

I MEF Forward: Science and Technology Observations

Presented to: Office of DDR&E

Presented by: I MEF Fwd G9 (Post-RIP/TOA)

Contents

- Background
- Threat
- Outstanding Urgent Deficiencies
- I MEF Fwd Needs Process Experience
- Relevance for DDR&E and S&T
- General Observations WRT Needs
- Questions
- Some Selected MNF-W/II MEF Fwd Needs

Background

- I MEF Fwd = Multi National Force – West (MNF-W)
- MNF-W Area of Operations = Al Anbar Province
- OIF 05-07, Feb 06 - Feb 07:
 - CG, I MEF Fwd: MajGen Richard Zilmer
 - DCG (Operations), I MEF Fwd: MajGen Robert Neller
 - DCG (Support), I MEF Fwd: BGen David Reist
 - AC/S G9: Col Martin LaPierre
 - Science Advisor: Mr. Franz Gayl

Threat

- **Highly adaptive AIF threat:**
 - TTPs adjusted within days and hours
 - Speed of TTP iteration is a major AIF strength
 - Technical innovation and field expediency high
 - Universal AIF internet and media access assumed
- **IEDs top cause of MNF-W casualties:**
 - RC IEDs being replaced by CW and VO IEDs
 - Larger number of EFPs anticipated in MNF-W AOR soon
 - Targeting focus on operational vice logistics movements
- **Sniper attacks on rise as CIED improves**
- **SAF and IDF attacks remain persistent threats**
- **Weaponized UAVs anticipated**

Outstanding Urgent Deficiencies

- **Persistent AOR-wide surveillance:**
 - 1. Scan Eagle UAVs
 - 2. Networked Video COP and Warehouse
 - 3. Tandem Camera-Equipped Tower
 - 4. Platform Mobility for Offensive COIN
- **CIED and sniper protection:**
 - 1. MRAP replacements for M1114s
 - 2. Kinetic and non-kinetic predet capabilities
 - 3. Escalation of Force (EOF) mitigation tools
 - 4. Multi spectral RF and optical stand-off threat detection capabilities
 - 5. Machine-assisted, in-stride pattern analysis capabilities
 - 6. Spoiling operation capabilities to deny IAF perceived sanctuary

Needs Process Experience

- **Over 130 I MEF Fwd JUONS-UUNS submissions:**
 - Low combined fill rate – JUONS and UUNS both <10%
 - Before Nov 06 JUONSS frequently languished at MNC-I
 - UUNSS cancelled, delayed, or solutions not what was asked for
 - Tandem JUONS and UUNS submissions routine to increase odds
- **CoS CENTCOM intervened to speed JUONS:**
 - JUONS urgency at MNC-I and MNF-I restored
 - II MEF now benefiting from CoS CENTCOM's action on JUONS process
- **Joint Staff actions always rapid and supportive**
- **JRAC actions always rapid and supportive**
- **UUNS process remains challenging:**
 - Process workshop cripples operating forces
 - Civilian middle management lacks technical and operational currency
 - Risk-averse civilian middle management defaults to process controls
 - Mine Resistant Ambush Protected Vehicles (MRAP) delayed
 - Unmanned Arial Vehicles (UAVs) delayed
 - Ground Based Observation and Surveillance System (G-BOSS) delayed
 - Many other urgently needed capabilities delayed

Relevance for DDR&E and S&T

- **JUONS fulfillment and S&T investment:**
 - JRAC understandably not chartered to initiate longer term S&T
 - JUONS designed for rapid procurement of mature capabilities
 - Still, later JUONS spirals often have S&T implications
 - Lead time is required for rapid and timely S&T maturation
 - OSD lacks a JRAC-like mechanism to enforce Service S&T follow-up
- **S&T insight of Service HQs deficient:**
 - Acquisition expertise and process-oriented, risk-averse mentality valued
 - Ever-less organic-independent physics and engineering insight
 - Losing independent uniformed insight into high payoff opportunities
 - Dependence on interested outsiders for S&T recommendations
 - HQ decision maker staffs appear to default to lab priorities
 - Services' in-house lab interests define the Service HQ S&T horizons
 - Industry IRAD and Joint efforts frequently dismissed by Service labs
- **S&T-related recommendations:**
 - Provide JRAC a mechanism to insure JUONS-supportive Service S&T
 - Legislation needed to educate and retain a substantial uniformed S&T cadre
 - Legislation needed for CENTCOM RDT&E in the spirit of SOCOM's MFP

General Observations WRT Needs

- I MEF Fwd Operators Defined Solutions:
 - Need for speed to get ahead of AIF
 - Operators know the requirements
 - CG expected staff to do tech research and define solutions
 - Broad G9 technology field of regard (Labs, Academia, Industry, DARPA)
- MNF-W needs competed against funded programs:
 - Angel Fire vs Constant Hawk
 - MASDANS vs Counter Sniper Vehicle
 - G-BOSS vs CRAM/RAID
 - ScanEagle vs Spyhawk
 - SUCAV vs Warrior UAV from TF Odin
 - Penetradar IRIS vs GSSI Road Scan
 - MRAP vs up-armor programs and ONR initiative
 - Terramax vs Forerunner
- Developers resist divergent operator needs:
 - Resistance costs time
 - Unnecessary delays cause U.S. friendly and innocent Iraqi deaths and injuries

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**Slides 9 – 32
Omitted**

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