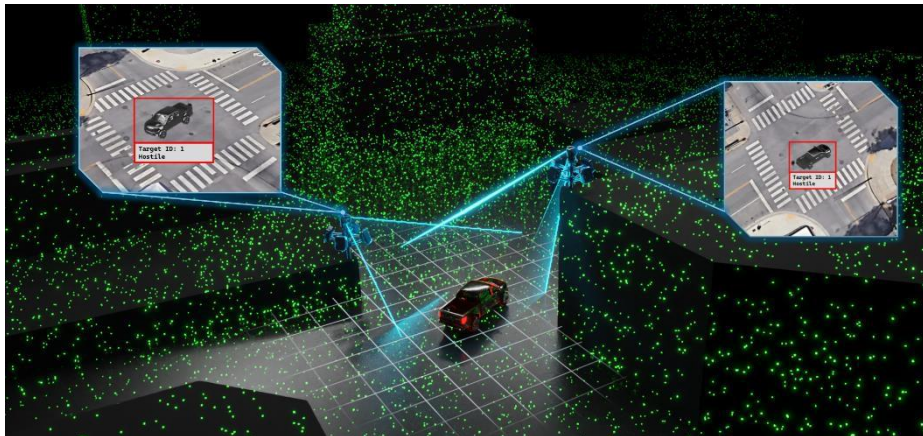
Future plans:

- While SensorXpress is working with I/Q and VITA49 protocols currently, we would like to work with other proprietary RF protocols
- We plan to continue to integrate with as many sensors as possible and hope to find partners (sensor vendor or Govt) that can work with us to provide and test with these sensors.



Camgian Corporation

Vision Enhanced Cross-sensor Tracking for Object Recognition (VECTOR)



EOIR and LiDAR fusion for real-time threat identification and enhanced situational awareness with cross-platform battlespace insights

Current Engagements & Contact Information

Current Engagements

- Department of Defense (DoD) funding (Current relevant customers)
 - Daniel Tidwell, AvMC DEVCOM, james.d.tidwell10.civ@army.mil, (256) 842-6688, "Sensor Control & Sensor Survivability" Program
 - John Klopfenstein, C5ISR DEVCOM, john.p.klopfenstein.civ@army.mil, (813) 789-0294, "Distributed Hyper Enabled Soldier Lethality" Program
- U.S. Government (Federal/State/Local) funding: N/A
- International Government funding: N/A
- Commercial sector customers: N/A

Contact Information

- Company Name: Camgian Corporation
- Website: www.camgian.com
- Points of Contact:
 - Primary: Michelle Parisi: mparisi@camgian.com, 662-320-1028
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Technology Description

Technology Summary:

- Integration of Electro-Optical Infrared (EOIR) camera data with LIDAR for enhanced Automatic Target Recognition (ATR).
- Fusion of LIDAR and passive imagery provides accurate range data and 3D object shape understanding.
- Enables multiple observing agents to perform cross-sensor object recognition using novel target discriminator network
- Comprehensive 3D battlespace picture enhances situational awareness and decision-making in complex environments.

Current or Proposed Applications

- Military surveillance and reconnaissance in the Indo-Pacific region.
- Target recognition and tracking in contested environments.
- Integration with existing defense systems for enhanced object recognition and tracking.

Current Technology Readiness Level: TRL 3

Solution Meeting Goals & Next Steps

Goals from participating in the Solutions Meeting:

- Secure partnership or funding for further development and testing.
- Demonstrate the capability and potential of the technology in operational scenarios.
- Identify potential collaborators or end-users for pilot projects.

What is needed to mature or transition the technology:

- Additional funding for prototype development and field testing.
- Collaboration with defense agencies for operational validation.
- Integration and testing with existing defense platforms and systems.

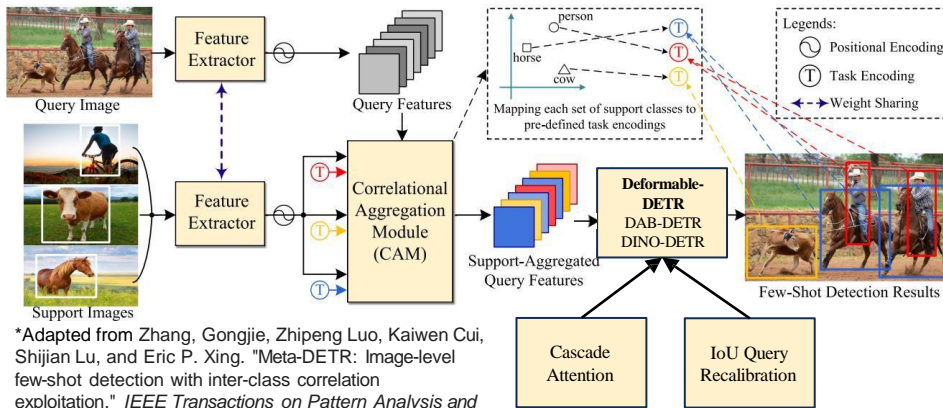
Plans for Future Development/Features:

- Enhancement of object recognition algorithms for higher accuracy.
- Expansion to include additional sensor types for broader situational awareness.
- Development of a user interface for real-time data visualization and decision support.



Corvid Technologies

Few-Shot Automatic Target Recognition with Enhanced DETR-Based Meta-Learning



Technology Description

Technology Overview:

Corvid's proposed DETR-Based Meta-Learning framework will utilize the few-shot learning capabilities of a DETR model to significantly reduce the amount of data required to perform automatic target recognition (ATR) without compromising the model's accuracy.

Corvid also proposes to enhance the Meta-DETR framework through novel integrations of Cascade attention (enforces local constraints with each object's self-attention) and Intersection over Union (IoU) Query Recalibration (allows for more accurate prediction of object bounding boxes).

Current or Proposed Applications:

This proposed solution was initially developed for SONAR-based Mine Countermeasure (MCM) Operations, but the few-shot meta-learning framework is generalizable to almost any object detection / tracking task, particularly in domains where prior training data is sparse (e.g., missile warning / launch detection, IED detection, UAV tracking)

Current Technology Readiness Level: TRL 4

Current Engagements & Contact Information

Existing customers for this solution:

- Previously proposed for a Phase I Navy SBIR
- Letter of Support obtained from RTX
 - Few-shot capabilities for MCM operations and data
 - Future integration into AN/AQS-20 / GATR systems
 - Additional deployment to Mk18, FOS, AQS-24, Raytheon Barracuda systems
 - Additional MCM SONAR training data procurement as necessary for evaluation of the framework

Company Contact Information:

- <https://www.corvidtec.com>
- Point(s) of Contact:
 - Nathan Henderson, Ph.D.; nathan.henderson@corvidtec.com
 - Peter Woods, Ph.D.; peter.woods@corvidtec.com

Solution Meeting Goals & Next Steps

Goals from participating in the Solutions Meeting:

To engage with interested parties that Corvid does not have previous experience with regarding this technology and have potential use cases for few-shot learning with more novel AI/ML techniques

What is needed to mature or transition the technology:

Corvid plans to perform the initial implementation of the proposed solution and the training / evaluation of the AI/ML models via our on-premises HPC system, but the training data and evaluation criteria should be provided by external stakeholders in order to bring this solution to TRL 6 or higher.

Plans for Future Development/Features

The initial implementation should be evaluated across multiple distinct domains and ATR tasks, and the robustness of our solution to varying levels of data sparsity should be empirically evaluated. Additional features for the meta-learning component include integrating more recent DETR models such as DINO-DETR and DAB-DETR. The applicability of this solution to zero-shot learning environments is also a path forward for future development.

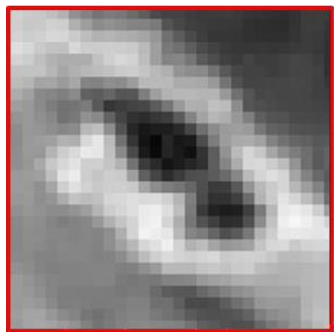


Logos Technologies

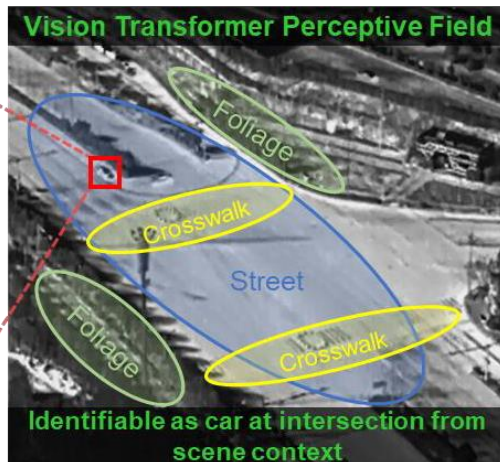
An Elbit Systems of America Company

Vision Transformers for Enhanced ATR with Limited Visibility

Conventional ATR Perceptive Field



Indecipherable, too few direct pixels on target



Technology Description

Logos has developed a series of scalable **Vision Transformer**-based AI/ML models for enhanced automatic target recognition (ATR)

