

Special Operations Forces Industry Conference

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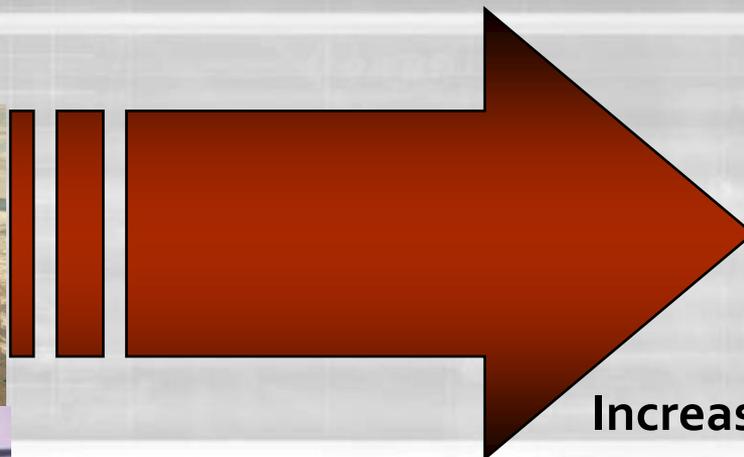
Program Executive Officer-Rotary Wing

**Advanced Planning
Briefings for Industry**

Rotary Wing

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Rotary Wing Lift Transformation



Lighter & Faster

Increase Payloads

Increase Lethality

Increase Survivability

Increase Situational Awareness

Reduce Crewmember Workload

Seamless & Quick Aircraft Integration

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Technology Areas of Interest

- **Lightweight Transparent Armor**
- **Hostile Fire Indicating System (HFIS)**
- **Reduced Optical Signature Emissions Solution (ROSES)**

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Lightweight Transparent Armor



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Lightweight Transparent Armor

- **Current state of the technology**
 - Transparent: 7 lbs/ft² small arms protection
 - Small, flat surfaces only
- **Ongoing efforts**
 - Helicopter Survivability Task Force (HSTF) funded Multi-Hit Transparent Armor (MITAS) effort
 - Army Research Lab (ARL) USSOCOM Science and Technology project

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Lightweight Transparent Armor (Continue)

- **Where we want to be**
 - Weight is critical
 - Transparent: $<5 \text{ lbs/ft}^2$ with AP protection
 - Large flat & curved surfaces
- **Potential game changers**
 - New lightweight materials for strike plate component of a layered transparency solution
 - New manufacturing techniques for large & complex shapes

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Lightweight Transparent Armor

- Lightweight Transparent Armor
- This program will be applied to flat and large curved surfaces and will not degrade optical clarity

Acquisition Strategy

- Full and Open Competition
- RFP for EMD phase released in FY14

Period of Performance

FY14-TBD

Milestones

FY14&15 Research and Development
FY15 Milestone C Decision

Point of Contact

USSOCOM PEO-Rotary Wing

Funding

- \$11M RDT&E FY14
- \$1.9M RDT&E FY15
- \$10.9M PROC FY15

Current Contract/OEM

TBD

Hostile Fire Indicating System (HFIS)



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Hostile Fire Indicating System (HFIS)

- **Current state of the technology**
 - Numerous potential systems but no single system has demonstrated the ability to discern hostile intent against the full spectrum of small arms threats
- **Ongoing efforts**
 - CERDEC and United Kingdom Ministry of Defense Common Missile Warning System HFI
 - Multi-Function Threat Detector JCTD
 - OSD DDR&E funded Rotorcraft Aircraft Survivability Equipment (RASE) experiment

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Hostile Fire Indicating System (HFIS) (Continued)

- **Where we want to be**
 - HFIS solution that provides hostile intent discrimination, azimuth, elevation, and range to hostile fire sources, geolocates and displays the threat on a digital map, and cues targeting systems or weapons
 - Multi-Spectral Solution is required to meet User requirements
 - Combination of Ultra-Violet (UV), Infrared (IR), and Acoustics
- **Potential game changers**
 - Lightweight, integrated, and multi-spectral warning sensors with minimal A-Kit impacts

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Hostile Fire Indicating System (HFIS)

- Detects, classifies, and alerts the aircrew to the presence of small caliber, crew-served, AAA, and RPG fires
- By providing detection and angle of arrival, HFIS will enhance aircraft survivability

Acquisition Strategy

- Integrate HFI capability into existing aircraft sensors
- Develop acoustic HFI capability

Period of Performance

FY10-TBD

Milestones

4th QtrFY-11 Established interim HFI software solution
FY12 Milestone C Decision

Point of Contact

USSOCOM PEO-Rotary Wing

Funding

- \$2.5M RDT&E FY10
- \$4M RDTE FY11
- \$19M PROC FY12-15

Current Contract/OEM

Various integration contracts

Reduced Optical Signature Emissions Solution (ROSES)



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Reduced Optical Signature Emissions Solution (ROSES)

- **Current state of the technology**
 - Advanced Infrared Countermeasures Munitions (AIRCMM)
 - M-216
- **Ongoing efforts**
 - USSOCOM Phase II SBIR: Low Visibility Flare
- **Where we want to be**
 - Covert & effective protection against current & advanced IR Surface to Air Missiles (SAM)
 - Use current Improved Counter Measures Dispenser (ICMD)

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Reduced Optical Signature Emissions Solution (ROSES) (Continued)

- **Potential game changers**
 - **Lightweight, integrated, multi-functional IR countermeasures**
 - **Alternative Reduced Optical Solution**

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Reduce Optical Signature Emission Solution (ROSES)

- This program will develop a replacement flare that will operate outside of the visible spectrum
- Improve effectiveness and survivability of current and emerging IR threats

Acquisition Strategy

- Full and Open Competition
- Expect EMD RFP release in late FY11

Period of Performance

FY10-TBD

Milestones

FY11-12 Flare development
FY13 New Flare Solution
FY 13 Milestone C Decision

Point of Contact

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Funding

- \$3.8M RDT&E FY10
- \$4M RDT&E FY11
- \$2.9M RDT&E FY12
- \$3.5M PROC FY13

Current Contract/OEM

TBD

Future Technology Interest

- **Degraded Visual Environment (DVE)**
 - Brown Out / White Out countermeasures
 - Cable Warning /Obstacles Avoidance
 - Synthetic Vision
 - Advanced Distributed Aperture System
- **Lightweight Fire and Forget Weapon**
- **Aircraft with rapid ingress/egress capability with true helicopter capabilities on the objective**

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Questions



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