



CENTER OF OUR STRENGTH

Project Manager Soldier Weapons

Project Manager Soldier Weapons Briefing For NDIA

BG Peter N. Fuller
Program Executive Officer Soldier

18 MAY 2010

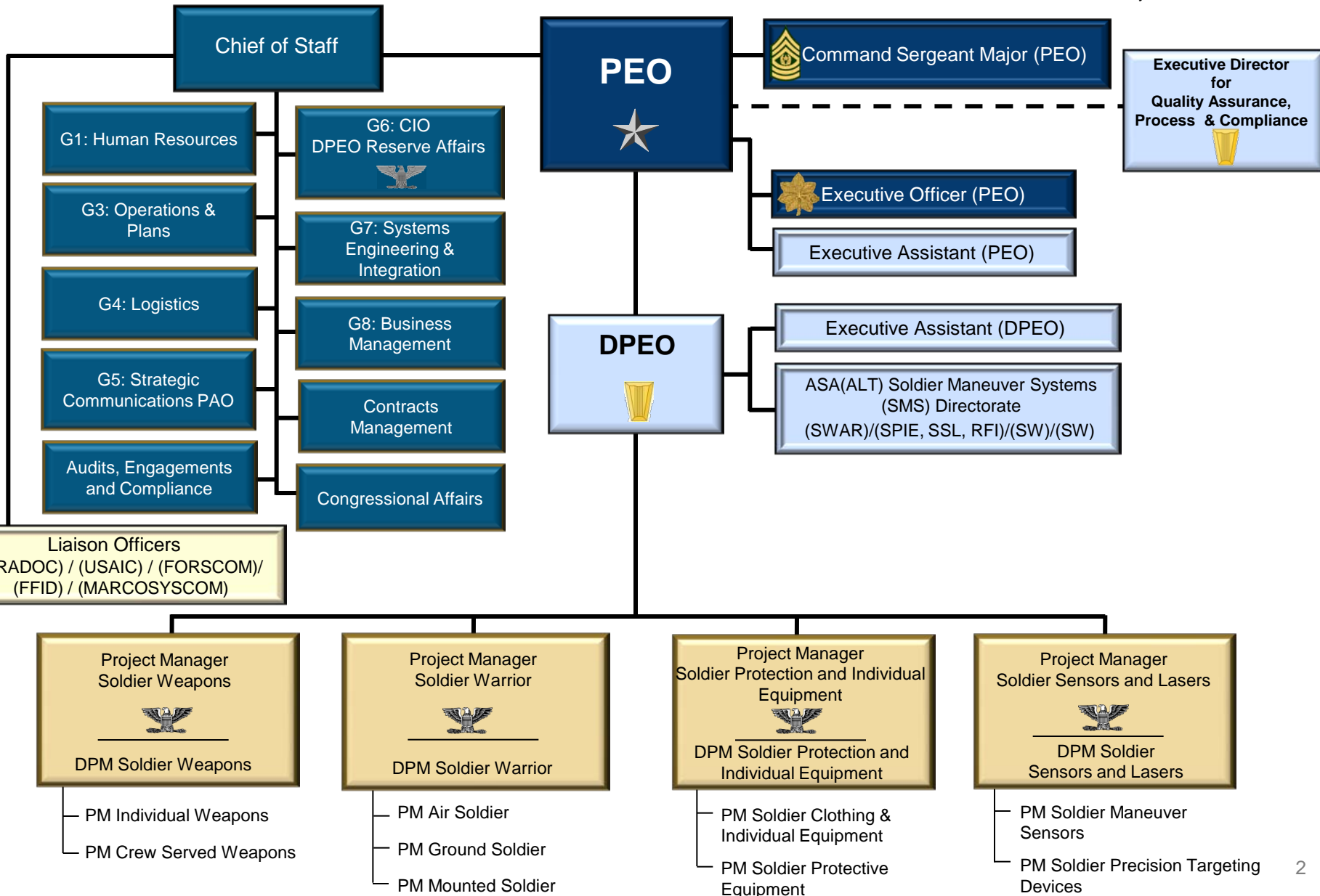
COL Douglas A. Tamilio
Project Manager Soldier Weapons