- Vision Transformers can leverage broader scene context for more informed decision making compared to conventional ATR models
- Improves ATR performance when direct visibility of target is low (e.g., few pixels on target, adverse weather, environmental obstructions, etc.)
- Logos has designed its Vision Transformer models to prioritize **small object detection** and **efficiency on low SWaP-C edge processors**

Logos has completed 6 successful field tests in the past year, adapting to varying scenarios, sensors, and SWaP-C requirements

- **Current Technology Readiness Level:** 6 (IR) – 7 (EO)
- **Scenarios:** Maritime & terrestrial environments, EO & IR sensors, aerial & surface-mounted vehicles
- **Edge processors:** Jetson Xavier NX, Orin NX, Orin AGX

Current Engagements & Contact Information

Existing Customers

- **Naval Information Warfare Center**
 - Overmatch
- **Office of Naval Research**
 - Integrated Battle Problems
- **Army Futures Command**
 - Experimental Gateway Demonstration Event 2024

Contact Information

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Solution Meeting Goals & Next Steps

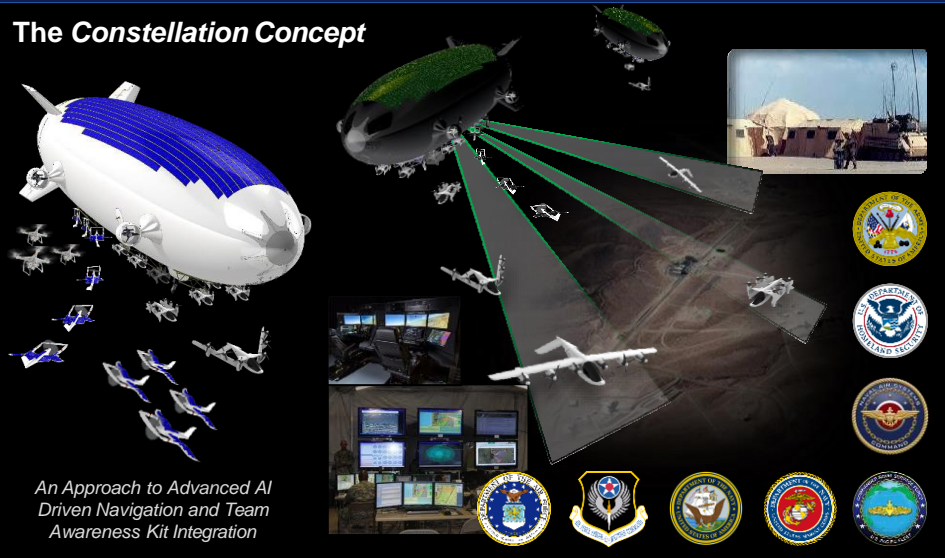
Logos is seeking funding to continue maturing this technology, with the following goals in mind:

- Increase Technology Readiness Level to 8, with focus on IR
 - Most beneficial to low-cost LWIR systems, given their low visual fidelity
 - Principal hurdle for IR is lack of data, which can be mitigated via simulation & domain adaptation strategies
- Incorporate temporal features into model's perceptive field
 - Allows AI to leverage prior frames as context
- Leverage Vision Transformers for improved vision-based navigation
 - Enables navigation in GPS-denied or comms-contested environments
- Extend detection/characterization capabilities to tactically important subcomponents (e.g., truck windshield, tank hatch, boat engine)
- Adapt models to latest emerging low SWaP-C hardware & quantization strategies (e.g., NF4)



Galaxy Unmanned Systems LLC

The Constellation Concept



An Approach to Advanced AI Driven Navigation and Team Awareness Kit Integration

Constellation Concept Technology Description

Technology Overview:

- Modular, multi-tiered autonomous swarming system integrating large persistent airships as “motherships” with drop drone swarms for scalable deployment, utilizing the best
- Powered by AI/ML for real-time task automation, enhancing autonomous mission execution and energy-seeking ‘hunt and forage’ capabilities.
- Utilizes an ad-hoc mesh network for communication, enabling drones to collaborate and adjust dynamically to operate in GPS-denied environments, ensuring reliable performance in complex and contested areas.

Current Applications: Military ISR, logistics, commercial urban air mobility, aerial inspections, and disaster response.

Technology Readiness Level (TRL): Currently at TRL 4, with concept validation through lab testing and preliminary field trials.

Current Engagements & Contact Information

Major existing customers for this solution:

- U.S. Air Force (USAF): Through multiple SBIR/STTR contracts from 2020 through 2024 for development of hybrid electric orbs and autonomous airships as the *Constellation Concept's* foundations.
- Bell Helicopter: Utilized Galaxy's platforms for flight services and UAS testing for swarming development, expressed interest.
- Choctaw Nation of Oklahoma (CNO): Collaborating with Galaxy on Advanced Air Mobility (AAM) solutions and air corridor projects.
- AFWERX: Engaged with Galaxy for autonomy and airspace integration efforts.

Provide Basic Company Contact Information: <https://www.galaxyuas.com/>

- Jason White, CEO: Jason.White@galaxyuas.com
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- Quinn Sukhia, PM: Quinn@galaxyuas.com

Solution Meeting Goals & Next Steps

Goals from Participating in the Solutions Meeting: Demonstrate the scalability of the *Constellation Concept* for both military and commercial applications and enlighten viewers on scientific/future capabilities.

Establish additional partnerships for further testing and integration, especially with FAA, DoD, and commercial stakeholders.

What is Needed to Mature or Transition the Technology: Additional real-world testing to move from TRL 4 to higher readiness levels, including Beyond Visual Line of Sight (BVLOS) operations.

Regulatory support and validation for integration into the national airspace, especially for UAM applications.

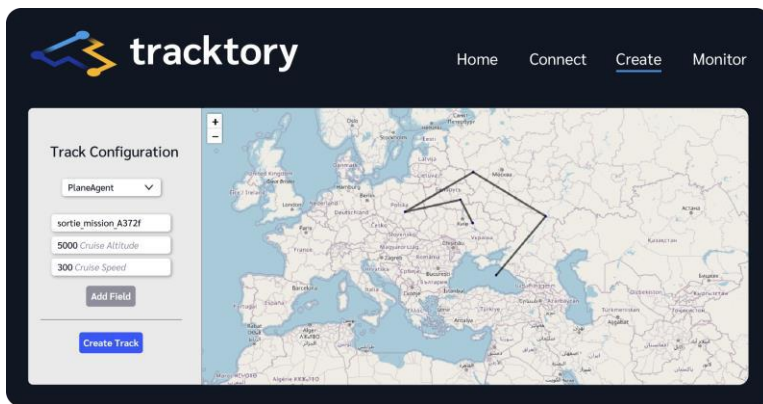
Plans for Future Development/Features: Incorporate advanced AI/ML processes for more autonomous mission execution and resource optimization.

Expand functionality for dual-use operations, including bio-inspired ‘hunt and forage’ characteristics and emergency response.



MORSE Corp.

Tracktory



A factory to replay, alter, and generate tracks for large-scale mission scenarios

Technology Description

- Tracktory streams real and synthetic terrain-aware vehicle tracks for cars, planes, and watercraft, and serves a variety of use cases, including system and workflow stress testing, declassifying data, scenario planning, wargaming, analyst training, AI/ML training and testing, and more.
- Real tracks stream from logs and can be edited to be rotated, scaled, or translated to other parts of the world. Users can edit tracks live with a smooth transition from real to synthetic tracks. Synthetic tracks incorporate user-provided constraints such as physics, waypoints, speeds, flight paths, roads, and more.
- Tracktory enables **large-scale mission scenario creation** currently supporting 1000s of simultaneous streaming tracks per second, with architecture ready to support 500k tracks using a standard laptop.
- Tracktory is a containerized web application that can be deployed in less than ten minutes. Tracktory is currently at a TRL of 4.

Current Engagements & Contact Information

Existing Customers

- USSOCOM; \$1.75M; October 2022-April 2024

Company Contact Information

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Solution Meeting Goals & Next Steps

- Strong desire to integrate Tracktory with USARPAC PED network to integrate with practical use cases to increase Tracktory's TRL to TRL 5/6.
- Expand Tracktory to support global scenario generations and scale to meet the largest needs of USARPAC: millions of tracks per second or more.
- Future development/features: a) Add additional relevant data replay formats, expanding beyond the currently-supported OMNI format. b) Add additional synthetic track generation capabilities including bathymetry-aware vehicles, space-based vehicles, sensor and radar models, and further user customization of track generation.



Greenroom Robotics

Lookout+



A sensor agnostic passive optical radar.

Technology Description

Technology Overview

- A passive optical radar leveraging multiple layers of Machine learning and computer vision to detect, classify, track and analyze the maritime environment.
- Edge processing enabled, removing need for communications.
- Sensor agnostic, designed to leverage existing sensors for rapid deployment to any maritime platform.

