

SPECIAL OPERATIONS FORCES ACQUISITION, TECHNOLOGY, & LOGISTICS

PROGRAM EXECUTIVE OFFICE SOF DIGITAL APPLICATIONS OVERVIEW

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PROGRAM EXECUTIVE OFFICER, SOF DIGITAL APPLICATIONS



AGENDA

- Overview
- Digital Transformation
- PMO Briefings
- Getting Connected
- Questions

PEO-SOF DIGITAL APPLICATIONS



PEO SDA
COL Leilani
Tydingco-Amarante



DPEO SDA
Mr. Robert Mathews



PM SOF DE
Mr. Christopher Yates



PM INTEL
Mr. Rob McClintock



PM SOF MC
Mr. Chad Raaymakers



PM USAI
LtCol Aaron Davidson



**Sr Business
Finance Manager**
Ms. Jennifer Abraham



Chief Engineer
Mr. Chris Morrison



**Information Systems
Security Manager**
Mr. Chris Parker

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PEO-SOF DIGITAL APPLICATIONS

MISSION:

Deliver Innovative, Relevant, Dependable Special Operations-Peculiar Software and Data Capabilities for the SOF Warfighter to Achieve Information Dominance And Win In A Joint Force Environment



VISION:

Trusted Experts for Interoperable Software and Data Solutions

Digitally accelerating the kill chain

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INTEGRATED SOFTWARE SOLUTIONS



Trusted experts for interoperable software and data capabilities

CHIEF ENGINEER



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AREAS OF INTEREST

INFRASTRUCTURE & DEPLOYMENT

- **Configuration Management:** Cross-platform and hybrid, integrated CM solutions (e.g., iLO to Helm charts)
- **Test Automation:** automated testing and test-to-failure solutions.
- **Fog Computing:** Processing and inference close to the edge; data fusion.
- **Full-stack Observability:** Cloud to edge continuous, hybrid monitoring solutions.

DATA CENTRICITY & INTEROPERABILITY

- **Data Centric Security (DCS):** ZTDF and ACP-240-compliant implementations; lightweight DCS on edge devices (e.g., UxS).
- **Ontology Layer:** Enable seamless multi-ontology compatibility between multiple backends.
- **Hardware-in-the-Loop (HITL):** Integrate DevSecOps and MLOps with HITL testing.

AI IMPLEMENTATION & SUPPORT

- **Augmenting Knowledge Representation:** solutions to augment messages with semantics and ontological information.
- **Agentic AI:** Protocols, design patterns, and best practices implementation.
- **Autonomous Behavior:** Multi-domain solutions and UxS platform agnostic solutions.
- **Mission Autonomy:** UxS compliant with Rules of Engagement, Airspace Coordinating Measures, etc.

SDA FOCUS AREAS

Open Systems Architecture

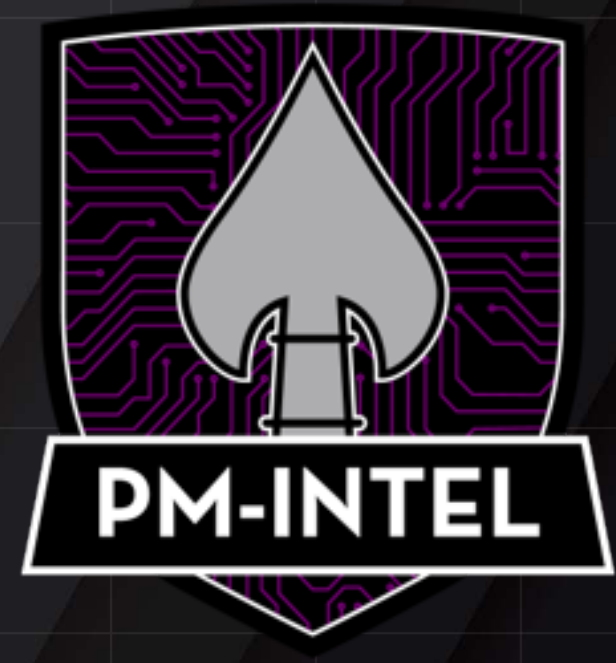
Cloud and Edge Runtime & Platform Independence

