SPECIAL OPERATIONS FORCES INDUSTRY CONFERENCE

Win • Transform • People

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INTRODUCTIONS/OPENING REMARKS
SPECIAL OPERATIONS FORCES INDUSTRY CONFERENCE

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COL Michael McGuire  Director, Combat Developments

FUTURE OPERATING ENVIRONMENT

“Somewhere something incredible is waiting to be known.”

-Carl Sagan
The Future Operating Environment is a world of “Convergence”: the point where the gap between non-state and state actor capabilities diminishes and the threat to force and mission success increases significantly.

SOF’s “Bold Ambitions” are to be more:

1) AVAILABLE: Agile and mobile enough to be decisive
2) INVISIBLE: Deny the ability to obtain decisive information
3) OMNISCIENT: Maintain information overmatch
4) INVULNERABLE: Defeat lethal and targeting capabilities

Special Operations Forces missions will not significantly change, but the environment in which they are conducted is, and will continue, to change significantly.
Unrelenting, far-reaching transformation that disorders beliefs and weakens traditions.

Institutional inadequacies, weakening global institutions, increased competition.
Future Operating Environment

Themes
- Defense budgets and capacity declines
- Urbanization
- Cities become dominant terrain feature
- Institutional Limitations
- Legacy systems constrain Special Forces

Trends
- Technology Proliferation
- Equal access across markets
- Individual Empowerment
- Individuals enjoy state-like power
- State Competition
- Nations compete short of war globally
- Urbanization
- Cities become dominant terrain feature
- Resource Realities
- Defense budgets and capacity declines

Notional Missions
- Technology Proliferation
- Equal access across markets
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Themes

Trends

Notional Missions

Proxy War
Using proxies, surrogates, and special activities to counter near-peers while subject to state level scrutiny and threat.

Global Man Hunting
Counterterrorism in non-permissive areas and against a dispersed enemy.

Weapons of Mass Destruction Disruption
Disrupt state and non-state actor WMD in permissive or non-permissive environments.

Mega City Raid
Precision raid under persistent threat and scrutiny in both “denied” and “permissive” areas.
Notional Mission: Mega City Raid Challenges

**Cars**
- By the thousands, both self-driving and with drivers
- Clog roads, limiting rapid movement
- Potential sensor data requiring Artificial Intelligence and Big Data Analytics to exploit

**Drones**
- By the thousands, some with facial recognition artificial intelligence
- Clog sky, blocking communications networks
- Relays real-time ground force location
- Armed drones concealed in delivery and other use drones

**Cyber**
- Hired hackers, and volunteers hack the city Closed Circuit Cameras and TV
- Navigation systems are spoofed to misdirect forces

**Global Coverage**
- Mobile cameras capture and upload everything via commercial encryption for live-viewing across the globe
- Social media and crowdsourcing generate potential tactics
- Special Forces Operators were collected on and tracked from point of origin to point of operation

**Subterranean**
- Cities moving underground
- Maze of tunnels and sewers
- Traditional communications denied

** Denied Access Zone**
- Extremely hostile
- Heavily surveilled
- No government influence
Notional Mission: Proxy War Challenges

Anonymous actors
- No state ownership of personnel conducting military-like actions, challenging legal and policy responses

Military-grade equipment
- Insurgents or other adversaries have access to technologies that reduce SOF physical invisibility

Non-conventional actors
- Paramilitaries
- Motorcycle gangs to cause disruption
- Mass refugee movements to complicate responses

State Collection
- State Signals
  Intelligence assets are used in combination with human networks and open source information focused on SOF units and their families

Internet of Things and Artificial Intelligence
- Allows access to information that can be used to identify plans, movement, personnel and aid intelligence collection efforts

Encryption
- Communication occurs easily across the globe via commercially encrypted apps

Non-attributable Cyber
- Collect on SOF personnel and movements
- Conduct information operations to provide false information
- Prevent the use of key SOF Command and Control assets

Notional Mission: Proxy War Challenges
Technology Focus Areas: Within the next 5-7 years, Special Operations Forces need to be able to address critical needs in the following areas:

• Contested Environment Situational Awareness
• Counter-Autonomous Systems
• Next Generation Characterization and Identification
• Strategic and Tactical Signature Management
• Tactical Communications/Navigation
• Tactical Remote Autonomous Systems and Human/Machine Interface
• Data Analytics/Visualization (as an enabler across all Technology Focus Areas)
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FUTURES PROCESS/FUTURES FOUNDRY
S&T Futures Process

A Foundational Process that is Flexible/Adaptable and Provides a Framework

Iterations Are Mission/Objective Focused and Enable Brainstorming/Ideation
Results

1. MATERIEL APPROACHES
   - Leap Ahead
   - Asymmetric
   - Divergent

2. NON-MATERIEL
   - Policy, Authority & Doctrine
   - Assess & Describe Impact/Opportunity

3. NEW PROBLEM IDENTIFICATION
   - Opportunity
   - Threat
   - Follow-on Analysis

Rapidly Changing Technology

Changing Environments

Varying Mission Objective (Measures of Success)

Changing Strategic Conditions
SOF Futures Foundry Events use a Design Thinking Approach to Explore Concepts from Future Technology Areas and how they Impact Potential Missions for Future SOF Operators

Inaugural SOF Futures Foundry Event Took Place In October 2017

Incorporated Design Thinking
Leveraged Diverse Participants

Using 2 SOF Mission Scenarios, Identified 24 Futures Concepts and Associated Sub-concepts/key Technologies with the Potential to Revolutionize SOF Missions 10-15 Years in the Future
SOF “Futures Foundry” Event

Next Futures Foundry Event is Scheduled to take Place in June 2018

• Will Incorporate Design Thinking and Leverage Diverse, Non-traditional Participants

• Hyper Enabled Operator is Embedded Within this Construct

New Set Of SOF Mission Scenarios, that are Based on the Future Operating Environment, will be used to Identify Key Technologies with the Potential to Revolutionize SOF Missions 5-10 Years in the Future
QUESTIONS?