Program Executive Office Soldier



As of 1 January 2010



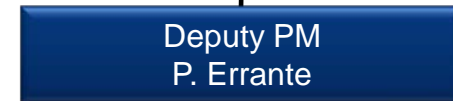
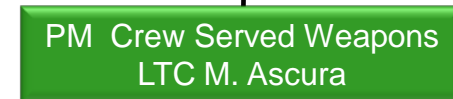
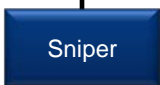
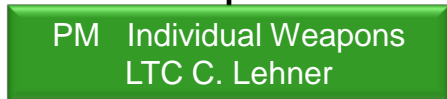
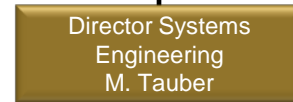
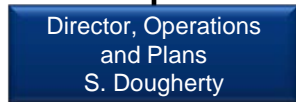


Project Manager Soldier Weapons



	PM SW	Total PM SW
Military	2	10
Core	17	35
Matrix	16	46*
Contractor	13	40
Total	48	131*

*Includes Part Time Contractors





PM Soldier Weapons Mission



Current



M16A4 Rifle



M9 Pistol



M4 Carbine



M320
40mm Grenade
Launcher



M4/M203



M110
Semi-Automatic
Sniper System
(SASS)



M107
Long Range
Sniper Rifle



M240L
Medium
Machine Gun



M249
Squad Automatic
Weapon (SAW)



M240B
Medium
Machine Gun



M2
Cal .50
Machine Gun



MK19
Grenade
Machine Gun



M25
Stabilized
Binocular



M24
Mini
Binocular



M68
Close Combat
Optic (CCO)



M145
Machine Gun
Optic



Rifle Combat
Optic (RCO)

Development



XM25
Counter Defilade
Target Engagement System



M26
Modular Accessory
Shotgun System
(MASS)



XM806
Lightweight
.50 Caliber
Machine Gun



XM153
Common Remotely
Operated Weapon
Station
(CROWS)

Future



Future
Handgun

Family of Weapons

Compact



Carbine



Light Machine
Gun



Future
Sniper Rifle

“ Provide the best weapons to our Soldiers”

2009 Successes
























- M320 Grenade Launcher
 - Fielded 10,000 to date (AAO 71,600 GLs)
 - Recently contracted Additional 12,000 GLs & \$3.8M spare parts
 - Soldiers praise its accuracy, ease of use, & modularity
- M4
 - AAO increase from 473,769 to 501,286
 - Acq Strat Apprv'd. for Heavy Barrel, Auto, Ambi - FY10 Production Contr (12k M4 converted to M4A1), FY11-12 Prod. Contr will be competed (full & open) for 24k M4A1.
- Individual Carbine CDD - In JROC Staffing!
- M26 - Approval to produce 1,800 LRIP shotguns, 3QFY11 initial Fielding
- M24E1- .300 WinMag, 1200m range, Down Select Ongoing, Initial Fielding 1QFY11
- M14 EBR-RI - 5,000 Weapons Produced & Fielded, New funding provided for 1,200 more
- XM25 - Fully Funded RDT&E, Finishing AROC staffing
- CROWS
 - UMRs Fielded systems on the Buffalo A1/A2/-1, RG31A1/A2/A3, RG-33, M1151, and M1A2
 - Integrating it on the MATV, JERRV, CAIMAN, and MAXPROPLUS
- M240L
- MK48 Urgent Materiel Release
- Lighten the Soldier Load



Lighten Soldier's Load



Rifles/ Carabines *	Shotguns	Machine Gun Tripods	Medium Machine Guns		Heavy Machine Guns	Heavy Machine Gun Tripods
Before  M16A4, 8.13 lbs	 M500, 7.7 lbs	 M122A1, 18 lbs	 M240B, 27.3 lbs		 M2, 128 lbs	 M3, 44lbs (Including T&E)
% Lighter  17% (-1.38 lbs)	 29% (-2.2 lbs)	 36% (-6.5 lbs)	 32% (-8.7 lbs)	 18% (-5 lbs)	 49% (-63 lbs)	 30% (-13 lbs)
After  M4, 6.75 lbs	 M26 MASS, 5.5 lbs <hr/>  M26 MASS Mounted on M4	 M192, 11.5 lbs	 MK48, 18.6 lbs	 M240L, 22.3 lbs	 XM806 Lightweight .50 Caliber MG, 65 lbs	 XM205, 31 lbs (Including T&E)
Systems Currently Fielded					Systems Currently in Testing	

