# AF Acquisition Track - Agenda

## Industry Day

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<td>Cyber Program Opportunities</td>
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OVERALL CLASSIFICATION FOR THIS BRIEFING IS UNCLASSIFIED

Classified Data At Rest (CDAR)

Dennis Becker
Cryptologic and Cyber Systems Division
**Classified Data At Rest (CDAR)**

**Description/Background**

- Classified Data at Rest (CDAR) must be protected with NSA approved encryption when physical protection is not adequate.
- AF users have been unable to implement CDAR solutions, indicating capability gap exists.

**System Capability**

- Inline Media Encryptor (IME) with interface agility that provides war-fighter platforms an enterprise solution to protect at-rest data that is operationally exposed to hostile or uncontrolled environments.

**Specifics**

- **Requirements Basis:** Crypto Mod (CM) ICD Mar 11, ICD; CNSSD 502, DODI 8523.01; CJCSI 6510.02E, CNSSP 15
- **Contractors:**
  - No contracts have been awarded to-date

**Warfighter Benefits**

- Renders classified data at rest unusable if compromised
- NSA Type-1 certified
- Common solution(s) – one size fits many
- Adaptable interfaces support different data storage architectures

**Development Planning Phase**
Potential Industry Opportunity

• Description:
  – Crypto development:
    • In-Line Media Encryptor
    • High throughput over a single channel
    • Size, weight and power (SWaP) constrained
    • Interface Agility

• Anticipated Schedule:
  – Development FY19-FY21
  – Production/Fielding: TBD

• Anticipated Contract: FIA2T

• Anticipated Procurement Approach: TBD
Open Discussion/Questions

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Mini Crypto (MC) Program

Heidi Beason
Cryptologic and Cyber Systems Division
The Tactical Dilemma

• Unmanned systems and sensors supporting tactical operations need secure communications
  – Command and Control (C2)
  – Data

• Traditional cryptographic devices require special support equipment and special handling
  – Increases system weight
  – Burdens tactical users with complex logistics
  – Strict NSA handling requirements - issues arise if lost or stolen

• Creates additional complications when tactical operations involve coalition forces
The Solution – Mini Crypto
Revolutionary Embeddable Crypto Chip

- **“Lose-able” Cryptographic High Value Product (CHVP)**
  - Self-generated keys vs. NSA key material
  - NSA approved protection for SECRET and Below data
  - Utilizes unclassified PKI certificates

- **Smaller Logistics Footprint**
  - Less Key mgmt support equipment = less weight and more room for mission-related equipment
  - No pre-placed Key required
  - No maintenance requirement

- **Simplified Operation**
  - Supports “Coalition of the Day” - Ability to add/block members
  - Warfighters do not have to place themselves in harm’s way to retrieve or re-key Mini Cryptos
One Size Fits Many
Designed for Small Systems, Relevant to Larger Platforms

EOD Robots

Smart Munitions

Situational Awareness
Unmanned Vehicles

Radios

Chem/Bio and Security Sensors

Precision Air Drop
Program Status
Supporting the Warfighter, Revolutionizing Crypto

- MC EMD Contractor, ViaSat, **successfully passed** Qualification Testing and Security Verification Test
- Coordinating with multiple programs from multiple services
  - AF, Army, Navy embedment activities underway
- **Successful demonstration** of MC by Air Force Civil Engineering Center
- Currently in Low Rate Initial Production
- Central procurement by CCSD allows reduced per unit cost
Potential Industry Opportunity

• **Description:**
  – Mini Crypto can be embedded into a wide variety of unmanned systems, radios, and sensors
  – Mature documentation available for integration
  – Integrator support available – “art of the possible”

• Limited number of MC production units can be provided FREE to AF programs and Joint programs with AF participation

• Additional units available for other DoD and Government organizations

Looking to work with Industry on Embedment Ideas
Open Discussion/Questions

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Remote Control Units (RCUs) Modernization

Daryl Banks
Cryptologic and Cyber Systems Division
Remote Control Units (RCUs) Modernization

**System Capability**

- Provides remote control capability for VINSON/ANDVT end cryptographic units (ECU)
- Support secure voice/data transfer
- Provides form/fit replacement and backwards compatibility with legacy devices

