



Project Manager Soldier Weapons

The Soldier

Our Strength and Purpose

PM Individual Weapons LTC Shawn Lucas



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PM Individual Weapons Portfolio



Current



M4 w/ M203
Grenade launcher



M4 w/ M320A1
Grenade Launcher



M320
40mm Grenade
Launcher
Stand-alone



M26
Modular Accessory
Shotgun System
(MASS)
Stand-alone



M4 w/ M26
Modular Accessory
Shotgun System
(MASS)



M4/M4A1
Carbine



M2010
Enhanced
Sniper Rifle (ESR)



M14
Enhanced
Battle Rifle (EBR)



M107
Long Range
Sniper Rifle



M110
Semi-Automatic
Sniper System
(SASS)



M68
Close Combat
Optic (CCO)



M150
Rifle Combat
Optic (RCO)

Near Term



XM25
Counter Defilade
Target Engagement
(CDTE) Weapon System



Modular Handgun
System

Future



Next Generation
Squad Weapon (Carbine)



Subcompact



Precision
Sniper Rifle



Compact Semi-Automatic
Sniper System (CSASS)



Squad Common Optic (SCO)

“Provide premier Soldier weapons systems enabling battlefield dominance”



Modular Handgun System (MHS)



- **Description:**
 - Handgun system with improved lethality, target acquisition, ergonomics, reliability, durability, and maintainability
- **Requirement:**
 - US Army adoption of the USAF CPD, Oct 2013
- **Desired Capabilities:**
 - Increased lethality, accuracy and reliability
 - Modularity aspect may include:
 - Capability to change barrel and slide lengths
 - Interchangeable frame and/or grip dimensions
 - Ability to configure/re-configure for diverse mission sets and users
 - Accessory ready: aiming lasers, illuminators, suppressors, and others



- ✓ Industry Day, Dec 2013
 - **Develop Acquisition Approach**
 - 2nd Industry Day, Jun 2014
 - Draft Solicitation, Aug 2014
 - 3rd Industry Day, Sep 2014
 - Release Final RFP, Nov 2014

Seeking a balanced, effective acquisition approach to deliver a MHS which meets the needs of the Joint services



M4A1 Carbine



- **Description:**

- A compact version of the M16A2 rifle, with a collapsible stock, a upper receiver accessory rail w/ detachable handle/rear aperture site assembly

- **Background:**

- More than 90 performance-based design improvements since its inception in early 1990s
 - Army begins fielding the more lethal/accurate M855A1 ammo in 2010
 - Testing recently completed on a magazine design which is optimized for the M855A1
 - Significantly improved Class I/II reliability
 - ECP approval pending
- **Army authorized upgrade of all M4s to the M4A1 configuration in Sep 2010**
 - First unit converted in May 2014 (1st ID)



- ✓ Currently producing systems via FN Manufacturing, LLC

Limited Full & Open Competition

- ✓ 300k systems
- ✓ Sources Sought Notice released, May 2014
 - RFP release, Dec 2014
 - Contract Award, 4QFY15

Additional Product Improvements

- Capabilities under review
- RFP(s) released as early as end of 2QFY15

Continue to incrementally improve the capability of the Army service rifle

Future M4/M16 Enhancements



Modified Magazine

- Developed by the ARL and ARDEC
 - Increased angle on the feed lip
 - Extended front wall height
- Increases reliability and decreases wear
- Testing at ATC has shown a 300% increase in the mean rate between stoppages



**Standard magazine (orange)
vs. improved magazine (grey)**



**Front view of modified magazine
(left) and legacy (right)**



M320 Grenade Launcher



■ **Description:**

- The GLM is a 40mm grenade-launching weapon system
- M320 mounts under M16; M320A1 mounts under M4 series
- Improves squad level indirect/direct grenade launching capability out to 400m

■ **Requirement:**

- Capability Production Document (CPD), Feb 2007; Revised Jun 2007

■ **Background:**

- Full Materiel Release, Dec 2008
- Over 29,626 fielded to date



- ✓ Currently producing M320 systems via H&K Defense

Full & Open Competition

- ✓ ~20,000 systems
- ✓ Sources Sought, Jan 2014
- ✓ TDP presently being converted to Govt. format
 - Draft RFP release, Jun 2014
 - Competitive Contract Award, 3QFY15

Full and Open Competition begins later this year to procure M320s required to complete the Army's procurement objective

Compact Semi-Automatic Sniper System (CSASS)