* Weapon Weight With Empty Magazine, No Sling, No Optic



Ongoing Programs



XM153 Common Remotely Operated Weapon Station (CROWS) System Description

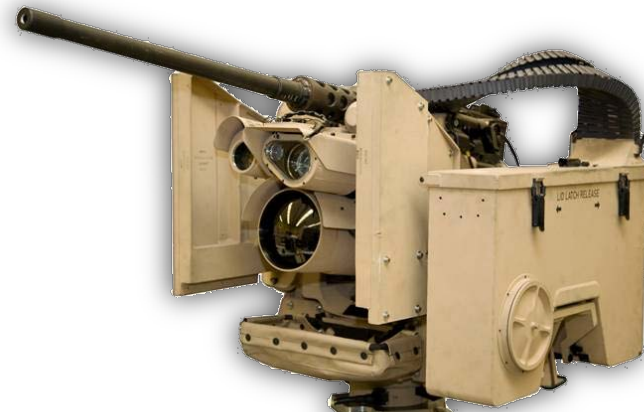


**Fire Control Unit
(FCU)**



**Control Grip
(CG)**

- Weight (w/o Weapon And Ammunition)
 - Above The roof: 325 lbs (w/o Armor Kit)
 - Total weight: 430 lbs
- Supported Weapons:
 - M2 (400 rds) - M240 (1000 rds)
 - MK19 (96 rds) - M249 (1600 rds)
- Reliability: Minimum Of 1600 hrs MTBMA



Potential Future Improvements:

- Sniper Detection Capability
- Far Target Designation With Handoff
- Additional weapons (LW50, MK47, M134, Integrated Javelin Launcher)
- IR And Visible Pointers
- Enhanced Image Capability

- Four-Axis Targeting System
- Three-Axis Vector Stabilization
- Day Camera: 27X w/47 Degree FOV
- Thermal: Dual FOV (3° & 11°) w/ 2x E-Zoom
- Auto Focus (Day And Thermal)
- Laser Range Finder
- Auto Tracker / Auto Lead / Auto Scan
- Target Reference Points Scan
- Elevation: -20 to +60 degrees
- Traverse: 360 Degrees Continuous



CROWS Fieldings



Buffalo



RG31A1



M1151



JERRV



M1A2



RG33

MRAP Vehicles in progress



XM806 Lightweight .50 Caliber Machine Gun



- **Lightweight**
 - Two Man Portable (62.0 Vice 128 lbs M2HB)
 - Can Be Dismounted From Vehicle Platform And Remounted On Ground Mount <30 Seconds
- **System Dispersion-1.1 Mills (Ground Mount No Ballast)**
- **No Headspace Or Timing Adjustment**
- **Minimized Logistic Impact: 133 Parts LW50 vs. 244 Parts M2HB**

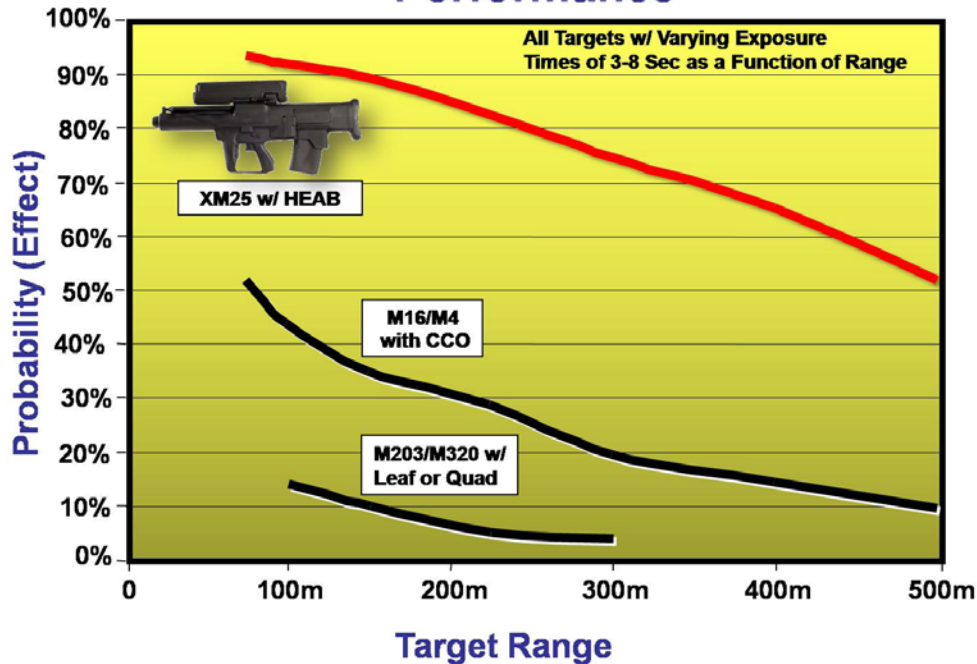
Low Recoil = More Hits/Less Dispersion



Counter Defilade Target Engagement Weapon System



Performance



System Description:

- 3 Components that are Highly Integrated & Optimized to produce noted P(effect):
 - Semi-auto, Magazine Fed, 25mm Weapon
 - Programmable, Low Velocity, High Explosive Air Burst (HEAB) Ammo
 - Fully Integrated Day & Thermal Night Sight w/ Full Solution Target Acquisition/Fire Control
- System Weight: 12.0-12.5 lbs

System Capabilities:

- Defeats Defilade Targets And Exposed Targets
- Point Target Range: 500 meters
- Area Target Range: 700 meters

Status:

- Contractor Integration Testing: Aug 08
- Government Testing at APG: Sep 08 – Present
- Limited Safety Release: 4QFY09
- MS B: 3QFY10
- MS C: ~3QFY12

Current Development

Future Development



25 mm Ammo





M2E2 Quick Change Barrel Kit



System Description:

- Quick Change Barrel
- Barrel Support
- Barrel Extension
- Solid Breech Lock
- Flash Suppressor*

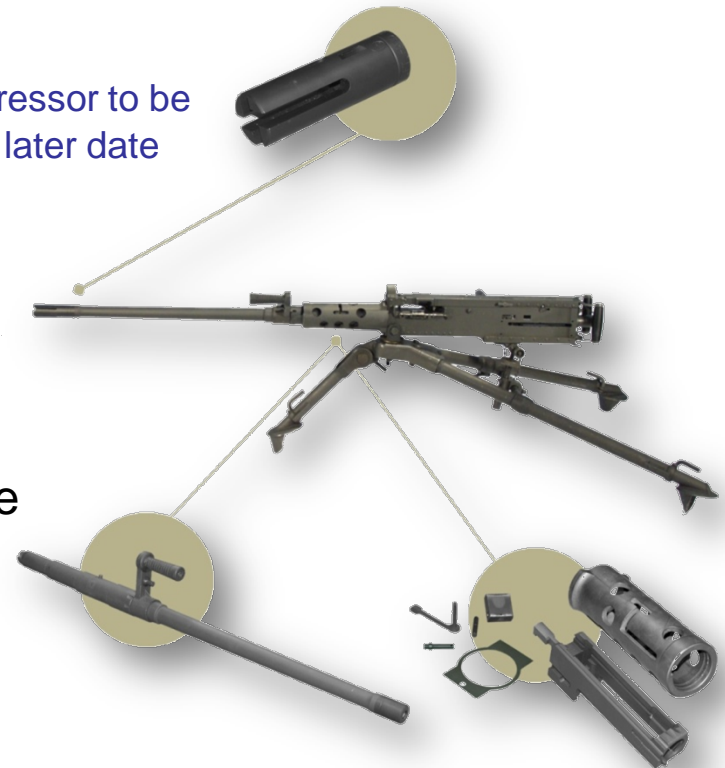
Capabilities:

- Enhancement will increase readiness by providing a faster & simpler barrel change without the need to set headspace and timing
- Reduces Training
- Includes Flash Suppressor

Status:

- Production Verification Test at Aberdeen Test Center – May thru Oct 09
- Limited User Evaluation at Ft. Benning – Jul 09