**Description**

Permanent sustainment modification to deliver modernized VINSON/ANDVT remote control units (RCUs) to replace legacy devices

**Specifics**

- **Requirements Basis:** Air Force Form 1067; Permanent Sustainment Modification
- **Contractor:** TBD

**Warfighter Benefits**

- Secures voice communications on aircraft, ships and ground fixed platforms
- Enables crew members to remotely control out of reach cryptographic units
- Improves sustainment of RCUs used by DoD and FMS
- Potentially reduce RCU types across DoD
- Addresses Obsolescence

*RCUs for Airborne/Shipborne devices of interest*
Potential Industry Opportunity

- **Description:**
  - Remote Control Units (RCU) Modernization of Legacy RCUs supporting VINSON/ANDVT End Cryptographic Units
  - Development and Production of multiple RCU variants supporting 80+ platforms across DoD and FMS customers

- **Anticipated Schedule:**
  - Development and Production efforts: FY19-24

- **Anticipated Contract:** Increment 1: FY19; Increment 2: FY22

- **Anticipated Procurement Approach:** Incremental, Single Step Acquisitions
Open Discussion/Questions

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Crypto Modernization 2 (CM2)

Michael Fitzpatrick
Cryptologic and Cyber Systems Division
Crypto Modernization 2 (CM2)

Description / Background
- CM2 extends the original Crypto Mod activity to modernize or develop crypto equipment to address current and future threats

Key Activities
- Analysis of AF crypto devices affected by threats
- Determine AF mitigation strategies, implementation tactics, monitor compliance, and track & report migration
- Execute modifications to fielded equipment and develop cryptographic solutions to address threats

Warfighter Benefits
- Long-term, evolving protection of AF airborne platforms and most terrestrial networks
- Enhanced security for the majority of AF voice, data, and video capabilities on the battlefield and throughout the DoD enterprise
- Enable the integration of new capabilities to AF users through development of a new DoD Crypto Mod Initial Capabilities Document (ICD)

Specifics
- Requirements Basis: CM ICD (25 Mar 11), Joint CM2 ICD (in-work)
- Major Customers: All Combatant Commands, Services, AF MAJCOMs, UCCs, Intelligence Community Partners
- Contractors: No contracts have been awarded to-date
- External AF Interest: DoD CIO, NSA
Potential Industry Opportunity

- **Description:**
  - Studies and Analysis
  - Tech maturation and risk reduction – multiple prototyping efforts

- **Anticipated Schedule:**
  - Studies/analysis and Prototyping efforts: FY18/19
  - Development: FY20 and beyond

- **Anticipated Contract:** TBD

- **Anticipated Procurement Approach:** TBD

Programmatic and Acquisition Planning in Early Stages
Open Discussion/Questions

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Unified Platform (UP)

Audrey Onweller
Cryptologic and Cyber Systems Division

DISTRIBUTION A. Approved for public release: distribution unlimited.
Purpose/Agenda

• Provide an overview of the Unified Platform (UP) Initiative

• Provide insight into current UP industry opportunities

• Provide insight into future UP industry opportunities
Cyber Mission Threads & Unified Platform

- Platform, access, & payload link to provide cyber effects
- Modularity allows for agile operations via tailored mission threads
- Framework provides standard interface and bridging for existing/future cyber weapon systems

Deliver incremental Unified Platform capabilities to the Joint warfighter
UP Capability Delivery Roadmap

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<td>Transitional</td>
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<td>Prototype</td>
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<td>Integrate</td>
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<td>Connect disparate capabilities</td>
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<td>Deliver Joint capability</td>
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<td>Connect additional disparate capabilities</td>
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<td>Enhance with new functionality/capabilities</td>
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<td>UP Cyber Factory</td>
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<td>Continuous expansion of capabilities, user base, and interoperability</td>
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<td>DevSecOps</td>
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<td>Product support</td>
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UP Cyber Factory – Capability delivered at the speed of need
UP Program Strategy
Key Government and Industry Players

System Coordinator (Contractor)
- Integration
- Leave Behind Capabilities
- Training
- Agile
- Coordinating Efforts
- Fielding
- Initial Capability Support

