Mr. Tony Davis
Director

SCIENCE AND TECHNOLOGY

“Somewhere something incredible is waiting to be known.”
-Carl Sagan
“If the rate of change on the outside exceeds the rate of change on the inside, the end is near.”

Jack Welch
Discover, Enable, and Transition technologies to provide an asymmetric advantage for Special Operations Forces
INNOVATION ECOSYSTEM

Supporting Innovation
1. Build the Network
2. Provide the Venues
3. Develop the Tools and Processes

SOF CAPABILITY NEEDS

Local Community
• Thunderdome
• Hackathons
• STEM events
• Volunteers

Technology Domain Awareness
• Vulcan
• DIUx
• H4D

Advanced Manufacturing & Rapid Prototyping

Ideation & Iteration Venues
• SOFWERX
• DirtyWERX
• User Test Bed

Innovation

Leverage Network:
• Services & IC
• Government Labs
• Industry
• Academia
• Non-profits

Customers and Culture

Tools and Processes

POTENTIAL SOLUTIONS

1. Build the Network
2. Provide the Venues
3. Develop the Tools and Processes

Distribution A. Approved for public release: distribution unlimited
Innovation Thrives in a Marketplace

“So by accelerating the collisions, community, and co-learning… innovation and productivity increases.” Tony Hsieh, Zappos.com

Co-Invention  Thunderdome Events
Rapid Prototyping  Project Vulcan
Technology Awareness  Education with AT&L
Workforce Development  Fellowships / Interns
Industry Engagement

Sign up for SOFWERX ecosystem at: http://www.sofwerx.org
New Operating Models

Rapid Prototyping Events (RPE)

Field Trials

Rapid Transition Opportunities

Thickening the Network
TECHNICAL EXPERIMENTATION (TE)

• TE 16-2, 7-11 Mar 2016, Camp Roberts, California
  – Experimentation Focus: C4 and Mobility

• TE 16-3, 11-15 Jul 2016, Atterbury-Muscatatuck Center for Complex Operations, Indiana
  – Experiment Focus: Unconventional Warfare / Urban Ops

• TE 16-4, 19-23 Sep 2016, Little Creek, VA
  – Experiment Focus: Maritime Surface Craft

• TE 17-1, 14-18 November 2016, Camp Blanding, FL
  – Experimentation Focus: Night Vision/Electro Optics and Advanced Sniper Rifle Military Utility Assessment (MUA)

• Public Link: http://www.socom.mil/sordac/Pages/ExpWithUS.aspx
• LinkedIn Group: SOCOM Technical Experimentation
Cooperative Research and Development Agreements

• **What...**
  – Provide a mechanism for technology transfer
  – A legal document, not a contract—No money can be exchanged

• **Why we use them...**
  – Leveraging non-federal entity RDT&E efforts
  – Support non-federal entity to expend IR&D to support cooperative development
  – Save time and money
  – Increase communications and focus technology development

• **SOCOM S&T CRADAs...**
  – **SOF AT&L-ST-15-01-XX Collaborator** (Blanket document – multiple agreements)
    • Single CRADA signed by Acquisition Executive—blanket applicability across SOF AT&L
    • Multiple work plans signed by Program Executive Officers or Directors—agreement with company on specific technology project and associated government support
Enduring Technology Needs (PEO Tech Insertion Roadmaps) 1 of 2

**C4**
- Stabilized Rapid Adaption of Network
- Security and Network Management/Monitoring of Mobile Ad-hoc Network
- Open Standard Airborne ISR Transport Modem

**Fixed Wing**
- High definition, 3D & multi-color EO/IR, multiple moving target tracking, FOPEN
- Crew workload reduction, machine intelligent processing/Tactical Flight Mgmt
- Situational awareness with full spectrum threat reduction and counter measures
- 105 mm cannon precision guided ammunition and fuses, loitering munitions
- High energy laser, power management, aiming and focus turret
- Multispectral sensor
- Combat ID, IFF to ID friendly and hostile in all environments

**Maritime**
- Common Operating Tactical Picture
- Low Probability of Intercept/ Detection Communications
- Wireless Intercom
- Surface System/Active Ride Control
- Maritime Personnel Signature Management Technologies
- Situational Awareness, High Visual/NIR Transmittance Window Films
### Enduring Technology Needs

**PEO Tech Insertion Roadmaps** 2 of 2

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<tr>
<th>Rotary Wing</th>
<th>SRSE</th>
<th>SOF Warrior</th>
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| - High Power Watts for Over the Horizon Communications  
- Improved RW Counter Measures  
- Advanced IR Countermeasures & Self-Protection for RW Aircraft | - Maritime Forensics Exploitation Capability  
- Hidden Chamber/Material Detection  
- Portable, Automated 3D Room/Building Mapping Device  
- Stand-off/Remote Facial Recognition & Iris Capture  
- Dustless Latent Print Collection  
- Rapid Identification of Materials for Site Exploitation | - Transferrable armor for commercial vehicles  
- Helmet sensor system to monitor and record linear and rotational accelerations  
- High Sulfur Diesel Engine Capability  
- Camouflage Applique  
- Reduced IR Signature  
- Improved Gun Barrels  
- Variable Transmission & Laser Protection Eyewear  
- Tactical stand-alone ballistic plate  
- Multiple colors or spectral bands within the same sensor and SWAP  
- Thermal band Identify Friend or Foe (IFF) beacon, backwards compatible |
Adapt or Die
QUESTIONS?

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