Current or Proposed Applications

1. Enhanced Situational awareness – Increasing the safety and effectiveness of maritime platforms and their crew, without the need for active sensing (TRL 9)
2. Automatic Target recognition (ATR) in increasingly congested and contested maritime domain (TRL 78/9)
3. Automated Intelligence, Surveillance and Reconnaissance gaining insight and analysis into tracked targets (Number of people, weapons, state, light/shapes status) (TRL 7).

Current Engagements & Contact Information

Current contracts for this product/solution:

- SubSea Craft (United Kingdom)
- Undisclosed OEM, Military applications (USA)
- Austal Ships, shown in image above (AUS)

Website: www.greenroomrobotics.com

Primary Point of Contact:

- Harry Hubbert
- harry@greenroomrobotics.com
- +61409 576 633

Solution Meeting Goals & Next Steps

Goals:

- Make attendees aware of the proven Greenroom Lookout+ solution.
- Present the technical solution that powers Lookout+
- Show the unique value points and benefits of Lookout+ Situational awareness solution.

Features on our roadmap:

- Automated vessel name/registration number recognition
- ISR features to predict intent of vessels through behavior and other visual cues.
- ATR integration to Combat Management Systems.

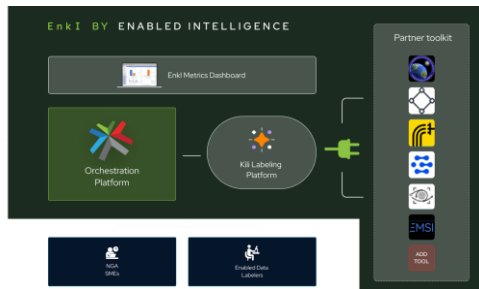
Next Steps :

- Demonstration of the Lookout+ capability to interested parties
- Integration of Lookout+ for US DoD or OEM vessels/platforms
- US DoD needs refinement to tailor and update Lookout+ to directly meet needs.

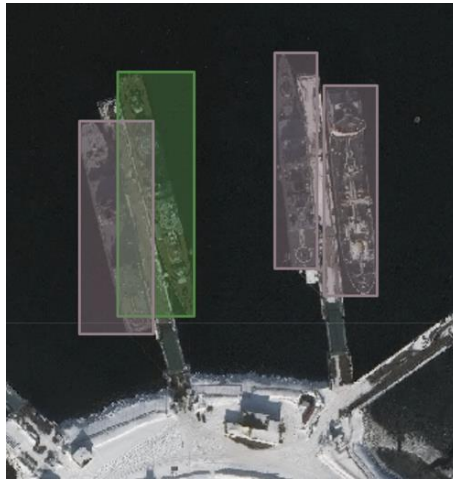


Enabled Intelligence, Inc

Enkl AI Data and Model Development Platform



Enkl: Secure platform to turn raw data into AI backed intelligence



Technology Description

Enabled Intelligence's (EI) Enkl™ platform is a fully integrated software platforms that can be deployed in the cloud or on "on-prem" secure networks (e.g. JWICS) that ingest raw data (Imagery, LiDAR, SAR, text, language, etc.) and builds highly accurate AI training and test data sets along with creating and deploying AI models. Enkl can be used at the edge and also has optional links to EIs dedicated team of open and cleared data labeling and AI engineering staff. This reach back allows military customers to focus on mission, model testing, deployment and use, while still building extremely accurate, reliable, and secure AI ready data sets.

Enkl and EI's reach back option is currently deployed with multiple DoD and Intelligence Community agencies.

Current Technology Readiness Level [\(TRL\).8](#)

Current Engagements & Contact Information

List any major existing customers for this solution

- *United States Air Force (NASIC)*
- *Central Intelligence Agency*
- *United States Space Force (15th Space Surveillance Squadron)*
- *National Geospatial Intelligence Agency (NGA)*
- *National Reconnaissance Office (NRO)*

Provide Basic Company Contact Information

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Solution Meeting Goals & Next Steps

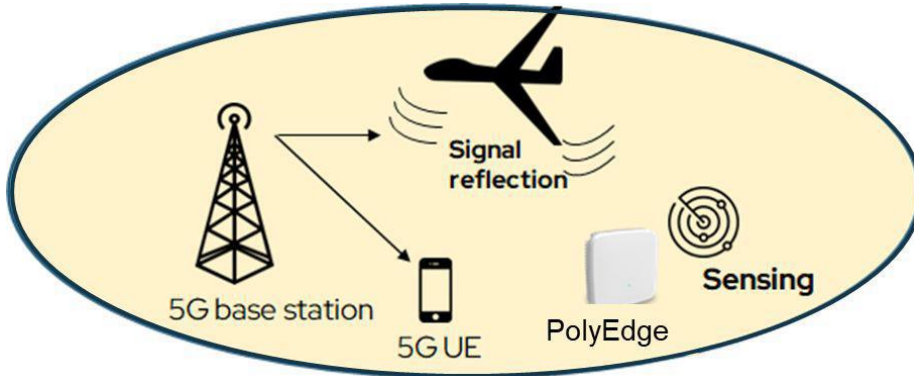
- Goals for this event are to
 - discuss EI's offerings and setup further demonstrations or pilot programs with government groups.
 - Understand what others are doing with AI and look for potential partnerships that can provide robust complete solutions to the government.
- EI and Enkl will continue to grow with more projects, data types, and specific objects or objectives desired to be detected with AI.
- Future development plans include:
 - Building out robust AI training catalogs for common objects
 - Expanding AI models with new workflows and objects
 - Working with partners to develop plug ins to Enkl



Tiami Networks

Technology Name

Hyperlocal geospatial awareness using 5G signals of opportunity



Technology Description

Technology Overview:

PolyEdge excels at offering precise detection and tracking of people presence, vehicles, and UAS movements leveraging passive 5G-based radar sensing. It offers enhanced tracking and surveillance capabilities, works with existing commercial 5G networks, has no active transmitters, is jammer resistant, and invisible to radar search.

Current or Proposed Applications:

Detection, Classification, and Tracking of Drones, Unmanned Aircraft Systems (UAS), Unmanned Ground Vehicles (UGVs), and People

Current Technology Readiness Level:

TRL-6

Current Engagements & Contact Information

List any major existing customers for this solution

- BlueHalo
- Air Force
- Deutsche Telekom
- Colorado Smart Cities Alliance
- City of Elk Grove, CA
- Gerald R. Ford International Airport

Provide Basic Company Contact Information

- www.tiaminetworks.com
- CAGE Code: 913X0
- DUNS: 084613536
- Non-traditional defense contractor
- Point(s) of Contact: Chris Pearson, cpearson@tiaminetworks.com

Solution Meeting Goals & Next Steps

Goals from participating in the Solutions Meeting:

We are well positioned to enter into Proof of Concept demonstrations with partners to demonstrate how our technology works.

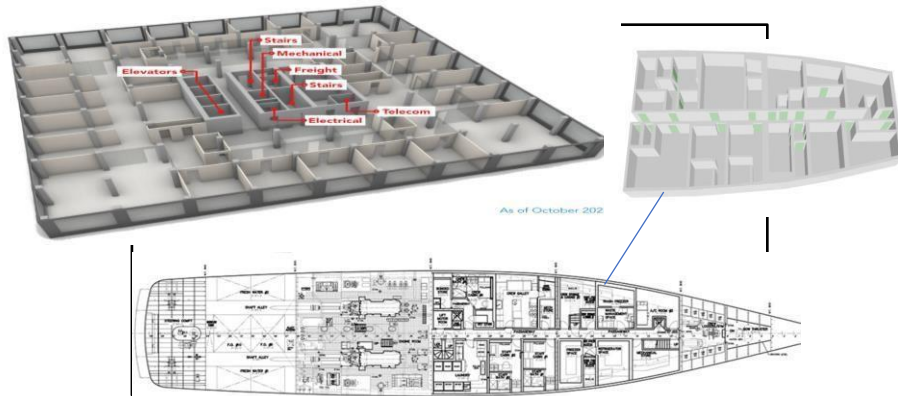
What is needed to mature or transition the technology:

- Funding for enhanced performance and extension to distributed sensors (continue to improve signal processing algorithms and detection range)
- Field testing with DoD and IC partners in urban/suburban/austere areas.
- Partner with manufacturers to explore large-scale production methods
- Collaborate with more industry players, research institutions, and government bodies (e.g., OTAs, BAAs, SBIR programs)
- Integration with fielded radio systems and private DoD 5G networks.



IndoorGeo

IndoorGEO 4.0



“Conversion of pre-CAD building plans to CAD/3D, using AI”

Technology Description

IndoorGEO – provides the following capabilities using advanced AI, in real time, at scale and with global reach. IndoorGEO 4.0 (PDF-to-CAD/3D) is TRL 9. Listed capabilities with * require input from the particular user community and a period of a few months to be able to perform the listed capability.