- **Description:**

- Compact and lighter weight 7.62mm SASS, with shorter barrel, collapsible buttstock, new suppressor, and new optic
- Provides a more full-spectrum and versatile SASS to sniper teams without sacrificing performance, accuracy and reliability

- **Requirement:**

- SASS Operational Requirements Document (ORD), Jun 2004
- MCoE Letter of Clarification, Feb 2012

- **Desired Capabilities:**

- Reduce Soldier load, improved ergonomics, survivability, portability and decreased "felt" recoil
- Maintain a high level of precision needed to effectively engage enemy combatants



- ✓ Draft Request for Proposals (RFP) closed Jan 2013
- ✓ FY15 funding issue addressed
- ✓ NDI based strategy
- Final RFP to be released, May 2014; closes after 60 days
- 10 Bid samples required along with technical and cost proposals
- Down-selection activity, Jun 2014 to Jan 2015
- Contract Award for test assets, Mar 2015 (PVT and OT)
- Production Option, 3QFY16

Lightening the load while improving the effectiveness of our Snipers



Precision Sniper Rifle (PSR)



- **Description:**
 - Multi-caliber, bolt-action sniper rifle effective against personnel targets at extreme ranges
 - Enhances Sniper's role in supporting combat operations
- **Requirement:**
 - The Army is currently staffing a PSR requirement intended to meet the needs of the Army Sniper community
 - Now includes anti-materiel capability
- **Desired Capabilities:**
 - Precision fire out to 1500m, significantly increased P_h at intermediate ranges
 - Enhanced/increased adjustability with common ergonomic features
 - Modular, multi-barrel design



- ✓ SOCOM Firm-Fixed Price Contract (10 year) for weapon, ammo and spare parts awarded, Mar 2013
- ✓ SOCOM Firm-Fixed Price Contract (5 year) for day optics awarded, June 2011
 - Modification of SOCOM contracts for Army quantities
 - Army looking at options for procuring optics for its rifles and the .338 AP munition

Addresses long and medium-range needs of the modern battlefield in one package



Grenadier Sighting System (GSS)



■ **Description:**

- The GSS provides Soldiers the ability to quickly and accurately engage targets with the M320/M320A1 day or night

■ **Requirement:**

- Requirements revised as a result of feedback received from Industry.

■ **Desired Capabilities:**

- Updatable for future ammo
- Capable of multiple ballistic solutions and presets selected by the user
- Night time operation capability
- Long run time
- No special tools



- ✓ Requirement modified based on Industry feedback, Fall 2013
- ✓ Market Survey released, Dec 2013
- ✓ Funding issue addressed
 - Acq strategy discussions continue
 - COTS vs. developmental
 - Draft RFP, Summer 2014
 - Industry Day, Summer 2014
 - Final RFP released, Fall 2014



Squad Common Optic (SCO)



■ Description:

- Provide an improved capability to recognize and engage targets from 0 to 600m with the M4/M16, M249, and M240L
- Variable magnification optic that combines the reflexive fire capability of the M68 Close Combat Optic (CCO) and offers greater resolution than the M150 Rifle Combat Optic (RCO) for increased recognition ranges

■ Requirement:

- Draft Capability Development Document (CDD) in process
- PM is working with User to further inform the development of the requirement (emphasis on technologies associated with Gen II vs. Gen III optical bench)



- ✓ Small Arms Fire Control Industry Day, Jun 2013
- ✓ Dismounted Non-Network Enabled Experiment, Aug - Sep 2014
- ✓ Variable power DVO assessment
 - Requirement approval, Feb 2015
 - RFP released, Mar 2015

