



Disrupter Event

20-22 May 2019

Capability Submission Deadline: 3 April 2019

www.sofwerx.org/disrupter

On 20 – 22 May, SOFWERX, in collaboration with USSOCOM, will host a Disrupter event designed to rapidly evaluate and acquire effective solutions relevant to the specific Technology Focus Areas (TFAs) enclosed in the packet below. **NOTE: This Disrupter event will occur at the Tampa Bay Convention Center during the Special Operations Forces Industry Conference (SOFIC).**

What is a Disrupter Event? A Disrupter Event is a multi-phased, competitive opportunity focused on showcasing the most disruptive and transformational technologies/capabilities for Government Stakeholder review.

Why Should You Participate? USSOCOM seeks to enter into non-FAR based agreements with industry partners whose solutions are favorably evaluated by USSOCOM TFA subject matter experts. As such, this event is considered competitive in the same manner as a Broad Agency Announcement (BAA) or Commercial Solutions Opening (CSO), and solutions will be evaluated independently of one another primarily for technical merit.

The Three Technology Focus Areas for this event are:

- 1) Artificial Intelligence/Machine Learning/Robotic Process Automation (AI/ML/RPA)
- 2) Hyper Enabled Operator (HEO)
- 3) Next Generation Imagery, Surveillance and Reconnaissance (ISR).

Please see the enclosed packet and www.sofwerx.org/disrupter for details.

TFA 1: Artificial Intelligence, Machine Learning, & Robotic Process Automation

Categories of AI, ML, RPA Sought:

- a) Cognitive problem-solving software or techniques
- b) Emotional intelligence applications
- c) Social intelligence applications
- d) Adaptive virtual assistants
- e) Power efficient chips & solid-state circuits designed to influence AI
- f) AI enhanced smart phones, man portable devices, and/or AI enhanced apps used on existing devices
- g) Self-supervised learning capabilities
- h) Predictive analytical tools that can rapidly assess data for confident decision making
- i) Speech translation tools
- j) Simulations and cognitive modelling assessment tools
- k) Autonomous or cognitive man-machine capabilities for drones, vehicles and robotics platforms.
- l) Tools and/or techniques that reduce cognitive workload
- m) Other

That Can Be Applied Against:

- MISO/WebOps
- Predictive Maintenance
- Warrior Mental/Physical Health and Safety
- Cyber Protection & Resilience
- SOF Recruiting and Talent Management
- Logistics Planning and Forecasting
- Vendor, Contract, Budget Management
- Travel & Expense Fraud
- JIPOE of Threats/Risks for Planning and Operations
- Partnered/Indigenous Force Operations

Leveraging:

- **Perception**
 - Computer Vision
 - Speech Recognition
 - Document Analysis
 - Signals Analysis
- **Reasoning**
 - Natural Language Processing
 - Recommendation Engines
 - Knowledge Graphs
- **Acting**
 - Autonomous action, navigation, and movement

TFA 2: Hyper Enabled Operator

Regarding technology: HEO is the application of individual-centric technology to enable battlefield dominance by providing timely and actionable information.

Regarding data: HEO will leverage sensor and data assets to gain decisive information dominance against an adversary.

HEO Technologies include:

- a) Edge Computing and Analytics (both Disadvantaged and Reach Back)
- b) Tactical Communications & Navigation that are also Layered and Automated
- c) Tailorable Human Machine Interfaces and Protocols (Vis, Acoustic, Haptic)
- d) Adaptable/Flexible Sensors
- e) Biometric and Forensic Analysis Tools
- f) Social Network Mapping and Sentiment Measurement Tools
- g) Interoperability and Integration Standards/Models for HEO Capabilities
- h) Heuristic or Probabilistic Techniques or Applications that Can Speed and Enhance Decision Making
- i) Telemetry and Internet of Battlefield Things (IoBT)
- j) Intuitive Mobile Applications that support data aggregation & interoperability
- k) Technologies that increase stand-off identification and characterization

TFA 3: Next Generation ISR

Imagery, Surveillance and Reconnaissance Tools, Techniques and Capabilities in the Air, Sea, Land, Space and Cyber Domains that Increase Superiority or Deny Adversarial Competition. The desired multi-domain capabilities should provide higher fidelity information & increased confidence levels regarding identities, locations and actions.

Next Generation ISR Technologies Include:

- a) Standoff biometrics
- b) Micro/nano technology
- c) Unattended sensors
- d) Data Aggregation and Provenance
- e) Full EM spectrum detection & location
- f) Meshed and layered networking
- g) Multi-domain sensor fusion
- h) Cognitive man-machine interfaces
- i) Social Network mapping and predictive sentiment analysis tools