- Situational Awareness Modeling (Wireless InSite, NRL’s Builder, JREM, etc.) (TRL 9)
- Processing any raw plan set (or a database of raw plan records) from PDF (flat image/raster) to CAD/3D (TRL 9)
- Quickly searching entire databases of raw plan records for *any type of building data*, [e.g., basements, hidden rooms, data centers, video/security systems (ethernet and optical fiber), WiFi, electrical closets, service panels, mechanical rooms and ventilation]*
- Automated attribution of above-listed attributes and *any other type of building data**
- Structural elements and wall composition (e.g., steel-reinforced concrete)*
- Enables indoor targeting/weaponeering via precise integration into geo-referenced missile guidance mapping*

Portable and deployable worldwide

Current Engagements & Contact Information

Existing customers:

- U.S. Army Futures Command (One World Terrain) – sub to Maxar Technologies
- CIA – Situational Awareness Modeling (Wireless InSite) - sub to Envisioneering (in process)
- Naval Research Lab – Situational Awareness Modeling (Builder) - sub to Envisioneering (in process)
- DTRA (UWAC & UFAC) – recent IDIQ (in process)

Company Contact Information:

- www.indoorgeo.com
- Point of Contact: Charles Carrington – charles.carrington@indoorgeo.com

Solution Meeting Goals & Next Steps

Introduce IndoorGEO’s capabilities.

Highlight for OUSD (Policy) data source access for building plan records for vast majority of buildings worldwide.

Connect with DoD, U.S. Government and Partner Nation military representatives having a potential need for our capabilities, with emphasis on OUSD (Policy), intel side and DIA.

Next steps

IndoorGEO 5.0 with additional capabilities (anticipated completion in 6-8 weeks)



Optelos

Optelos AI technology can help DoD decrease time to analyze data, increase operational awareness and insights

<p>Ingest and process imagery from any source</p>	<p>Geo-locate and contextualize</p>	<p>Immersive AI Powered Digital Twin</p>	<p>AI Workflows & Analytics</p>
<p>Process batch streams of structured and unstructured data from handheld devices, aircraft mounted instruments, static mounted instruments, and more.</p>	<p>Patented Data Processing to create detailed, massive digital twins such as Orthomosaic maps, 3D models, LiDAR, 360 scans, & more for operational & battlefield use cases.</p>	<p>AI Powered Digital Twin technology for detection and visualization of asset conditions to facilitate situational awareness in shipyards and depots.</p>	<p>AI Workflows provide automated data analysis to detect and geo-locate battlefield asset condition and provide operational insights.</p>
<p><i>AI Powered Digital Twins for Battlefield Insights</i></p>			

Technology Description

Optelos provides **visual intelligence** infused with **AI computer vision analytics** and **Digital Twin insights**. Our visual data correlation technology provides automated battlefield awareness (digital 3D terrain map) and operational insights on infrastructure including shipyards and depots – a truly multi-disciplined approach.

Current or Proposed Applications

- 3D Digital Twins for enhance situational awareness.
- Computer Vision AI technology to detect and geolocate data.
- Secure, modular platform for system integration and AI workflows.

Current Technology Readiness Level (TRL)

- Optelos is generally assessed at a TRL of 7 to 8 :
- Optelos core platform is commercially deployed with successful production operations which signify a high level of maturity.
 - Production usage of Optelos computer vision AI and digital twin tech.

Current Engagements & Contact Information

Major existing customers

Commercial Sector customers include:

- Utilities: *Exelon/ComEd, JAX, SSE*
- Chem/AgChem: *ADM, Chemours*
- Telecom: *AT&T, MastTec, Zain*
- Energy: *Oxy, CPChem, KAP*
- Partners/SI: *Deloitte, Skydio*



Basic Company Contact Information

- Company Website: <https://optelos.com>
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Neil Inman, COO neil.inman@optelos.com

Solution Meeting Goals & Next Steps

Goals and next steps for advancing this solution:

Goals from participating in the Solutions Meeting

- Provide awareness and industry examples of the Optelos AI solution.
- Understand DoD use cases and applications where for Optelos can help.
- Seek budgeted projects to begin trials.

What is needed to mature or transition the technology

We believe our Computer Vision AI and Digital Twin technology can be applied into DoD applications through AI training using DoD data and development of workflows tailored for DoD use cases.

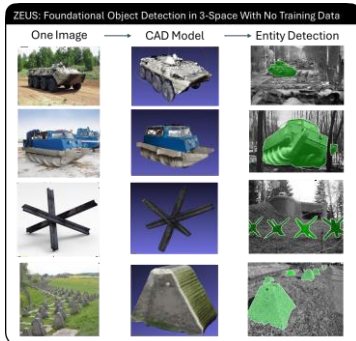
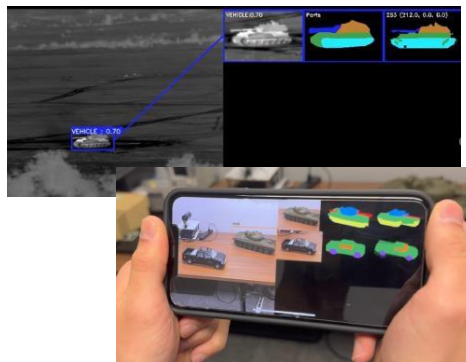
Plans for Future Development/Features

We are adding AI Workflow Builder to allow customers to create and deploy their unique workflows. We are working with partners to extend AI for LiDAR, and Large Language Models (LLM) for natural search. We will enable customers to operationalize and apply AI computer vision for their workflows.



CoVar, LLC

DOCTRINAIRE & ZEUS



Zero-Shot, Explainable AI/ML on Low-Power Devices –
AI/ML Without Training Data

Current Engagements & Contact Information

CoVar is actively working on these technologies with

- US ARMY C5ISR (ATLAS Program)
- US NAVY NSWC (Doctrinaire At Sea)
- US MARINES (SBIR PH 1; Awarded, not started)
- ONR DLAC (CoVar IR&D)

Provide Basic Company Contact Information

- www.covar.com
- Peter Torrione CTO – pete@covar.com
- Mark Hibbard CEO – mark@covar.com

Technology Description

- AI/ML for ATR & Tracking **without training data**
 - Explainable; Zero-Shot NO TRAINING DATA
 - Hand-held devices; NO CLOUD
 - Universal ATR
- Application Areas:
 - Automatic Target Recognition
 - UAS-mounted AI/ML
 - **C-UAS**
 - Intelligence/Surveillance/Reconnaissance
 - Etc.
- TRL's
 - Ground to Ground ATR TRL 7
 - Phone implementation ATR TRL 7
 - Satellite & Other ATR TRL 5-6

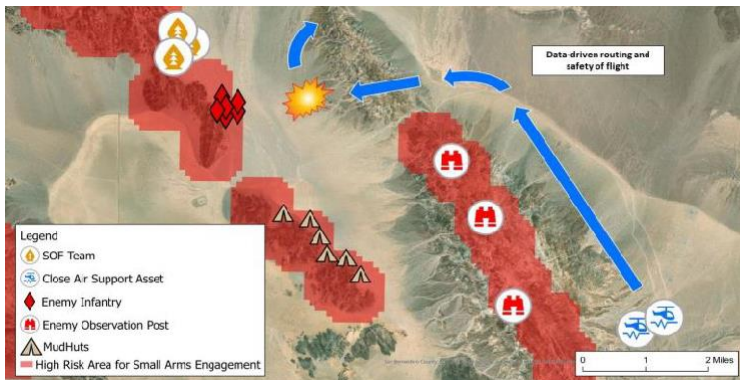
Solution Meeting Goals & Next Steps

- We are a contract R&D firm seeking
 - Deeper understanding of where these technologies could work
 - Deeper understanding of end-user work-flow, and needs
 - Ultimately – technology licensing
- Seeking contacts with
 - AI/ML & ATR Subject Matter Experts
 - Opportunities for demonstrations
- What is needed for maturation
 - Understanding of programs of record
 - Integration into existing API's, ICD's
 - Continued GCIA, MOSA, OSA compliance
 - Government transition partners
- Plans for Future Development/Features
 - Ongoing R&D for cross-modal zero-shot target custody
 - Nett Warrior Implementations: Any Platform, Any Mission, Zero SWAP



Simsi, Inc.

Risk Terrain Modeling (RTM) & RTMDx Software



Analytical Decision Support Software

Technology Description

- RTM analytics connect environmental features to incident location patterns of risks and diagnose vulnerable areas to **better protect assets from point of origin to point of need.**
- RTMDx is the RTM software that enables users to align disparate datasets (e.g. human factors analysis, remote sensing data, asset technical capabilities) for **unified operational decision making.**
- RTMDx **provides prescriptive information.** Situational awareness of spatial risks allows improved battlespace visualization planning while **reducing the commander's risk of decision-making fatigue.**
- RTMDx is **commercially available at TRL 9.** RTMDx is actively used internationally by law enforcement to address crime and public safety. It has also been used to study terrorism, maritime piracy, and IED risk.

