

BLUEHALO

• Intelligent Automation, a BlueHalo Company

IARPA WRIVA Lightning Talk
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Company Snapshot

BlueHalo is purpose-built to provide industry-leading capabilities in Space Superiority, Directed Energy, Air & Missile Defense, C4ISR, Cyber, and Intelligence mission solutions.

Intelligent Automation Inc. was acquired by BlueHalo in 2021.



Expertise and Experience

- AI / ML
- Deep Learning
- Sequence Modeling
- Simulation and Generative Modeling
- Trajectory-based Activity Detection and Analytics
- Multimodal Target Tracking
- Graph Modeling
- Cloud Engineering
- System Integration

Established record of R&D and transition. These include:

Ongoing programs (as Primes)

- IARPA SMART
- IARPA BRIAR
- Multiple NGA projects (Phase 2 and 3)
 - Image geolocation
 - Image quality assessment
 - Machine-assisted annotation
 - Cloud infrastructure development
- Multiple UAS programs from DHS, Army

Prior Programs

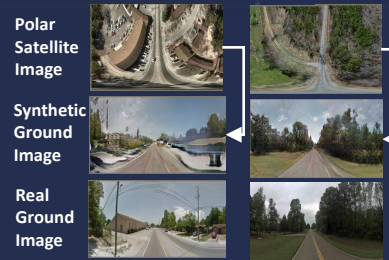
- ReconAR:
 - Scene modelling from UAV imagery
 - Augmented reality for mission planning and scene walk-through

Expertise and Experience

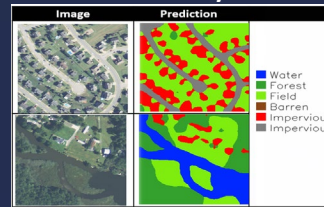
Core Capabilities Relevant to WRIVA

- GeoINT analytics: Image geo-localization, semantic modeling, pattern of life analysis, object detection
- AI/ML – Cross-view image synthesis, structure-from-motion, sensor fusion
- Proven records of delivering high-TRL solutions to customers

Satellite-to-ground Image Synthesis



GeoINT Analytics



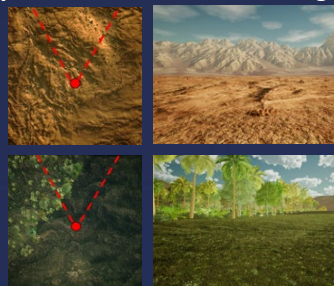
Teaming Relationships Sought for WRIVA

- We are seeking team members with expertise in:
 - Camera calibration and photogrammetry
 - 3D model reconstruction from imagery
 - Photorealistic texture-mapping of 3D models
 - Large area site-modelling
 - Radiometric calibration
 - Neural rendering

Differentiating Capabilities Relevant to WRIVA

- Procedural 3D simulation using satellite imagery, DEM, and OpenStreetMap
- Synthetic data generation using Unreal Engine
- Intelligent 3D model and scene reconstruction using satellite imagery
- Image geo-localization and retrieval
- AI-aided data annotation and visualization
- Augmented reality for mission planning

Synthetic Aerial / Ground Images



3D Scene Reconstruction



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