* Flash suppressor to be fielded at a later date

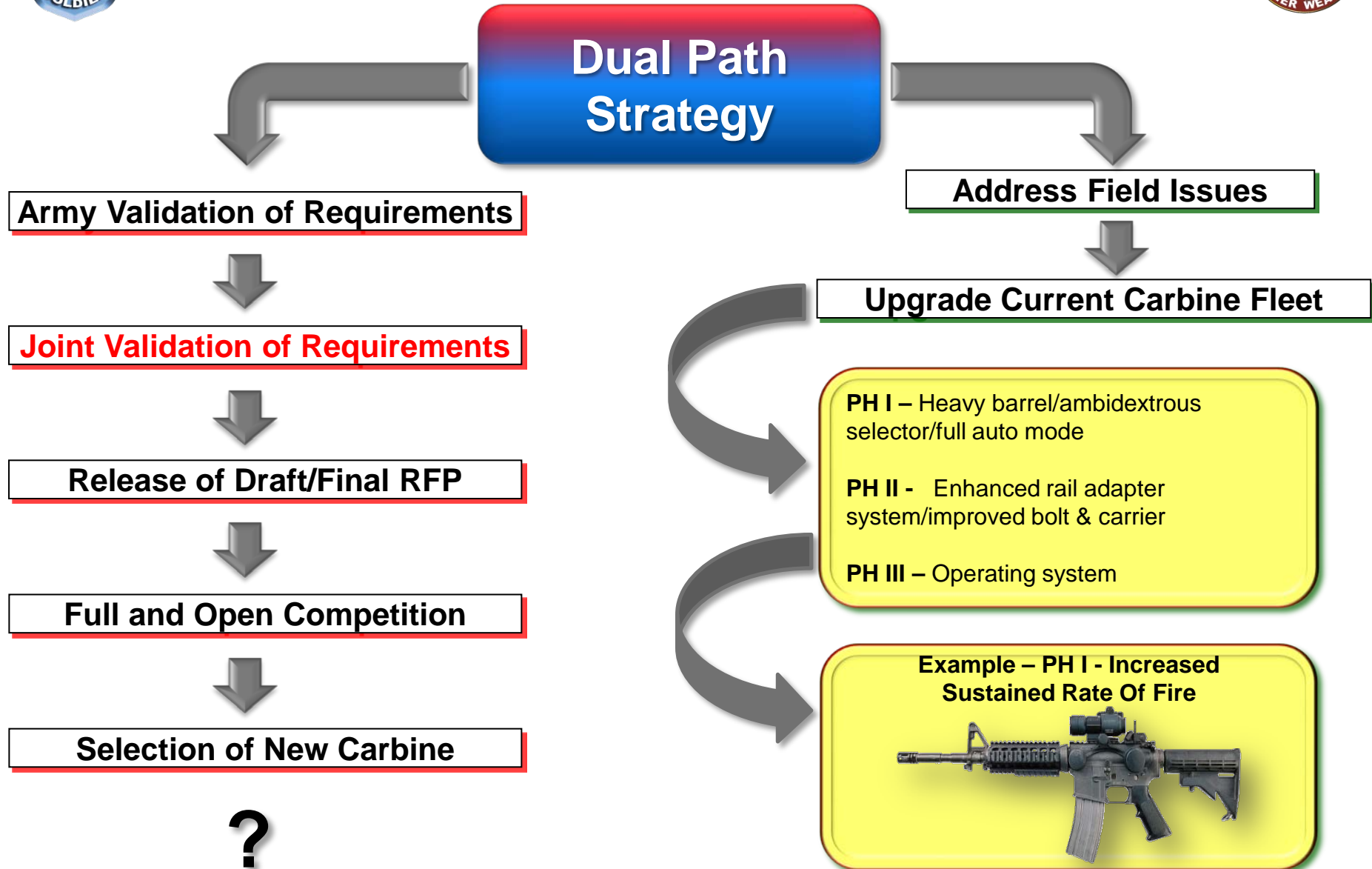




Future Business Opportunities



Carbine Path Forward





Individual Carbine Competition



Description:

- The Individual Carbine (IC) will provide the US Soldier with the most accurate, reliable, durable, maintainable, and modular individual weapon with improved features such as ambidextrous controls and at a best value to the US Government

Capabilities:

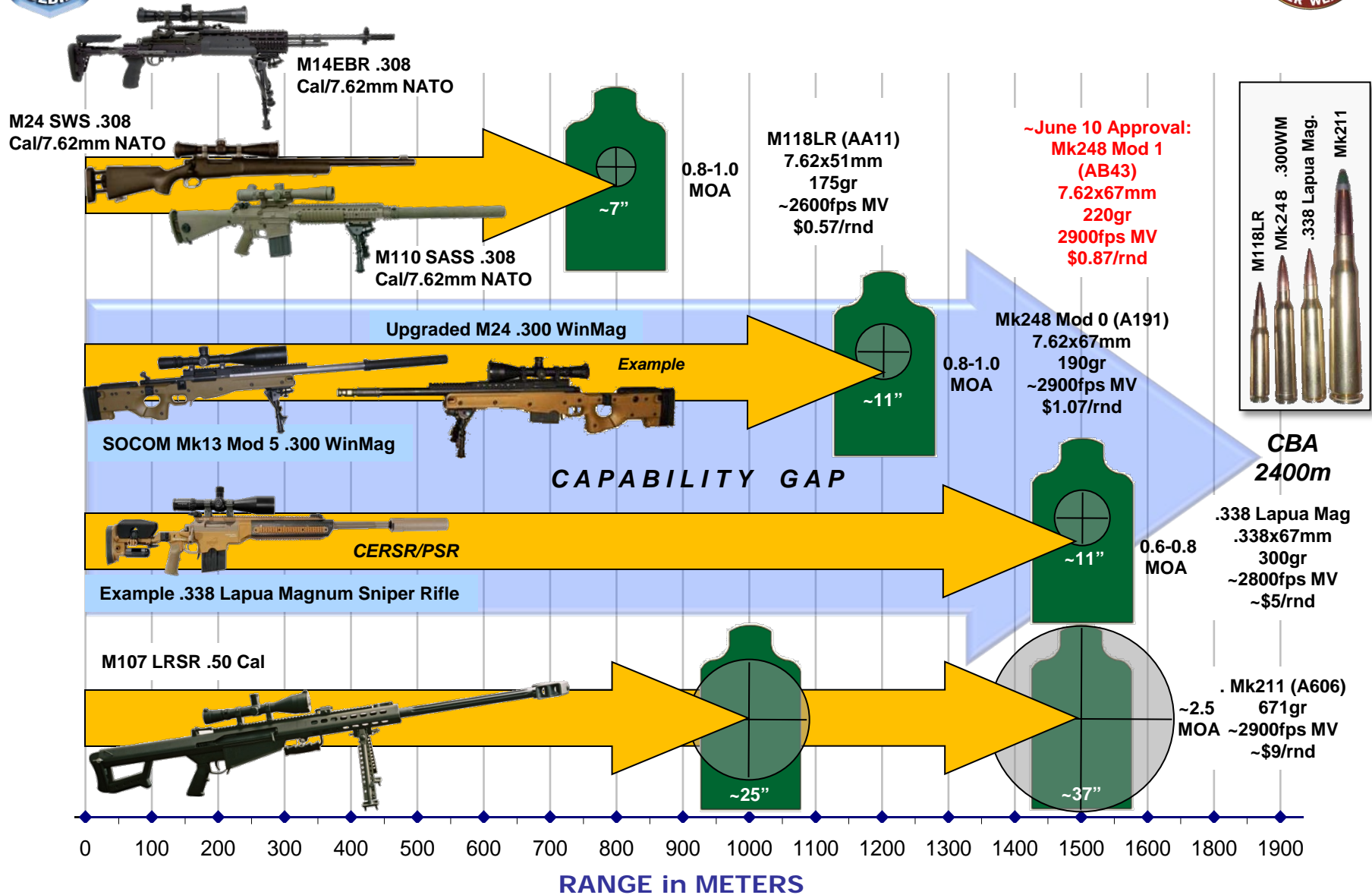
- Carbine will provide accurate and reliable firepower
- Semi-auto and full auto fire
- Integrated rails will accept Mil-Std-1913 rail mounted accessories
- Fully ambidextrous

Status:

- CDD in Joint Staffing – 10 May 2010
- Congress provided RDT&E for FY10
- Release draft RFP 1QFY11
- Industry Day 1QFY11
- Final RFP 2QFY11



Precision Weapon Portfolio Engagement Ranges & Dispersion





Sniper Weapons Suite



- M107 Long Range Sniper Rifle – Cal .50 Anti-Materiel System (1000-2000m)
 - Production complete
 - Fielding complete
 - Defining Product Improvements



- M110 Semi-Automatic Sniper System - 7.62mm (800m)
 - 2307 delivered (2943 AAO)
 - USMC adopted for REPR program



- M24 Sniper Weapon System – 7.62mm (800m)
 - M24E1, .300 WinMag (1200m) to be produced
 - Downselect for M24E1 Ongoing, Fielding 1QFY11



- Precision Sniper Rifle – Cal ?, 1500m
 - CDD released for World Wide Staffing 18 May 10



M14 Enhanced Battle Rifle



Description:

- M14 Enhanced Battle Rifle is a rack stock M14 rifle mated to an enhanced aluminum billet stock, Tactical Scope and Cantilever Mount. This weapon was built by Rock Island Arsenal in response to numerous Operational Need Statements requesting long range capability.

Capabilities:

- Accurate 7.62mm capability out to 800m

Status:

- 5000 Wpns produced & Fielded; Funding provided to produce additional 1200 Wpns
- Potential for Night Vision





FY 10 Technology Shortfalls



Lethality	Mobility
✓ Accurate Range Determination	✓ Lightweight, High Strength Materials for Small and Medium Caliber Weapons
✓ Nano Explosives/Nano Propellants	✓ Multi-Function Laser
✓ Miniature Non-Magnetic Direction Finding System	✓ Reduced Weight and Power Consumption Electronic Components
✓ Lightweight, Direct View Optics	✓ Wireless Weapon Interface
✓ Course Correcting Small Arms Projectiles	Survivability
✓ Inexpensive, High Brightness, High Resolution, Low Power, Color, Wide Temperature Range, Long Life, Ruggedized, Lightweight, Micro Video Display	✓ Luminescent Materials
✓ Improved Incapacitation for 5.56mm, 7.62mm, 9mm Ammunition	✓ Reduced Weapons Signature
✓ Adjusted Ballistic Reticle for 5.56mm and 7.62mm Rifles	Sustainment
✓ Covert Marking Ammunition for Small and Medium Caliber Weapons	✓ Wear Resistant Coatings for Weapon Mechanisms
C4I / Battle Command	✓ Higher Energy Density Mini-Battery
✓ Reconnaissance Munition	✓ Central Power Source

