Counter-Unmanned Autonomous Systems

Innovation Forum

Carahsoft Conference & Collaboration Center

November 1, 2024

Agenda

- Introduction | MPS
- UAS Field Story | Emerging and Critical Needs
- Panel Discussion | Q&A
- Speed Capability Overview
- Lunch | Demonstrations

Program Guide

Carahsoft Delivers Value to Three Customers

1. Government Customers

2. Technology Partners & Manufacturers
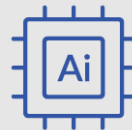
3. Reseller & Integrator Partner Ecosystem

Customer-Driven, Master Government Aggregator
Business Model

2024 Robust Solutions Portfolio

Logos: vmware, DELL Technologies, VERITAS, NVIDIA, f5, Adobe, SAP NS2 National Security Services, Red Hat, ATLASSIAN

splunk>, paloalto NETWORKS, Trellix, FORESCOUT, okta, Gigamon, RSA, Infoblox Next Level Networking, zscaler

aws, Google Cloud, Microsoft Azure, servicenow, salesforce, BROADCOM SOFTWARE, Akamai, MICRO FOCUS is now opentext, NUTANIX

tableau SOFTWARE, slack, box, zoom, DocuSign, ARMADA, solarwinds, Dedrone, UiPath

Cybersecurity	MultiCloud	FedRAMP Solutions	Open Source	DevSecOps	AI/Machine Learning	CX & Engagement	5G	Supply Chain
IoT	Geospatial	CMMC	Law Enforcement Tech	Mobility	Ed Tech	Healthcare Tech	Zero Trust	Hardware

Geospatial Solutions

Geospatial Solutions

Accela GIS Based Planning, Permitting & Building Solution	**aclima** Clean Air Innovators	**AECOM** Streamline Environmental Assessment & Community Engagement	**AeroCloud** Intelligent Airport Management	**AgileAssets** Transportation Asset Lifecycle Management	**AIRIA** Self-Learning Spatial Analytics Platform	**AIRWORKS** AI-Powered Software Processing Aerial Data	**ALTAIR** Transformative Mapping & Spatial Data Solutions
ARCADUS Empowering Efficiency with Advanced 3D Solutions	**AUTODESK** Computer Aided Design (CAD) & Simulation	**Ball** Aerospace Data Visualization	**Bentley** Advancing Infrastructure & Public Facilities	**CARTO** Cloud-Native Location Intelligence Platform	**chargepoint** Electric Vehicle (EV) Charging Stations	**chooch** AI-Powered Geospatial Intelligence Analysis	**Climate Engine** Global Insights for a Shifting Planet
CompassCom Automatic Vehicle Location & Mobile Resource Management	**CompassData** Improve Data Accuracy with GPS Archive	**Dantex** Empowering the Public Sector with Geospatial Data	**DIGITAL MAP PRODUCTS** Real Estate Analysis Solution	**elastic** Use Elastic to Create an End to-End Geospatial Workflow	**emesent** Drone Autonomy, LiDAR Mapping & Data Analytics	**EDB** Postgres Database for Geospatial Software	**e-PlanSoft** Compliance Software for Inspection & Assessment Processes
fm:systems Facilities Management Software	**GE Digital** Software and IIoT Services	**GeoNorth** Information Systems Satellite Imagery & Information Services	**GEOSITE** One API for All Geospatial Data	**GeoSolutions** One-Stop-Shop for Open Source Geospatial Software	**Google Maps** Toolkit of Google Maps Platform API's	**ike GPS** Mobile Asset Data Collection	**InfraMappa** Asset Mapping for Site Infrastructure
INTERMAP Digital Elevation & Surface Models	**KLEOS** Nano-Satellite Clusters Operating in Low Earth Orbit	**mapbox** Location Analytics & Geo-Productivity Platform	**MariaDB** Empowering Missions at Real-Time	**Matterport** Digital Library of Spatial Data and Information	**nearmap** Geospatial Information Services & Aerial Surveys	**ORACLE** Oracle Smart Construction Platform	**Orbital Insight** Delivering AI-powered Insights from the World's Sensors
plotly Unlock Geospatial Data's Power: Dash Enterprise	**Premise** Crowd Sourced Data to Empower Decision Making	**PROCORE** Digital Construction Management for the Public Sector	**PTFS** Empowering Content KnowvationGS Geospatial Content Services Platform	**Quantum** Ensure Data Availability & Durability	**SEERIST** Empowering Futures Through Insight	**Skyline** Multi-Platform 3D Visualization Software	**SPATIALGIS** DRIVEN BY DATA Mapping Insights & Guiding Decisions
spatialitics GeoSpatial Apps/Analytics Cloud Platform	**spire** Maritime & Aviation Geospatial Intelligence Data	**Swiftly** Public Transit Management Network	**TERRA PIXEL** Imagery Streaming Service & Terrain Database	**tomorrow.io** Cutting-Edge Weather Intelligence Solutions	**TOMTOM** Navigable Map Data & Traffic	**Trimble** Easy to Use 3D Modeling Software	**True Elements** We See Water Differently Clear Water Intelligence for Informed Decisions
TVU networks Live Video Transmission Equipment	**VARUNA** Geospatial Cloud Solutions for Resilient Water Systems	**VEXCEL** IMAGING Aerial Imagery & Geospatial Data Program	**voxelmaps** Building Accurate 4D Volumetric Model of the Earth	**WINDWARD** Power Your Organization With Maritime AI Maritime AI for Awareness & Risk Management Needs			

