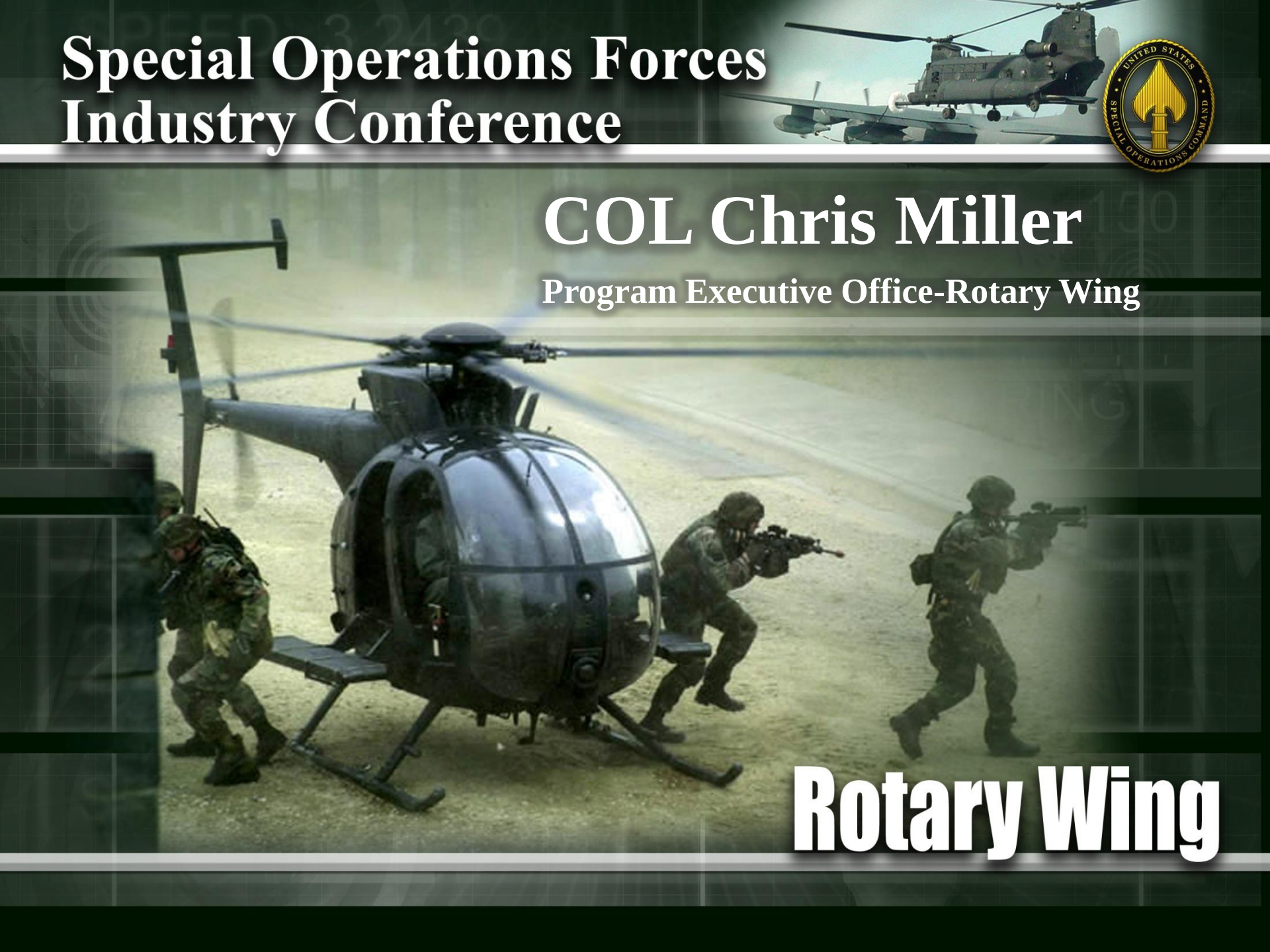
Special Operations Forces Industry Conference

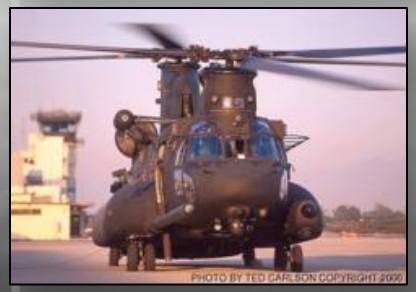


COL Chris Miller

Program Executive Office-Rotary Wing

Rotary Wing

Rotary Wing Lift Transformation



Lighter & Faster

Increase Payloads

Increase Lethality

Increase Survivability

Increase Situational Awareness

Reduce Crewmember Workload

Seamless & Quick Aircraft Integration

Rotary Wing

MH-47G (61)

Technology Areas of Interest

- Aircraft Occupant Ballistic Protection System (AOBPS)
- Hostile Fire Indicating System (HFIS)
- Reduced Optical Signature Emissions Solution (ROSES)

Aircraft Occupant Ballistic Protection System (AOBPS)

- Current state of the technology
  - Ballistic protection against small arms fire
    - Transparent: >10 lbs/ft^2
- Ongoing efforts
  - USSOCOM Phase II Small Business Innovation Research (SBIR) – Abrasion Protection
  - Army Research Laboratory (ARL) Research & Development of lightweight transparent armor

Aircraft Occupant Ballistic Protection System (AOBPS) (Con't)

- Where we want to be
  - Weight is critical
    - Transparent: ≤ 3.5 lbs/ft^2
  - 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

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

Hostile Fire Indicating System (HFIS) (Con't)

- 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 probably 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

Reduced Optical Signature Emissions Solution (ROSES)

- Current state of the technology
  - Advanced Infrared Countermeasures (AIRCM), Midas
  - XM-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 flare dispensers

Reduced Optical Signature Emissions Solution (ROSES) (Con't)

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

Future Unfunded Technology Interest

- Low visibility landing solution
  - Brown Out / White Out counter measures
  - Cable Warning /Obstacles Avoidance
- Lightweight Fire and Forget Weapon
- Synthetic Vision / Advanced Distributed Aperture System
- Aircraft with rapid ingress/egress capability with true helicopter capabilities on the objective