Weapons Threat in the Future Operational Environment

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Key Take Aways

Adversaries reserves the right to adapt... the threat will evolve when the enemy determines it has to

In the future, adversaries will have access to increasingly advanced technologies (devices and materials)

Current improvised weapons are a step in the evolution timeline... in correlation with the enemy's perception of countermeasures being employed

"The most important failure (concerning 9/11) was one of imagination"
OE/Threat Role in Capabilities Development

TRADOC: Proponent CoEs, Centers and Schools

ARCIC: Develops Future Warfare Concepts and Operational Architectures

Evolving Capabilities Information

TRADOC G2: Define, Deliver/Apply and Assess the Army’s Operational Environment (OE)
- The Compelling Narrative for Unified Land Operations (Campaign of Learning)
- Underpins how the Army develops Leaders, Concepts and Capabilities
- Establishes the conditions for Individual and Collective Training across the Army

DA G2 or DIA Validates

Evolving, Adaptive Threat and OE Information

TRADOC Threat Managers (TM) and TRADOC G2 support Combat Developers (Requirements)
- Produce initial System Threat Assessment Report (STAR)
- TRADOC G2, Army G2 and DIA DOD 5000 Requirement
- Report and OT Threat Test Support Package
TRADOC G2 Threat Support to U.S. Army Training & Acquisition

Intel
Production Centers
NGIC
ONI
MSIC
MCIA
NASIC

DNI
DIA
DA G2
TRADOC G2
TRADOC Threat Managers

AMC G2
AMC FIOs
TACOM
CECOM
AMCOM
RDECOM
ATEC

- Fires Center of Excellence; Fort Sill, OK
- Army Medical Department; Fort Sam Houston, TX
- Aviation Center of Excellence; Fort Rucker, AL
- Brigade Modernization Command; Fort Bliss, TX
- Maneuver Center of Excellence; Fort Benning, GA
- Maneuver Support Center of Excellence; Fort Leonard Wood, MO
- Signal Center of Excellence; Fort Gordon, GA
- Intelligence Center of Excellence; Fort Huachuca, AZ
- Cyber Center of Excellence; Fort Gordon, GA
Threat Source Documents

Threat Statements and Assessments are based on DIA approved documents

NGIC
Land Warfare CTA

NASIC
Air Warfare CTA

DIA
Information Operations CTA

ONI
Surface Combatants

MSIC
ATGM Worldwide Handbook

Capstone Threat Assessments serve as baseline reference for STARs and JCIDS

JCIDS / STARs
Traditional and Non Traditional Weapons Threat

- Conventional Weapons
  - Conventional Delivery
- Improvised Weapons
  - Non Military means of Delivery
  - IEDS
  - Modified Munitions & Weapons
  - Improvised CBRN Weapons
- Weapons Mass Destruction
  - Conventional Delivery
  - Chemical
  - Nuclear
  - Radiological
  - Biological
Potential for Conflict – Through 2030

Many Crises Are Unfolding Now
What the Trends Tell Us

Increased Speed of Action

Outliers = Unpredictable

Transition of the Physical Domain

Adaptive, responsive, scalable landforces

Strategic Equilibrium

Technological Surprise Offshore

Changing Alliances and Partners

... the adversary will improvise and adapt; ubiquitous improvisation... signatures is key to understanding and neutralizing the threat.
What lies ahead...

Threat networks, personnel, weapons and TTPs are a global, transnational problem which will remain for years to come

- Constantly evolving capabilities to deploy, employ
- Will remain tactical weapon with strategic impacts
- Effective use will accelerate proliferation

Commonalities of Future Improvised Weapons

- Ubiquity of components
- Ease of threat networks to easily spread improvised weapons technology. (i.e. Social media, internet, etc) ...transnational influence
- Easy access to commercially available dual-use technology will promote the continued use and proliferation of current IED trends. Potential IEDs may use sensor technologies to improve targeting in the future

Advanced RC - Random Frequency/Freq Hopping capabilities
- Optical (Laser) initiated
- Surgically implanted
- IEDs utilizing CBRNE materials.

- Nanotechnology - Advances in non-metallic power source; increasing yield; miniaturized, flexible electronics, built into fabric/facilities
- Waterborne/Airborne delivered
- Hydrogen-based explosives
- Camouflage, Cover, Concealment and Denial and Deception (C3D2) technologies will aide advanced placement (shrouding)
LAND POWER CHALLENGES

Area Denial

Passive Defense

Preserve the Regime

Maritime
- 2x45 Gallon drums with main charge (Carligford Lough, NI 1980s)
- Remote and Suicide Boats

Ground forces mosaic defense - complete range of improvised weapons by defenders (Syria)

Land
- EFP (Iran 1980-88)
- PP IED (Helmand Province)

Ground forces melt into population centers, pursuing irregular actions
- Iraqi Army 2003 harbinger of future... develop and utilize a full range of improvised weapons
Conclusion

Organizational threat assessments reflect their mission

Future improvisation of weapons is only limited by imagination

Threat networks built on intent/opportunity/capability...do not underestimate the personal weapon

Enhanced designs will improve accuracy (selection and effect), lethality, and concealment

Adversaries will watch, assess, identify weakness in order to target our vulnerabilities and attempt to negate our strengths