Current Engagements & Contact Information

Existing Customers

- London, UK Metropolitan Police Service
- Lund University, SE and the Swedish Police Authority
- United Nations Development Programme and the Ministry of the Interior of Ecuador
- Kansas City, MO Police Department
- City of Edmonton, ON, CA

Company Contact Information

- **Website:** www.simsi.com
- **Presenter:** Andy Horn, Director, +18173812257, andy@simsi.com
- **Secondary Contact:** Julius Parishy, CTO, julius@simsi.com
- **Small Business:** Yes
- **Foreign Owned:** No

Solution Meeting Goals & Next Steps

Goals:

- Demonstrate RTMDx's ability to enhance the use of spatial data to **improve tactical planning** and **support the commander's intent,**
- Engage in **prototyping** to refine modeling and requirements, and;
- Secure **commercial opportunities** to engage with the military for deployment.

Next steps for advancing this solution:

- Enhanced security and resiliency framework to support sensitive deployments,
- Integration with real-time sensor data to enhance responsiveness,
- Integration with mission command modules to provide actionable intelligence within C2, and;
- Integration with uncrewed assets to automate responses to new signals.



Solutions Meeting Read-Ahead Materials

“Enhanced Situational Awareness” Solutions Meeting

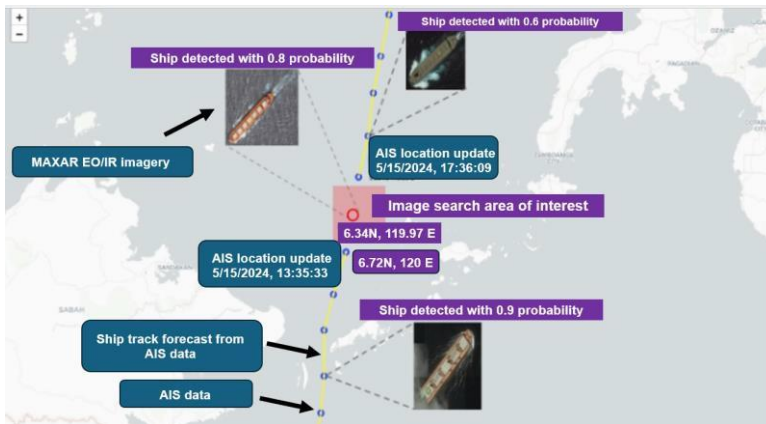
Day 2: 30-October 2024

2280 Historic Decatur Road (Suite #100), San Diego CA 92106



Spectronn Inc.

SpaceEyes



Reliable and trustworthy moving target indication from space imagery

Technology Description

- Computer vision software solution for ground and maritime moving target detection, tracking, and recognition from space-based imagery (e.g., EO/IR, SAR)
- Automatically generate explanations for object recognition results to build trust with the intelligence operator
- Domain-specific generative AI large language model (LLM) automatically generates object recognition reports, and pattern-of-life, and provides a natural language chatbot interface for threat intelligence Q&A
- Multiple AI agents combine multi-INT sensor data (e.g., AIS, RF, EO/IR, and SAR) for autonomous tipping and cueing, human-AI teaming, etc.
- Maritime ISR (e.g., dark vessels, ship-to-ship transfer), maritime risk and compliance applications
- Current Technology Readiness Level: TRL 7

Current Engagements & Contact Information

List any major existing customers for this solution

- AFWERX SBIR Phase II contracts (AFRL/RV, PEO Space Sensing, PEO Digital, and 319th Reconnaissance Squadron)
- Lloyds List Intelligence, Booz Allen Hamilton, Riverside Research, Northstar Earth & Space, and Ursa Space Systems partnerships for commercial solution

Provide Basic Company Contact Information

- <https://www.spectronn.com>
- Point(s) of Contact: Raj Chandramouli, mouli@spectronn.com
Vidya Sagar, vidya@spectronn.com

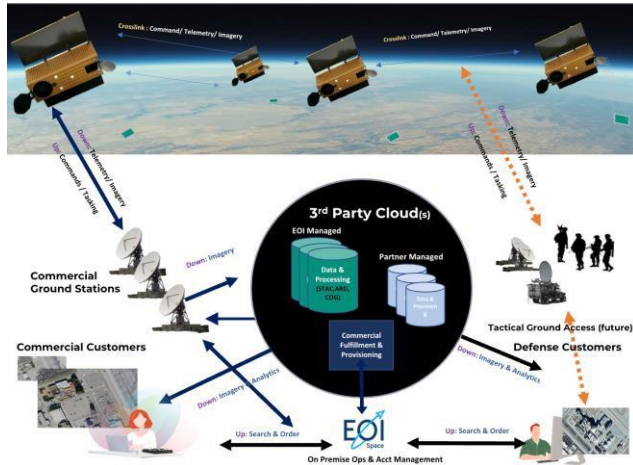
Solution Meeting Goals & Next Steps

- Identify DoD stakeholders for field experimentation, technology adoption, and follow-on funding for advanced concepts integration
- Field experimentation, stakeholder feedback, ATO for SpaceEyes software solution, and technology integration opportunities
- Future product plan: integrate RF data, autonomous sensor tasking, and threat-based dynamic sensor scheduling
- SBIR Phase III, TACFI, or other funding for further technology transition



EOI Space

Very-low Earth orbit Constellation for Tactical Observation & Response (VECTOR)



Revolutionizing TCPED with AI-driven data direct from space to the warfighter

Current Engagements & Contact Information

- Department of Defense (DoD) funding
 - SIBR ([FA864920C0279](#)) - Persistent EO from VLEO
 - TACFI ([FA254123CB003](#)) - On Board Compute
- International Government funding
 - Actively pursuing JNSC funding >\$100M
 - On contract with a Japanese Prime Contractor
- Commercial sector customers
 - \$2.5M Investment NTTDATA
 - \$22.5M Contract Prepayment NTTDATA
- <https://eoi.space>
- Point(s) of Contact:
 - Benjamin Tuttle, PhD - btuttle@eoi.space
 - Tachi Rivera – trivera@eoi.space

Technology Description

- The on-board compute cluster will bring Artificial Intelligence (AI), Computer Vision (CV), Analytics, and data processing on orbit enabling autonomous decision systems that provide unique improvements in monitoring.
- The system provides an edge node capable of image-tagging, sorting, and pattern-of-life analysis for specific targets of interest, in <15 minutes.
- The edge compute cluster facilitates extremely low-latency image delivery with Processing, Exploitation, and Dissemination (PED) on orbit.
- [TRL4](#) through [TRL9](#) based on sub-systems

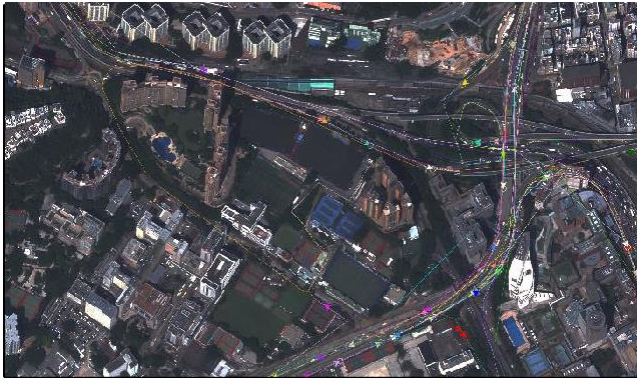
Solution Meeting Goals & Next Steps

- Our goals are to:
 - Better understand future engagement opportunities
 - Evaluate follow-on contracts supporting R&D expansion surrounding AI/ML opportunities
- To transition this technology, we need further use case development for AI/ML analytic generation (such as object detection) surrounding key areas:
 - Border Conflict Monitoring
 - Rapid disaster response coordination
 - Adversarial Infrastructure monitoring
- Future Development/Features:
 - TacRS – hosting multiple payloads such as our core EO offering in addition to RF.
 - Direct downlink to fixed and portable antennas



Textron Systems

Technology Name



AI/ML Track Data

Technology Description

Summarize (3-5 bullets) your technology:

- *Textron Systems currently builds and supports applications for exploitation of imagery and full motion video both classified and unclassified.*
- *Latest advancements in cloud computing and AI/ML are driving changes to the PED workflow resulting in the need for trusted applications to support new data types and deployment mechanisms.*
- *RemoteView Pro*
- *SeeGEO*
- *We have several products commercially available, deployed and used now (TRL 10) as well as other capabilities in development we would consider TRL 9.*

Current Engagements & Contact Information

List any major existing customers for this solution

- NGA, DIA, CIA
- USAF
- Space Force

Provide Basic Company Contact Information

- <https://www.textronsystems.com/>
- Point(s) of Contact:
- Kevin Opitz E: kopitz@textronsystems.com O: 406-360-0957
- Matt Morris E: mmorris@textronsystems.com O: 703-467-2464

Solution Meeting Goals & Next Steps

Summarize (3-5 bullets) goals and next steps for advancing this solution:

- *Our primary objective is to make our capabilities known to government customers and decision makers.*
- *Our secondary objective is to connect with other business who have complimentary applications and expertise, ie AI/ML to evaluate possible partnerships.*
- *Our technologies are commercially available now but we are always looking for partnerships and the voice of the customer to help drive our innovation and product roadmaps.*



Semandex Networks Inc.