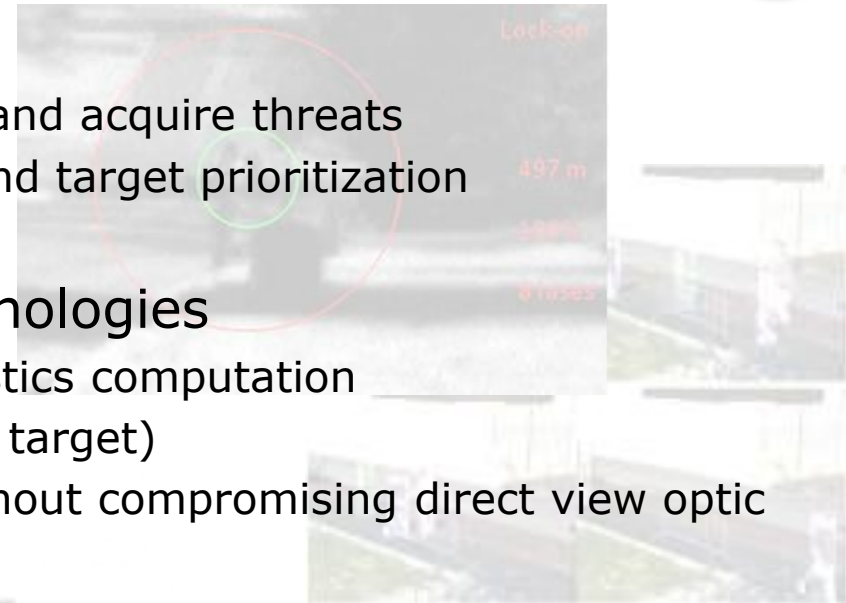


Back-up

Small Arms Fire Control Technology Needs



- Enhanced Target Acquisition
 - Improved ability to detect, situate, and acquire threats
 - Systems to enhance identification and target prioritization
 - Tools to aid in damage assessment
- Enhanced Ballistic Solution Technologies
 - Accurate, verifiable, updatable ballistics computation
 - Environmental sensors (local and at target)
 - Display firing solution to Soldier without compromising direct view optic
- Closed Loop Fire Control
 - Tracking of last shot, to allow compensation on follow-up
 - Control and programming of programmable ammunition
- Accurate Weapon Orientation
 - Miniaturized/Low Power elevation and cant sensors
 - Orientation relevant to target, fed to ballistics computer
- Reduced SWAP—both opto-mechanics and electronics



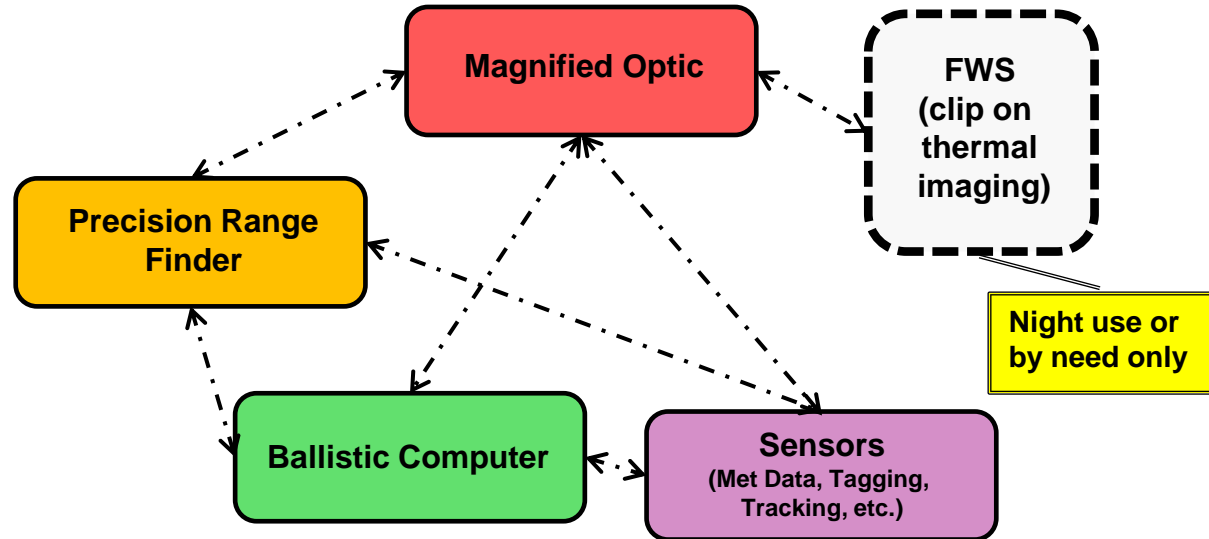


Future Fire Control Technologies



Goals:

- Range Determination
- Target Recognition
- Target Tagging
- Target Tracking
- Incident Firing
- Platform Stabilization
- Net Ready (Intra-Soldier)
- Integrated yet Modular (Built as a system but replaceable components)
- MET data
- Digital overlay within DVO
- Ballistic computation with environmental factors
- Disturbed reticle
- Acceptable Cost
- Weight



Future fire control and optics should be built around a modular concept consisting of an optic, a range finder, a ballistic computer, a limited visibility unit, and an appropriate suite of sensors, where each module can be upgraded or replaced independent of the other modules (open system architecture). Critical to the system is a Direct View optic that requires zero power to operate. **The modules can be integrated through any means as long as they are able to be replaced and upgraded independently.**