Autonomy & Robotics Technology

Autonomy & Robotics Technology					
	Intelligent & Autonomous Aerial Robots	Professional Drone Pilot Training	AI-Powered Software Processing Aerial Data	Unifying a Workforce of Autonomous Robots	Purpose-Built Scientific Aerial Platforms
	Improve Data Accuracy with GPS Archive	Smart Airspace Security	UAV & Drone Hardware, Software, Sensors & Services	Absolute Connection Confidence	Legged Robots Made for Unstructured Terrain
	Aerial Remote Sensing	American-Manufactured Drones	A Modern Approach to Mapping & Location Data	Transformative Aerial Intelligence	AI-Based Drone Inspection Software
	Visual Analytics at the Edge	Long-Range Aerial Asset Monitoring	IP-Based Live Video Solutions	Hybrid-Powered UAV & Piloted VTOL Solutions	Drone Services & Data Analytics for Infrastructure & Environmental

Government Markets We Serve

TECHNOLOGY PARTNERS
Software, Hardware, Cloud and Services Providers

GOVERNMENT CUSTOMERS
Federal CIV, DOD and Intel Community | State & Local Government | Education | Healthcare | Canada
NGOs and Non-Profits | Critical Infrastructure | Defense Industrial Base
End Users · Contracting Officers · Program Managers · Budget Managers · CIOs · GSA · ESI

PRIMES & SYSTEM INTEGRATORS

Internal Use	Gov't Program Use	Active Programs	Program Capture

Accenture · AT&T · BAE Systems · Boeing · Booz Allen Hamilton · CACI · CGI · Deloitte · EY · General Atomics · General Dynamics
HII · Jacobs · KBR · KPMG · L3Harris · Leidos · Lockheed Martin · ManTech · Maximus · MITRE
Northrop Grumman · Peraton · Raytheon Technologies · SAIC · SMX · Verizon

CLOUD ECOSYSTEM

AWS · Google Cloud Microsoft Azure · Oracle Contracts: JWCC, C2E, DC2	Cloud Advisory & Consulting	MSPs & Implementation Partners	FedRAMP & StateRAMP: ATO Accelerators & 3PAOs	Marketplaces: AWS · Google · Azure Salesforce · ServiceNow

MSP/SERVICE PROVIDERS
Slalom · StackArmor · Tekstream · MTX Group · NuHarbor · Vibrint · SpringML · Palantir

LARS/NATIONWIDE RESELLERS
Dell · CDW · SHI · Insight · Connection · WWT · Zones · Presidio

VARS
Agency-Focused · Technology-Focused · Vendor-Focused · Product Integrators · OMG Partners

CONTRACT VEHICLE VARS

FEDERAL	STATE & LOCAL	EDUCATION	COOPERATIVE
GSA · SEWP · 2GIT · ESI · ICITE OTAs · FSII · CDM · ITES · Alliant	CMAS · TX DIR · OH · NASPO COSTARS · OH STS · IN QPA · SLP	Internet 2 · The Quilt · E-Rate NJ Edge · OARNet · ONENet	OMNIA · NASPO · NCPA · GSA MD COTS · TX DIR · PEPPM Alliant

SOCIOECONOMIC STATUS
8(a) · MBE/WBE/DBE · Small Business · NHO · ANC · Native American-Owned · HUBzone
Veteran-Owned · Service-Disabled Veteran-Owned · Calif-DVBE · Calif-Small Business

c-UAS Mission Problem Statement (MPS)

Summary

○ **Detect, track, and neutralize** UAS threats

Overview

The growing threat of UAS at a global level requires **expedited solutions** to significantly **enhance the capability** of the DoD, federal intelligence community, and allied nations to effectively counter these threats. By fostering collaboration between all the parties, the initiative aims to enhance **situational awareness** and **operational effectiveness**.