Summary



- Thank you for your responsiveness
- Understand the change in fiscal environment
- Incremental vs. Revolutionary



Questions



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Project Manager Soldier Weapons

PM SOLDIER WEAPONS ASSESSMENT TEAM

18 May 2010

MAJ Shawn Murray
MAJ Elliott Caggins



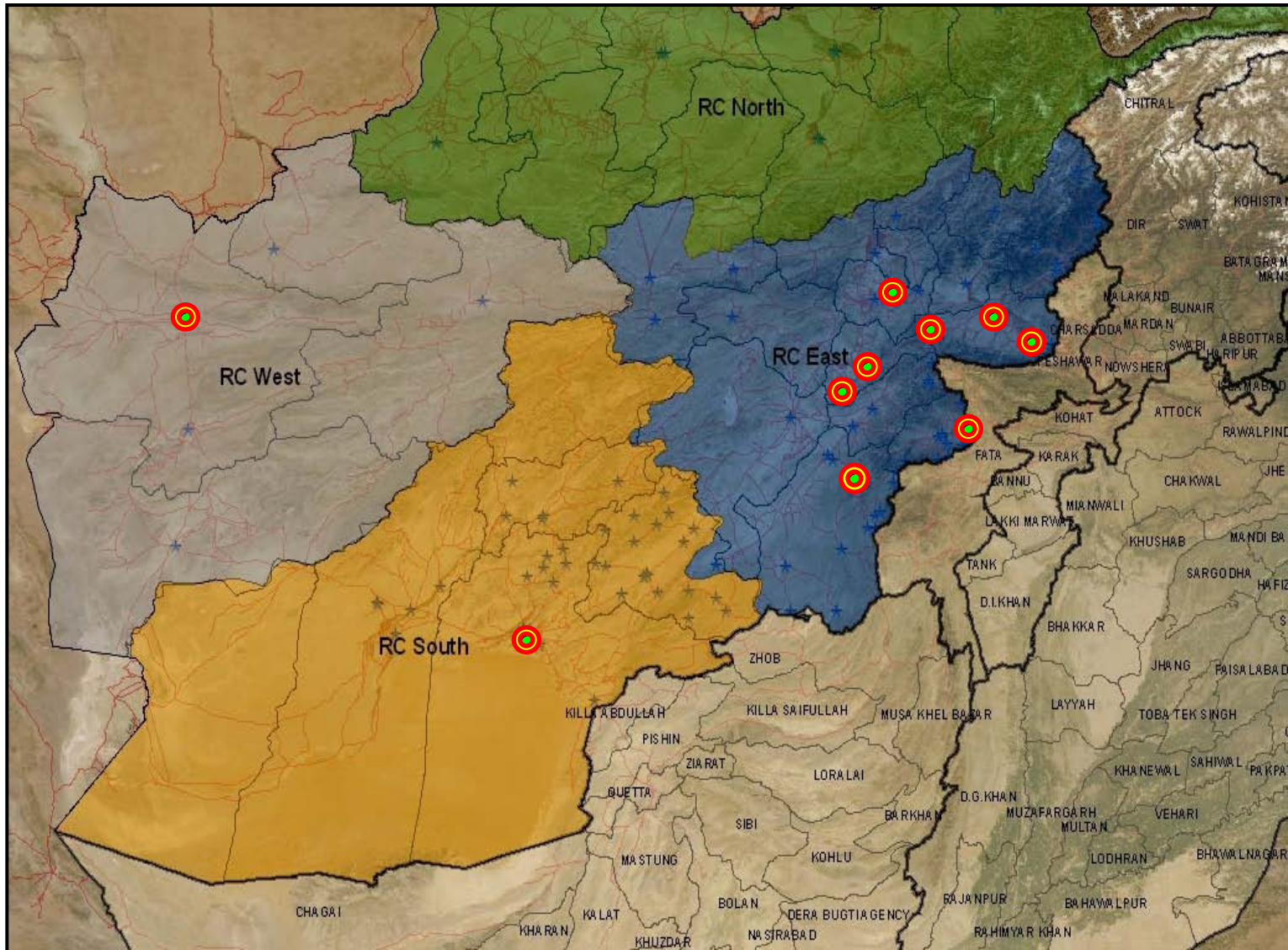
Agenda



- Afghanistan and the Interview Area
- Findings
- Individual Weapons
- Crew Served Weapons
- Acquisition Issues
- Questions