Technology Description

- Searches visual data with plain text queries and sample pictures, including change detection, using pre-trained models with no need to train new models
- Recognizes objects, their scene context and depicted activities across diverse perspectives (ground, airborne and satellite) and is not affected by shear, stretching or brightness
- Automatically tags observations matching saved searches and allows users to export results as JSON, KML, Shape file overlays
- Deployable on cloud, hybrid cloud, on-premise, transit servers, workstations and laptops
- Currently at TRL 7/8

Solution Meeting Goals & Next Steps

- Goals: Participate in risk reduction exercises to advance readiness for fielding to Programs of Records
- Needs to mature or transition the technology: Expand and refine data ingest framework to support processing of streaming FMV with KLV metadata, video from small drones, CCTV cameras, social media and special reconnaissance collections.
- Plans for future development/features: On-board processing at airborne platform and expedited dissemination of collected data and analytics; Advanced integration with chat-based Retrieval Augmented Generation (RAG) Large Language Models (LLM)

Current Engagements & Contact Information

Current Customers:

- Department of Defense (DoD)
 - National Geospatial-Intelligence Agency (NGA)
 - USMC/DCI

Company Contact Information:

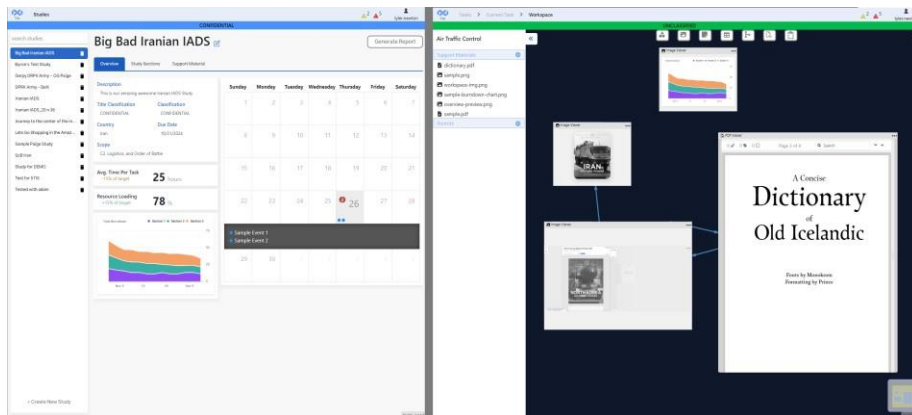
- Company Website: <https://semandex.net>
- Point(s) of Contact: Dr. Daniel Reininger, dan@semandex.net





Modus Operandi

PAiGE



PAiGE is a cutting-edge, AI/ML/LLM-enabled all-source analysis tool that is data-agnostic and built on an open architecture. It seamlessly integrates, analyzes, and provides actionable insights from vast and diverse data sources.

PAiGE empowers businesses to make faster, more informed decisions, stay compliant with regulations, and gain a competitive edge in their industry. Whether you're managing risk, optimizing operations, or driving innovation, PAiGE provides the tools needed to turn data into actionable intelligence. Potential sectors are:

**Financial Services | Healthcare | Supply Chain & Logistics |
Energy & Utilities | Legal & Compliance | Government & Defense**

CURRENT CUSTOMERS:

- Existing DoD/USG Customers: US Army, US Air Force, US Navy, MDA
- Active DoD/USG Contracts: LEEP, KNITE, LOGEN, CoDeR, Inception, PAiGE, POMML, POWER, AMID, ManTech DCGS-A, ASSURE
- Intended DoD/USG Customers: US Army, US Air Force, US Navy, MDA, US Marine Corps, DIA, DoT, DHA

Website: <https://www.modusoperandi.com/>

Modus POC: Tyler Newton, tnewton@modusoperandi.com

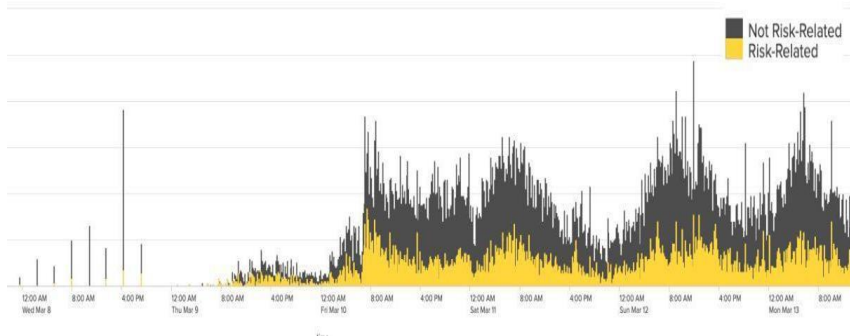
High-tech small business that develops software for the U.S. defense and intelligence community:

- R&D** data fusion, data analytics, AI/machine learning, natural language processing, unstructured information management, advanced data visualizations, and fostering human/machine collaboration.
- Expertise:** semantic enrichment and the integration of multi-source data in defense sector software systems, particularly in logistics and the C6ISR domains



Inca Digital Federal

Real-Time Anomaly Detection



Risk-related discussions on social media regarding Silicon Valley Bank leading up to its collapse.

Technology Description

Summarize (3-5 bullets) your technology:

- **Advanced NLP and AI-driven analytics** process social media data for early event detection, geo-location, and real-time risk assessment.
- **Used by crypto-financial institutions** and the Federal Reserve Bank for monitoring and managing financial risks.
- **Event Detection System (EDS)** flagged risk-related discussions on social media regarding Silicon Valley Bank prior to its collapse, highlighting its predictive capabilities.
- **Expanding models and topics** to focus on DoD and intelligence interests, enhancing situational awareness for defense and national security.
- **Technology Readiness Level (TRL 3-6)**, progressing toward broader real-world deployment and integration into government and financial platforms.

Current Engagements & Contact Information

List any major existing customers for this solution

- *Federal Reserve Board (FRB)*
- *Commodity Futures Trading Commission (CFTC)*
- *Paypal*
- *Chainlink*
- *Mysten Labs*

Provide Basic Company Contact Information

- *Company Website: <https://inca.digital>*
- *Point(s) of Contact: Please include name and email*
 - *Nicholas Gans - nicholas.gans@inca.digital*
 - *Greg Favitta - greg@inca.digital*

Solution Meeting Goals & Next Steps

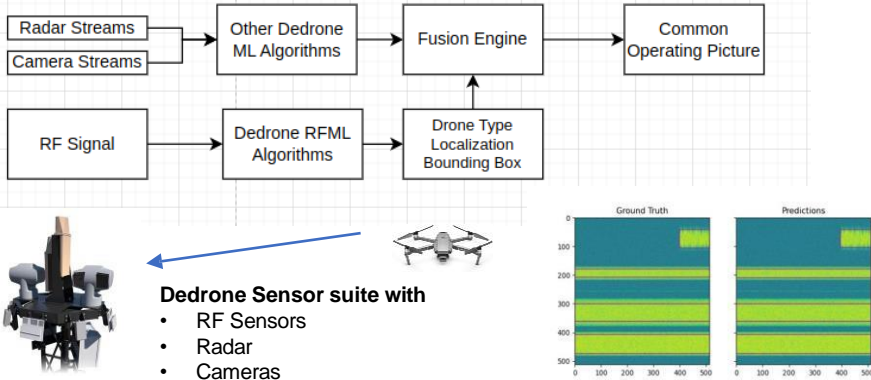
Summarize (3-5 bullets) goals and next steps for advancing this solution:

- **Showcase the operational value** of Inca Digital's NLP technology in enhancing situational awareness for USG decision-makers through real-time intelligence extraction.
- **Expand customer base** by identifying strategic and DoD-level partners interested in broad applications of the technology.
- **Gather feedback from stakeholders** to refine and optimize the solution for monitoring geopolitical, economic, and social events.
- **Pursue partnerships and collaborations** to support R&D, enhance multilingual capabilities, and drive commercialization efforts.
- **Explore integration opportunities** with existing DoD and government intelligence platforms for seamless, large-scale data processing.



Dedrone Defense

Radio Frequency Machine Learning (RFML) Algorithms for Evasive Drone Signals in Highly Contested environments



ML Enabled RF detection and processing pipeline to detect, identify, classify, and localize drone signals in dense and rapidly evolving environments

Technology Description

Technology Overview: Our state-of-the-art AI/ML solution detects, classifies, and localizes drone signals in real-time using algorithms like vision transformers, leveraging RF sensor expertise, DSP, and a current signal library. We fuse RF intelligence with other sensors like EO/IR cameras, radars, etc., to generate a complete picture of the environment.