Data-Centricity & Data Virtualization

Apps (& AI models) from Cloud to Edge

Ops/Intel Fusion (COP/CIP)

PROGRAM MANAGER INTELLIGENCE



INTEL: DESCRIPTION

- **PM-INTEL PORTFOLIO CONSISTS OF 3 BRANCHES:**

- Enterprise All-Source Information Fusion (ENT/ASIF): ENT/ASIF provides interoperable All-Source Information Fusion at all SOF echelons connecting Intelligence and Operations analysts to data sources in an advanced analytical tools environment used to produce the “common intelligence picture” in support of situational awareness for planning and executing of SOF missions.
- SOF Geospatial Intelligence Imagery Processing, Exploitation and Dissemination (SGIP): SGIP supports both near-real time actionable reporting and visualization requirements in Garrison, & Forward locations , as well as a collaborative & coordinated process for SOF Intelligence, Surveillance, Reconnaissance (ISR) cycle functions.
- Integrated Survey Program (ISP): ISP surveys and produces detailed tactical planning data of all key US Diplomatic facilities and select vessels, ports & harbors and supports National requirements under CJCS CONPLAN.

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INTEL: STATUS

- **ENT/ASIF** is in the Execution phase of the Software Acquisition Pathway and uses a modular open system architecture strategy and an agile software development framework
 - Agentic Artificial Intelligence (AI) & Machine Learning (ML) tools
 - Mission Partner Sharing (MPS) tools
 - Training/Global System Engineers
- **SGIP** is a Major Capability Acquisition currently post Milestone C
 - Lockheed Martin is the Life Cycle Sustainment Manager for the program
 - Relies on GOTS/COTS Software and Hardware
 - Extend Capital Equipment Replacement schedules when practical
- **ISP** is a Major Capability Acquisition, currently post Milestone C
 - Relies on GOTS/COTS software and hardware
 - Currently on the final year of a 5-year Production & Development Other Transaction Agreement

INTEL: AREAS OF INTEREST

- **ENT/ASIF**

- Agentic Artificial Intelligence and Machine Learning OPS Enhanced Information Fusion
- Mission Partner Sharing
- Common Intelligence Picture/Interoperable Data Layer

- **SGIP**

- Processing, Exploitation and Dissemination (PED) Video at the Edge
- Establishing Motion Imagery Standards Board (MISB) for surface and subsurface PED

- **ISP**

- Leverage COTS Mobile collection technologies in support of geospatial survey collection, production, and dissemination in a disconnected environment
- CRADA opportunities to use Artificial Intelligence and Machine Learning tools to reduce physical survey collection requirements
- Plug-ins to TAK devices

- **All Three Programs**

- Address Cybersecurity concerns, supply chain issues
- Rely heavily on feedback & inputs from Users to meet requirements
- Operate in disconnected, intermittent, low bandwidth environments
- Participate in Technical Experimentation and Exercise Events

Program Manager
SOF Mission Command



SOF MC: DESCRIPTION

- **Combined portfolio of MCS/COP and SOMPE programs of record**
 - Tackling same problem: data flow between echelons
- **Still a System of Systems providing SOF Situational Awareness and advanced insights for more effective decision making from tactical to strategic echelons**
 - Advanced geospatial interfaces that visualize the Command's data in a multitude of ways
 - Backend data and application architecture that takes hundreds of thousands of data points on a map and creates context from an abundance of content
 - Providing SOF-peculiar data to the Joint Force through interoperable architectures

Plus:

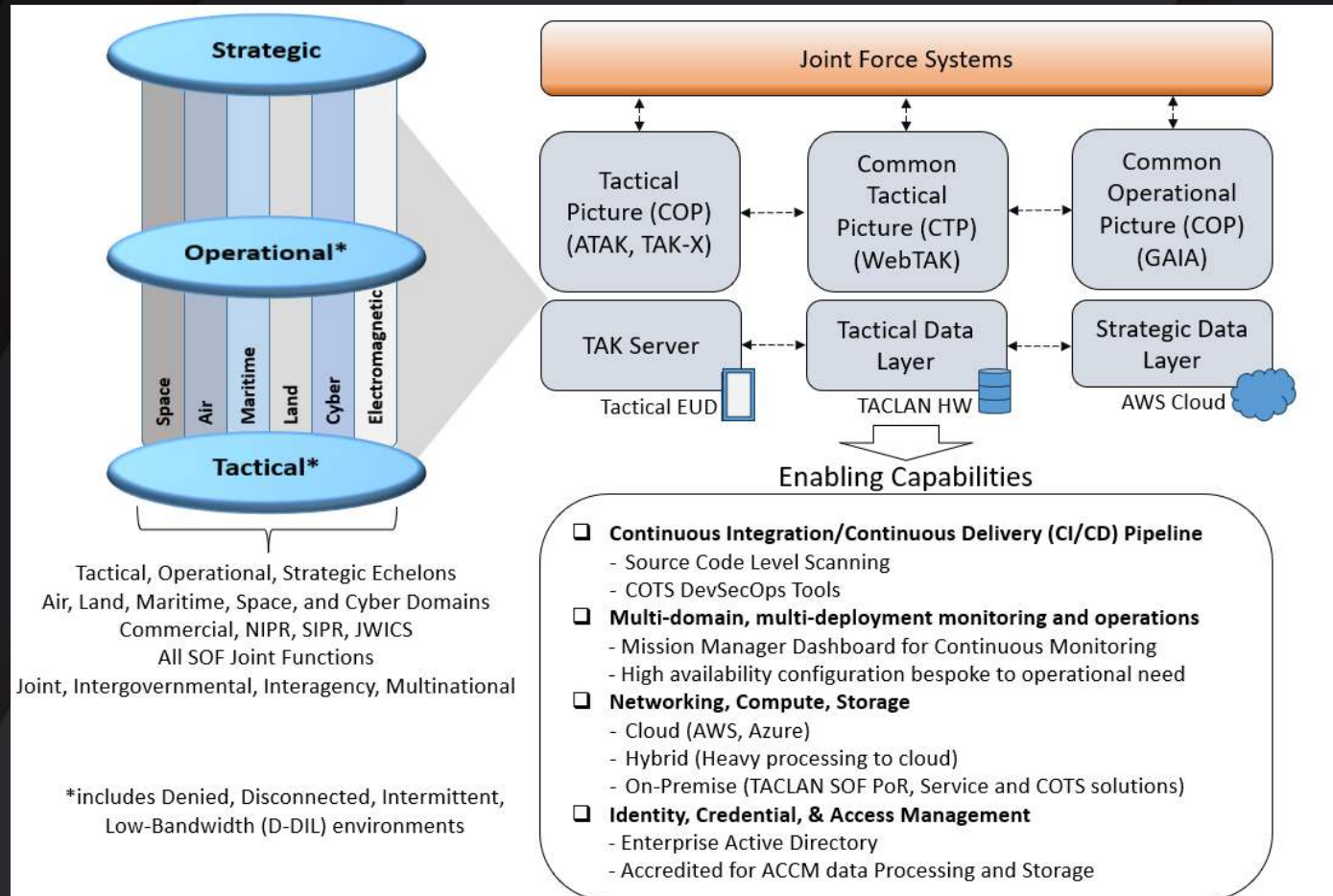
- **Air Mission Planning and Execution**
 - Air Mission Planning (Nyx)
 - Replacing legacy ARSOAC software with modern software that emphasizes user centered design
- **Tactical Mission Planning and Execution**
 - Largely Ground and Maritime via TAK based capabilities
 - Gov't Owned Software
 - SOF-peculiar TAK plug-ins
 - Tactical edge data routing and sharing

MCS/COP - Mission Command System / Common Operational Picture
SOMPE – Special Operations Mission Planning and Execution

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SOF MC: STATUS

- Operational deployment of core capabilities across SOF Enterprise
- Codification of deployment "flavors" to enable tailor-ability and repeatability
- WebTAK OASIS deployments, expansion of features and partners (USA, USMC, USCG, TAK Product Center)
- Hardened security posture; implementing C-ATO w/Source code scanning included