INTERVIEW POPULATION





The Context



- Each ridgeline brings a different set of wants versus needs...everything is relevant!
- Leader and Soldier feedback varies, but most comments support some general themes.
 - **OIF v. OEF are markedly different...extended ranges refer to OEF for the most part.**
- The PM SW Assessment Team walked into this assessment with an open mind, willing to travel throughout the CJOA and focused on giving our deployed units a voice.
- The Assessment Team was to deploy to OEF for no more than 17 days.
- Team Members: MAJ Elliott Caggins, MAJ Shawn Murray, MAJ Tom Aarsen and MSG Paul Wilcock



THE BLUF



1. Menu of approved Carbine accessories.
2. Simple camouflage applications for Carbines and Optics.
3. Suppression (noise/flash) technology.
4. Need for variable powered Optics for Carbines.
5. Increased firepower (caliber) at extended ranges.
6. Organic Designated Marksman Rifle at the Platoon/Squad level.
7. Increased modularity.
8. ASAK per Sniper weapon.





M4/M16 SERIES RIFLE



M4/M16:

- Menu of approved Carbine accessories.**
 - COTS Butt Stocks, Magazines, Slings, Bi pods, Handgrips
 - COTS Scopes / Optics
 - COTS Suppressors
 - In extreme cases, Soldiers have purchased upper receivers and high-costs rifle scopes.**
- Simple camouflage applications for Carbines and Optics.**
- Suppression (noise/flash) technology for Carbines.**
- Need for variable powered Optics for Carbines.**
- Increased firepower (caliber) at extended ranges.**



M14 ENHANCED BATTLE RIFLE



- ❑ NET remains critical to shooter/maintainer proficiency / Many types of units use this weapon.
- ❑ STRAC allocation affects availability of M118LR.
- ❑ Soldiers are removing/replacing Mk4 Leupold scope with other scopes.
 - ❑ MILDOT reticle training delta
 - ❑ Simple point and shoot reticle pattern
- ❑ Stock is adequate, but there is room for improvement.
 - ❑ Reduce bulkiness
 - ❑ Remove unnecessary parts
- ❑ General theme = DMR is **REQUIRED** organically in Infantry formations.





Mk 48 LIGHTWEIGHT MACHINE GUN



Mk 48 LMG:

- Original intent was to replace the M240B until the M240L was to be fielded.
- Possessing increased firepower and controlling extended ranges has forced:
 - Replacement of the M249 SAW by the Mk48 LMG
 - Lethality trumps Weight Reduction when extended fires are required
- Leaders want to adopt the Mk48 LMG



M240B/L

Mk48 LMG



M240B



M240L





Miscellaneous



Typical Observation Post (OP) field of fire along IED avenue of approach



M16A2 with M68 CCO and bipod mounted...no M1913 Rails.



M320GL mated to M4 Carbine...weapon painted, no sights for M320GL



Acquisition Issues with Small Arms



- Vendors sent items in theater/home station
 - Lubricant:
 - Company was sending free samples to soldiers in theater with the claim that the lubricant was superior to the Army approved lubricant (CLP)
 - Testing done over several months (-46°c to +71°c) proved that the superior lubricant was CLP

- Unit purchased items that modify weapons
 - Suppressors
 - BCT bought suppressors for Team Leader and above.
 - Provides difficulty in determining:
 - Suitability
 - Long Term Reliability



Acquisition Issues with Small Arms



- M4 Bolts
 - There is no need for lubricating the weapon
 - Less cleaning is required for maintenance
 - There is considerably less fouling and debris build up inside the weapon
 - The coating on the bolt will never rub off or flake off
 - The weapon operates cooler than one with a regular bolt.
- Testing was done by 5 soldiers who fired 1,000 each of M200 Blank and M855 ball under range conditions
- Soldier purchased items that modify M4 Carbine
 - Magazines
 - Buttstocks



Personally Equipped and Unit Purchase



By choosing to purchase equipment that has not been provided from the Army, individuals and unit commanders:

- Violate established Army Policy
 - AR 750-10 Army Modification Program
- Increase risk to Soldiers





QUESTIONS?