Special Operations Forces

Industry Conference

Product Line Manager - SIGINT

SPECIAL RECONNAISSANCE, SURVEILLANCE, AND EXPLOITATION
Joint Threat Warning System (JTWS)

- Signals Intelligence (SIGINT) And Precision Geo-Location For Ground, Air, And Maritime Applications

### Acquisition Strategy
- Spiral Development And Evolutionary Technology Insertions

### Period of Performance
- In Sustainment, Continuous Capital Equipment Replacement

### Funding
- FY12: $72.2M
- FY13: $62.8M

### Milestones
- Post-Milestone C, Sustainment And Capital Equipment Replacement

### Current Contract/OEM
- Multiple - Contact TILO

### Point of Contact
- (813) 826-7486
SIGINT Product Line Manager

Responsibilities

• Develops, Integrates, And Tests SIGINT Solutions For Users
• Provides Technical Conduit Between Users And Programs of Record
• Maintains SIGINT Capability Based Assessment Of Current Operational Systems
• Collaborates With Users To Forecast Technology Requirements
• Continuously Surveys The Market To Monitor State Of-The-Shelf Technologies
Technology Areas of Interest

• Improved Direction Finding (DF) And Geo-location (GEO) Antenna Arrays (Airborne/Maritime/Mobile/Body Worn)
• Networked Tactical SIGINT Systems
• Lightweight, Adaptable Tactical SIGINT Systems
• Exploit Modern Communication Systems
• Unmanned Aerial System Payloads
What We Need From Industry

• Improved DF and GEO Antenna Arrays
  • Current State Of The Technology
    » Bulky, Narrowband, Limited-Accuracy DF Antennas
  • Ongoing Efforts
    » Phased Array And Beam-Steering Antennas; Body-Wearable DF
  • Where We Want To Be
    » Wideband High-Gain Antenna Systems; Flexible Multi-Platform High-Accuracy DF And GEO Antenna Systems; Body-Wearable, Concealable DF Antennas; All-Azimuth/Elevation
• Potential Game Changers
  » Phase-Coherent DF Systems; Beam-Steering Antenna Design; T/FDOA Signal Measurements
What We Need From Industry

• Networked Tactical SIGINT Systems
  • Current State Of The Technology
    » Techniques For Collaborative DF And Geo-Location Operations
  • Ongoing Efforts
    » Networking Concepts And Devices To Communicate Between Tactical SIGINT Operators

• Where We Want To Be
  » DF And Geo-Location Of Signal Sources Using All Available Overhead, Air, Maritime And Ground SIGINT Assets

• Potential Game Changers
  » Lightweight VHF-UHF Mesh Networking Radios; Miniature Communications Devices; JICD 4.0 Collaborative Geo-Location Messaging; Time/Frequency Difference Of Arrival (T/FDOA) Sensors; Geo-Location Algorithms
What We Need From Industry

• Lightweight, Adaptable Tactical SIGINT Systems

• Current State Of The Technology
  » Heavy, Power-Hungry, Inflexible Products; Focused Use

• Ongoing Efforts
  » Reduce Equipment Size, Weight And Power (SWAP);
    Expand Platform Integration; Versatile HW/SW

• Where We Want To Be
  » Common Low-SWAP Adaptable SIGINT Equipment

• Potential Game Changers
  » Miniature T/FDOA-capable Receivers; Versatile Antenna
    “Toolkits”; Low-Profile And Body-Wearable DF Antennas;
    Flexible Industry-Standard Equipment Interfaces And
    Software Applications
What We Need From Industry

• Exploit Modern Communications Systems
  • Current State Of The Technology
    » Collection, Exploitation Of Current Communications Signals
  • Ongoing Efforts
    » Develop Collection And Exploitation Techniques For New Emerging Systems
  • Where We Want To Be
    » Worldwide Collection And Exploitation Of Advanced Communications Systems
  • Potential Game Changers
    » Advanced Signal Processing Algorithms; Demodulation And Decryption Techniques; Versatile, Wideband Tactical SIGINT Systems
What We Need From Industry

- Unmanned Aerial System Payloads
  - Current State Of The Technology
    » One Platform Payloads, Inflexible Products; Focused Use
  - Ongoing Efforts
    » Reduce Payload Size, Weight And Power (SWAP);
      Expand Platform Integration; Versatile HW/SW
  - Where We Want To Be
    » Common Low-SWAP Adaptable SIGINT Equipment
    » Same Payload That Is Adaptable Across Multiple Platforms
- Potential Game Changers
  » Miniature T/FDOA-capable Receivers; Versatile Antenna
    “Toolkits”; Integrated SIGINT & FMV payloads
Questions?