SOF MC: AREAS OF INTEREST

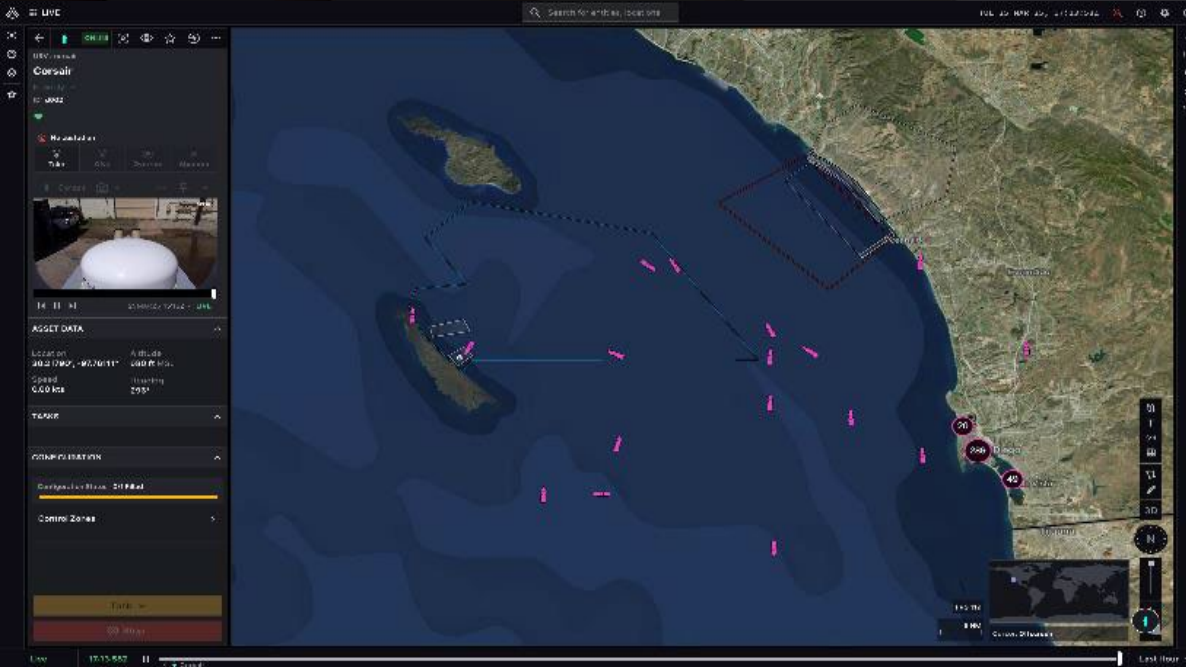
- **WebTAK OASIS And TAK Plug-in development**
- **Generative AI for reduction of operator cognitive burden across all echelons**
- **Down domain capabilities**
- **Automated "smart" data routing**
- **TAK Plug-ins integration with higher echelon data sources/Common Operational Picture (COP) tools**
- **Applications to integrate data from other SOCOM/Joint Force programs**
- **Capabilities to enable scalability to resolve TAK-server saturation issues**
- **Strategies for inference at the edge**
- **Software Applications need to be:**
 - Highly Available
 - Secure from the outset (CVE Remediated), if already ATO'd – great, show us the documentation
 - Platform Agnostic
 - K8s Ready with Helm Charts
 - User friendly, minimal advanced training required

**Program Manager
Unmanned Systems
Autonomy & Interoperability**



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UxSAI: DESCRIPTION



- Develop collaborative autonomy software utilizing artificial intelligence (AI), machine learning, and enterprise architecture to significantly improve SOF manned / unmanned teaming at the tactical edge
- Maximize the ability of UxS to broaden the kill web, shorten the kill chain, and enhance capabilities for command and control, communications, computing, cyber, intelligence, surveillance, reconnaissance, and targeting
- Provide the software infrastructure, capabilities, and accreditation process for the deployment of software at the speed of relevance