Current or Proposed Applications: Our solution detects drones and swarms of drones in noisy environments and weak signals at long ranges, utilizing data from sensors deployed globally and in Ukraine. By pairing ML algorithms with traditional DSP pipelines, we reduce onboard processing and enable rapid SIGINT and reverse engineering against emerging threats, including Russian and FPV custom threats in Ukraine. Fusing this information with other modalities gives the warfighter a more complete picture. This allows us to keep up with emerging threats and counter them timely and effectively.

Current Technology Readiness Level (TRL): Our RFML solution is an enhancement to our mature TRL 9 Library-Based detection system deployed in Ukraine, with ML algorithms at about a TRL of 4.

Current Engagements & Contact Information

- Research & Development is entirely self-funded.
- The technology is planned to roll out across Dedrone's customer base installed in 32 countries and used by six of the G-7 nation governments; 851 sites, including 49 airports and 61 stadiums; **15 US federal entities and 23 non-US governments.**
- **SOCOM engaged on utilizing this technology.**
- *Company Website:* dedrone.com
- *Point(s) of Contact:*
 - Muhammad Qureshi (muhammad.qureshi@dedrone.com)
 - Rob Campbell (rob.campbell@dedrone.com)
 - John Knag (john.knag@dedrone.com)
 - Jay Bienlien (jay.bienlien@dedrone.com)

Solution Meeting Goals & Next Steps

- **Goals:**
 - Gain a deeper understanding of government customers' needs and pain points, demonstrate our RFML technology's readiness for deployment and build customer confidence, and identify data sources for signals of interest to refine our solution.
- **What is needed to mature or transition the technology:**
 - Collaboration with government customers to understand specific needs and challenges, access to relevant end-user data and feedback, and guidance on integration and deployment considerations.
- **Plans for Future Development/Features:**
 - Develop robust and trustworthy capabilities to identify out-of-library signals, build patterns of life for deployed devices and technologies, and fuse multi-modal information streams using AI/ML fusion algorithms for advanced threat analysis, ultimately providing a comprehensive common-operating-picture.



Target Arm Inc.

Arsenal Modular Mission Payload (A-MMP): Autonomous UAV Swarms With Any Vehicle, On-the-Move, Hands-Free



Any Crewed
Vehicle



Any Uncrewed
Ground Vehicle
(UGV)



Fixed
Wing

Enhanced HMI-F - UAV Swarms + AI
No Stopping Needed - No Pilot Needed



Rotary Wing

Technology Description

Overview: A-MMP for Autonomous UAV launch and recovery for UGVs

- Modular and scalable; battery-operated for all day ops
- Enables high speed operational maneuver: for both manned/unmanned
- UAVs are stowed as All-Up-Rounds – ready to deploy now
- Enables one device to launch and recover all types of UAVs

Proposed Applications: modular payload on SMET, RCV, HMMWV, Stryker

- *Potential CONOPS: force protection, ISR, c-sUAS, convoys*

Current Technology Readiness Level (TRL): 7

SOCOM Field Assessment at PM FOSOV RODEO 2024:
**“Overwhelming positive response for an ‘on the move’
drone capture capability.”**

Current Engagements & Contact Information

List any major existing customers for this solution

- DoD funding to date: 8 SBIR/STTR R&D contracts (1 active)
- AFWERX Small Hybrid Aerial Refueling Kit (SHARK) contract
- BAE Systems IRAD for Area Surveillance enhancements with A-MMP
- Hyundai Motor Group – Proof of Concept contract

Recent/Upcoming Engagements

- SOCOM PM FOSOV Rodeo 2024 – live demonstrations
- OSD/R&E I&M Thunderstorm 24-3 – Live demonstrations
- OSD/R&E I&M JPEM M80 Stiletto – NSWG CRADA signed, pending

POC: Jeff McChesney, CEO/Founder, 203.434.5866

Email: Jmccchesney@targetarm.com

Website: <https://www.targetarm.com>

Small Business: Yes, SDVOSB, Non-Traditional, Sole Source Contracts-Yes

Solution Meeting Goals & Next Steps

Goals from participating in the Solutions Meeting

- Introduce the concept of Arsenal-Modular Mission Payload with UAVs
- Discuss swarm capabilities from A-MMP and effect on CONOPS
- Garner feedback on swarm grid sensor arrays for ISR and Lethality
- Gain support for additional funding to cross the valley of death

What is needed to mature or transition the technology

- **Initial Orders** for Hands-on with warfighters feedback on the MMP
- **R&D funds** to develop the feeder mechanism and magazines
- **R&D funds** to expand AI/ML software integration into DoD systems
- Environmental testing; more edge case testing

Plans for Future Development/Features

- Just Announced a second A-MMP: using a robotic arm, TRL-7 also
- Fixed wing autonomous recovery (in progress with current SBIR)
- Test UAV Swarming capability when A-MMP is mounted on UGVs
- Deepen AI/ML to improve swarm management and sensor data streaming, while on-the-move

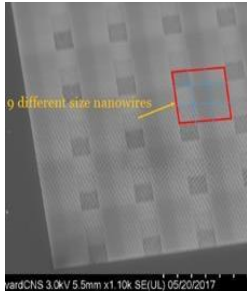


Metaphos Technology, Inc.

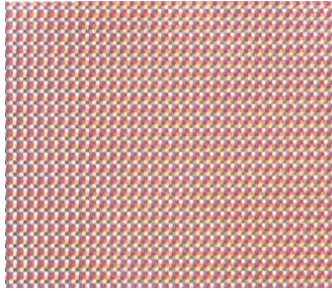
Mobile Multispectral Imaging



Mobile multispectral Imager



Electron-Microscope Image of the Nano-antennas



Optical reflection Image of the Nano-antennas

"Multispectral sensors for advanced situational awareness."

Technology Description

- CMOS-based multispectral sensors for enhanced object recognition and chemical composition analysis
- Captures UV-VIS-NIR (390nm – 1000nm)
- Compact, energy-efficient design ideal for deployment on surveillance drones, wearable devices, and unmanned systems
- Enables detection of objects such as camouflaged vehicles, concealed weapons and hazardous chemicals
- TRL: 5

Current Engagements & Contact Information

Existing customers

- Integration with MatrixSpace (in process)
- SBIR applications filed for NSF and NIH

Company Contact Information

- <https://metaphos.com/>
- Fawwaz Habbal – fawwaz@metaphos.com

Solution Meeting Goals & Next Steps

Solutions Meeting goals

- Highlight technology's potential, develop interagency relationships to select most prominent application / use case.

Our needs

- Connect with companies and specialists to specify and test applications.
- Additional funding (\$500k) to complete seed round.
- Develop manufacturing partnerships to mass produce sensors.

Next steps

- Expand spectral range of the sensor beyond 1,000nm.
- Develop machine learning algorithms for edge devices.



Georgia Tech Research Institute (GTRI)

Technology Name

Military YOLO (Detecting Military Objects with Open-Source Capabilities)

Many Examples Needed



Deep Learning Model

Model Trained to Detect Tanks (No Obfuscation)

Few Examples Needed



Model Trained to Detect Tanks (With and Without Obfuscation)

Technology Description

- Uses open-source object detection model(s) in combination with other capabilities for fast and accurate target recognition
- Leverages limited data and models' previous knowledge about military objects of interest to overcome presently used obfuscation methods
- Can reduce human analyst time and cognitive load in locating military objects of interest
- Presently at Technology Readiness Level (TRL) 4

Current Engagements & Contact Information

Current engagements for this solution:

- Presently funded by AFRL for development
- Discussions in-progress with Army PEO IEW&S

Contact Information:

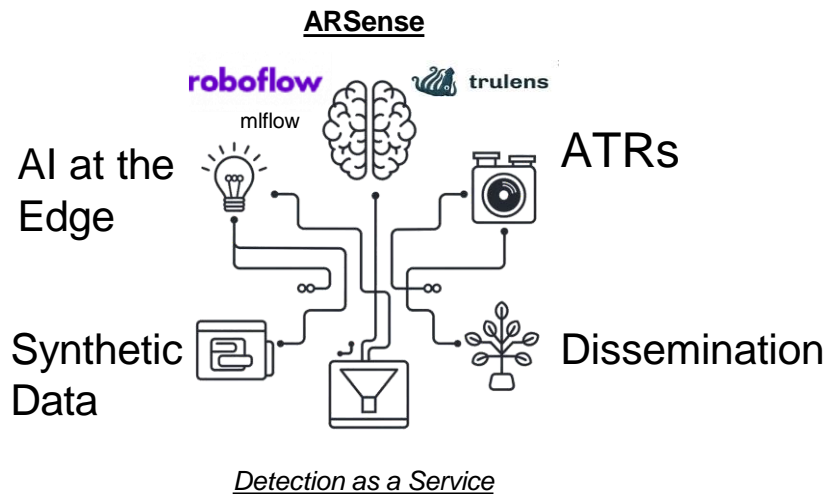
- <https://www.gtri.gatech.edu>
- Hunter Morera, hunter.morera@gtri.gatech.edu
- Ray Kenning, raymond.kenning@gtri.gatech.edu