Goals

○ Enhance Detection and Tracking Capabilities
○ Improve Situational Awareness
○ Foster Multinational Collaboration
○ Identify Advanced Sensors
○ Integrate into Command & Control Framework
○ Conduct US-based and Global Exercises
○ Operational Improvement
○ Promote Collaboration and Innovation

Solution Ecosystem Overview

Counter-UAS Mission
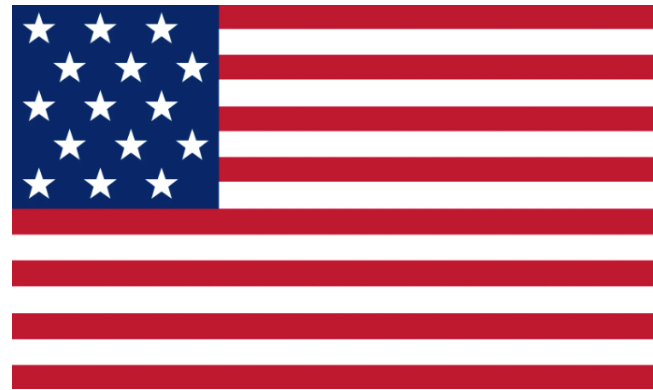
Scouting, Analysis & Coordination

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Solution Providers

ARMADA   Dedrone   SubUAS

FLARE BRIGHT   VANTIQ

Enablement

Goodman Technologies   PEGASUS   9 HI™   jtekdata solutions

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Solution Set Capabilities Coverage

Core Capabilities	Overall	Sub-Capabilities			
Detection					
Tracking & Classification					
Identification					
Neutralization					
Integration					
AI/ML					
Scalability & Mobility					
Legal & Ethical					
Resilience					
Allied Engagement					

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Work in Progress: Evolving Capabilities

◆ Swarm Intelligence Detection & Tracking

◆ Decentralized C-UAS Systems

◆ Drone-Specific Jamming Protocols

◆ Autonomous Defense Drones

◆ Advanced Directed Energy Solutions

◆ Swarm Simulation & Training

◆ High-Throughput Data Processing & Fusion

◆ Counter-Autonomous Drone Technologies

◆ Multi-Layer Defense in Depth

◆ Self-Learning C-UAS Systems

◆ High-Speed Kinetic Interceptors

Field Story: Emerging and Critical Needs

Chance Cole, Director
UAV Programs and Aeronautical Initiatives
Alethia Labs

Chance is a highly experienced professional with a Top-Secret clearance and over 20 years of leadership in Air Force Special Operations Program Management and Operations. Specializing in Unmanned Aerial Vehicles (UAVs).

He has over 16 years of personnel management experience and four years coordinating Combined Joint Air Domain Command and Control.

His strong networks with industry leaders such as General Atomics, Lockheed Martin, and SOCOM underscore his capability to lead UAV programs and advance aeronautical interests.

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Panel 2: Moving Innovation to the Left

Moderator

Nino "Typhoon" Marcantonio
Marcantonio Global

Mr. Stephen Moretto
NAVSEA S&T Leader

Dr. Kelvin Hamilton
Flare Bright

David V. Jones
Pegasys Defense Solutions

Dr. F. Javier Diez
SubUAS

Dr. Bill Goodman
Goodman Technologies

David Mroczka
AI Strategy Corp.

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Speed Capability Overview

"Dedrone's smart airspace security solution is the world's most trusted defense against the evolving drone threat."

https://www.dedrone.com

Rob Campbell | Jay Bienlien | Lauren Cunningham

"The world's leading organizations trust JTEK with their critical IT assets, benefiting from end-to-end solutions architected specifically to meet your needs."

https://jtekds.com
https://www.velos-solutions.com/

Jim Hathaway

https://www.armada.ai

Tony Schwarz | Adam Cooper

"Armada's products run on a common Commander platform, designed to solve the toughest challenges in the most remote locations."

https://nine-hi.com

David Mroczka

"9-HI is a Patent Pending new technology that provides Human-AI collaborative Decision Guidance to achieve greater success in commercialization."

Thank You

Thank you to Craig and the Carahsoft team (Corey, Seidy, Lauren, Lacey, Steve), with special shoutout to Bry and the events team!

Working Lunch: Exhibits & Demos

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