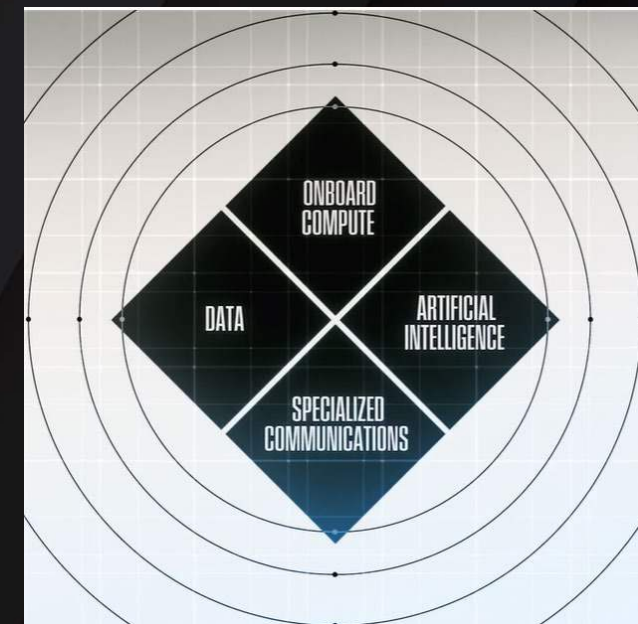
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UxSAI: STATUS

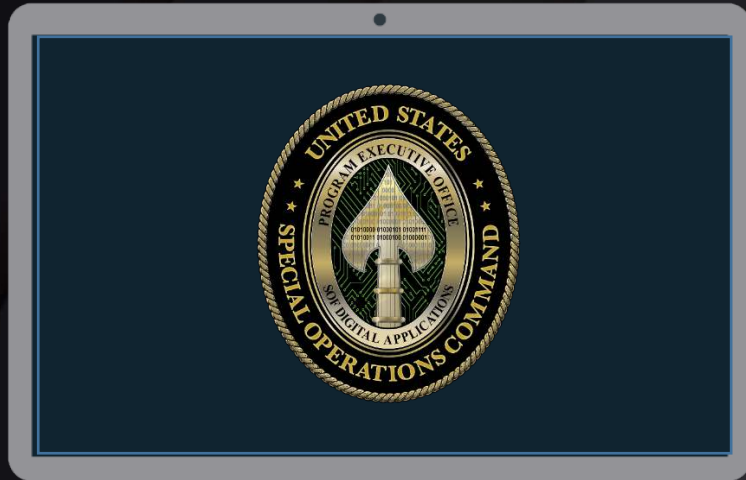
- **Partnered with Industry, Academia, FFRDCs, and Warfare Centers**
- **Entered Execution phase of the Software Acquisition Pathway**
 - 3-pronged development strategy
 - Establish the Foundational Core Architecture
 - Deliver Incremental Capabilities via Spirals
 - Cultivate a Competitive Ecosystem
- **FY26 focused on:**
 - ISR-Targeting Delivered to Capability Sponsor
 - Digital Engineering Environment
 - Machine Learning Operations pipeline
 - Collaborative Heterogenous Autonomy Operations Software (CHAOS)
 - Government-owned software baseline
 - Promotes open competition by third-party developers
 - Able to change at the speed of relevance

UxSAI: AREAS OF INTEREST

- Modular open systems architectures to enable growth and interoperability
- Modeling and Simulation
- AI Test & Evaluation
- Collaborative autonomy executed by multiple unmanned systems to perform an ISR-T mission
- Multi-platform MLOPS capability
- Automatic target resolution MLOPS (edge perception) software solutions
- Onboard computing for edge-based intel processing



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GET CONNECTED



- Engage SOF on Vulcan
- USSOCOM Small Business Office
- TAK.gov
- USSOCOM S&T BAA
- SOFWERX
- Exercise & Experimentation Events
- SDA Vendor Capability Form

SOF WEEK PEO-SDA Vendor
Capability



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QUESTIONS



Contact:
USSOCOM SOF AT&L,
Engage SOF (eSOF) /
VULCAN,
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DOING BUSINESS WITH SOCOM

Office of Small Business Programs (Will engage with companies of any size!)

First stop for questions, concerns, or assistance

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Engage SOF (eSOF) on Vulcan

Pathway to present SOF relevant capabilities to USSOCOM

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<https://www.engageSOF.com>

<https://www.Vulcan-SOF.com>

SOFWERX

Unclass, open forum partnering with industry to solve Warfighter problems

<https://www.sofwerx.org>

TECHNICAL EXPERIMENTATION

<https://www.socom.mil/SOF-ATL/Pages/technical-experimentation.aspx>