Solution Meeting Goals & Next Steps

- Goals for attending this meeting:
 - Demonstrate our technology capabilities
 - Receive feedback on technology capabilities
 - Identify potential collaboration partnerships
 - Learn more about OUSD R&E needs and pain-points
- Maturation needs:
 - Additional military datasets to enhance training and model performance testing
 - Funding to support algorithm development
 - Funding for hardware for data storage and computational processing
- Next step is to investigate the use of transformer-based networks and compare to classic Convolutional Neural Networks (CNNs)



Applied Research Solutions (ARS)



Technology Description

- AI framework leveraging GOTS/COTS technology and generative AI to generate synthetic data to decrease training requirements and increase accuracy of in-house models, while enabling integration of state of the art (SOTA) 3rd Party ATR (Automated Target Recognition) algorithms.
- Developmental tech stack currently part of other programs; Integrating multiple 3rd party ATRs and deploying software as for AF and IR&D internal customers. Leveraging that experience as well as ARS's AI and cloud stack.
- It currently does not exist in this deployment, but pieces are being used through the DoD. This effort would combine them as needed for customers.
- Platform tooling options could allow for potential fusion algorithms between ATRs.
- Current Technology Readiness Level [1-2](#)

Current Engagements and Contact Information

List any major existing customers for this solution:

- Air Force contracts for individual pieces:
 - ~\$1.2 million
- Local cloud commercial funding
 - ~\$800k

Provide Basic Company Contact Information:

- Company Website: <https://appliedres.com>
- Point(s) of Contact:
 - Patrick Benasutti, pbenasutti@appliedres.com
 - Wesley Sheppard, wsheppard@appliedres.com

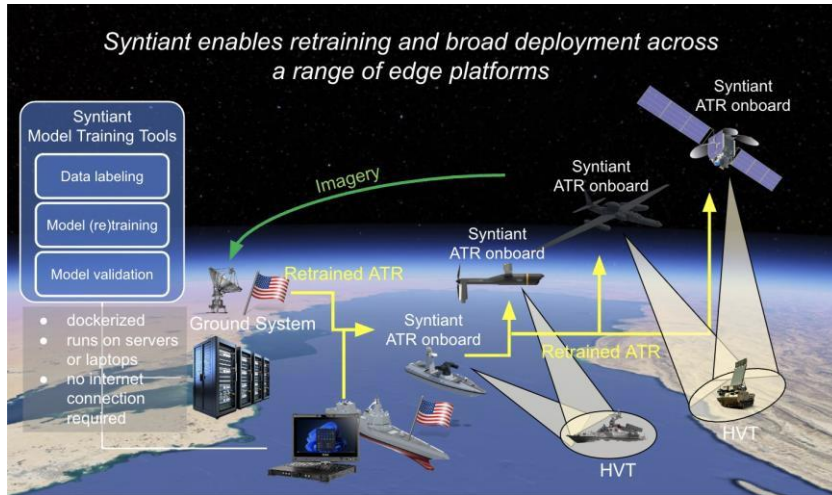
Solution Meeting Goals and Next Steps

- Which of the below pieces of ARSense are the most useful for customer needs?
 - ATR development
 - ATR integration
 - Synthetic Data Generation
 - Full Stack Deployment
 - Leverage modern AI and data with any ATR or input.
- Plans for transition would depend on customer needs of the above.
- Synthetic data generation and Generative AI for ATR development are key priorities, including direct to sensor synthetic generative concepts.



Syntiant

Syntiant Computer Vision & ML OPS for all Edge Systems



Current Engagements & Contact Information

Major existing customers for this solution:

- Department of Defense (DoD) funding
 - AFRL
 - USN (Overmatch) / DIU
 - OUSD R&E (RAMP-C)
- Commercial sector customers
 - Many (under NDA) - millions of devices shipped worldwide with Syntiant software including security cameras, smart home devices, and video conferencing equipment, all reliant on Syntiant ML OPS tools for support

Company Contact Information:

- Company Website: www.syntiant.com
- Point(s) of Contact: Ethan Wais | ethan@syntiant.com

Technology Description

- Syntiant's AI runs at the edge:
 - AI-based computer vision, optimized for low-SWaP edge sensors; Syntiant's AI models are compatible with a very broad range of compute (MCU, CPU, DSP, GPU, NN ASIC, FPGA, etc.), enabling platforms large and small, and even those with legacy compute
 - Small model size enables rapid distribution of retrained versions of the models to edge sensors across the network
- Syntiant ML OPS tools enable edge sensors:
 - Dockerized application provides standalone rapid retraining capability; can run on a cluster of servers or a single laptop
 - Rapid retraining (under 12 hrs.) improves detection accuracy and enables adaptation to new AORs and adversary actions to defeat the ATR
- TRL 6-9, depending on system component

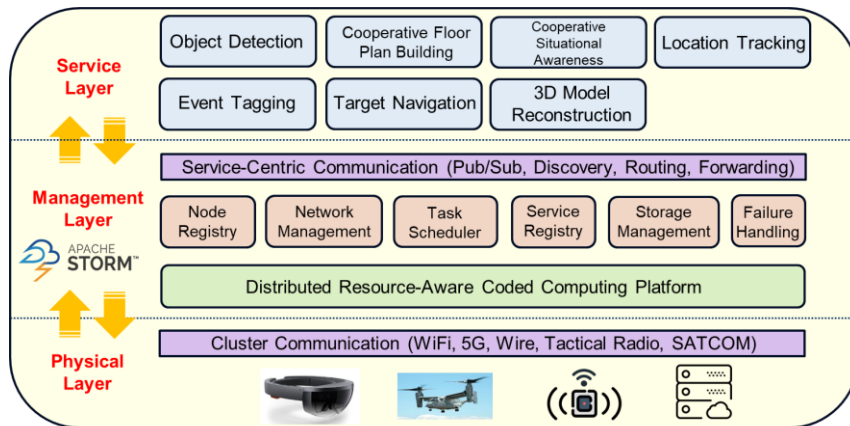
Solution Meeting Goals & Next Steps

- Goal at Solution Meeting: find development and transition government partners to aid in technology refinement (through feedback), testing and evaluation, and deployment opportunities
- Needs: participation in representative exercises for model and tool refinement, and obtaining relevant ATOs to make deployment easier across the DoD enterprise
- Development Roadmap:
 - text-based image search at the edge where users can describe in words what they are looking for, and the edge sensors return results matching those descriptions in real time
 - multi-modal AI models that fuse multiple sensor inputs, e.g., using RF in addition to EO/IR to improve threat characterization
 - TAK plugin (or equivalent) for easier deployment of models and simpler user interface with which to provide feedback to models



Intelligent Fusion Technology, Inc

Distributed Resilient Remote Sensing Platform



- Distributed, Resilient, Real-Time Sensing (DR2S) and Efficient Data Processing for Mission-Critical Environments

Technology Description

- DR2S platform leverages AI/ML and computer vision algorithms to enhance object recognition and cooperative perception across multiple domains, including ground, air, and maritime environments.
- DR2S platform seamlessly integrates with a wide range of sensors, offering efficient data processing capabilities while enhancing resilience and robustness against node failures and poor network conditions.
- A cooperative perception application integrated with Microsoft HoloLens, enabling comprehensive environmental sensing and seamless information sharing among team members for enhanced situational awareness.
- We propose deploying autonomous UAVs and ground robots equipped with 2D/3D cameras and additional sensors to detect and assess threats in hazardous or human-inaccessible areas.
- DR2S is currently at Technology Readiness Level 6

Current Engagements & Contact Information

Existing customers

- DR2S platform research and development efforts are mainly supported by US Army under SBIR funding contract No. W15P7T-21C-0001 and W51701-22-C-0058.

Company Contact Information

- Website address: <https://i-fusion-i.com/>
- Point of Contact (POC): Genshe Chen
- Email: gchen@infusiontech.com
- Phone number: Tel: 301 515-7261 (Office) 240 481-5397 (Cell)

Solution Meeting Goals & Next Steps

- **Goals of Solution Meeting:** Gain insights and feedback from potential government and industry partners to refine our platform's cooperative perception capabilities and explore use cases for object recognition and threat detection in various operational environments.
- **Maturing the Technology:** Further integration of advanced sensor modalities, such as EO/IR and LiDAR, along with optimizing AI/ML algorithms to improve real-time processing, scalability, and resilience in more complex scenarios and larger-scale deployments.
- **Plans for Future Development:** Develop autonomous task coordination between multiple UAVs, ground robots, and distributed edge nodes; enhance real-time analytics; and extended operational endurance in remote or hostile environments.
- **Transitioning the Technology:** Establish partnerships with military and emergency response agencies to conduct large-scale field tests, validate platform reliability in mission-critical scenarios, and prepare for transition into operational environments.