System Integrator (Govt)
- UP PMO*
- Intel
- Program Team
- Cyber Operators
- Product Team
- CT / DT / OT
- Security Assessments
- Interoperability Testing
- Interface Standards
- RMF

Third Party Independent Tester (Govt)
- Cooperative Assessment
- Adversarial Assessment

Development “Services” (Third Party Developers)
- Planning
- Generation
- Command & Control
- Visualization
- Reporting
- Execution
- Assessment

UP Program Strategy
Key Government and Industry Players

Developers/Customers

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Current Industry Opportunities

- **UP System Coordinator Task Order**
  - Award date: 26 Oct 2018
  - Period of Performance: 1 Base with 2 Option Years
  - Scope of work:
    - Facilitation and Synchronization
    - Scaled Agile Framework Implementation
    - Management of Development, Integration and Production Environments
    - Training
    - Testing
    - Deployment
    - Product Support
    - Limited Development
Current Industry Opportunities

• Responsive Cyber IDIQ Contract
  – AFLCMC/HNC currently in the process of:
    • Raising ceiling
    • Extending period of performance additional 7 years
    • On-boarding companies in addition to current incumbents
    • Anticipated Completion: Nov 2018
  – Future UP requirements will be awarded under this IDIQ:
    • Provide scalable development teams
    • Enterprise Services
    • Application Development
    • Anticipated Award: Jan 2019
On the Horizon

• Future UP-related opportunities may include:
  – Responsive Cyber IDIQ
  – Other Transaction Authorities (OTAs)
  – Blanket Purchase Agreements (BPAs)
  – Small Business Opportunities
  – Other existing contracts
Open Discussion / Questions

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Questions
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Joint Cyber Command & Control (JCC2)

Veronica Quinonez
Cryptologic and Cyber Systems Division

Providing the Warfighter’s Edge
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Joint Cyber Command & Control (JCC2)

**Warfighter Benefits**

- Provides situational awareness and battle management of Joint Services Cyber Mission Forces (CMF) at the operational (Cyber Joint Force HQs) and strategic (Combatant Command) levels of war
- Provides mission mapping, adversary awareness, and fusion and visualization across all network
- Supports CCDRs in rapid planning and Course of Action selection

**Description**

Joint Cyber C2 provides Situational Awareness and Battle Management (BM) for cyberspace operations missions and forces

**System Capabilities**

- Enhanced situational awareness (SA)
- Rapid planning and course of action selection
- Unified direction of cyber forces for synchronized ops with full spectrum joint, coalition, and interagency operations
- Actionable monitoring of forces

**Specifics**

- **Requirements Basis:**
  - Capability gaps, which inform requirements, are derived from Service and Combatant Command requirements documents
  - Cyber Situational Awareness – ICD (2012)
  - Evaluation of Alternatives (EoA) Phase I (2014)
  - EoA Phase IIB (Aug 2017)
  - JCC2 IS-ICD (In coordination)

- **Contractors:**
  - No contracts have been awarded to-date
Potential Industry Opportunity

**Description:**
- JCC2 will focus on development of capabilities FY20+
- Partnership with industry to leverage their R&D investments
  - Battle Management technologies
  - Cyber Battlespace & Situational Awareness for C2 Nodes
  - C2 Hosting & Transport

**Anticipated Schedule:**
- Prototyping efforts: FY 19-22
- Development: Late FY19 and beyond

**Anticipated Contract(s):**
- FY19 OTA/BAA prototyping, ID/IQ, other TBD

**Anticipated Procurement Approach:** Seeking 804 designation

Programmatic and Acquisition Planning in Early Stages
JCC2 Capability Delivery Roadmap

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**Rapid Prototyping (Alpha)**

**Capability Development/Modifications**

- Battle Management
- Battlespace & Situational Awareness
- C2 Hosting & Transport

**Capability Enhancement**

- Enhance with new functionality/capabilities

**Emerging Alternative**

- JCC2 Cyber Factory
- Continuous expansion of capabilities, user base, and interoperability
- DevSecOps

*Notional Roadmap*

As of Oct 18
Open Discussion / Questions

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