

Infantry Weapons Systems Product Group 13 Overview

Lieutenant Colonel Scott A. Huelse





Infantry Weapons Systems

LtCol Scott Huelse

- **P**rincipal agent for equipping and sustaining Marine Corps Operating Forces with the weapons and systems to accomplish Infantry, Anti-armor, Amphibious Raids and Reconnaissance, target acquisition, force protection, and non-lethal systems missions.
- IWS is also developing the process by which the Marine Corps addresses the rifle squad as an integrated system and defines the Marine Expeditionary Rifle Squad of the future.



Portfolio

Infantry Weapons Systems

Anti-Armor Systems

Anti-Armor
Anti-Structure



Reconnaissance & Amphibious Raids

Parachute/Dive
Special Purpose
Boats
Aerial Delivery



Infantry Weapons

Individual Weapons
Crew Served



Optics & Non-Lethal Systems

Day Optics
Night Optics
Non-Lethal Systems



Marine Expeditionary Rifle Squad

Squad Integration
Tech Insertion
Marine Enhancement Program





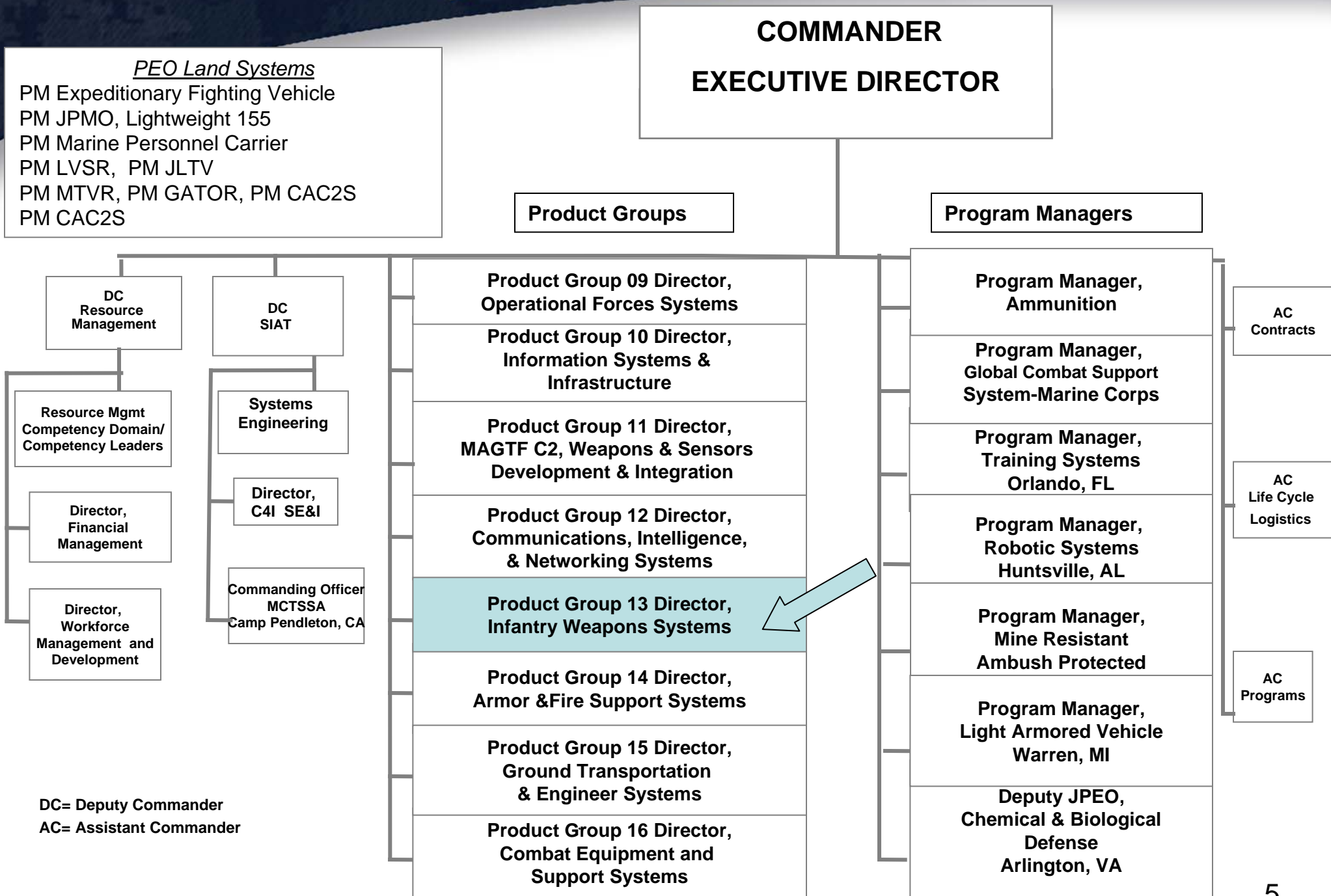
Infantry Weapons Systems

LtCol Scott Huelse

- Our perspective spans the continuum from rapid response projects to fill urgent needs of the operating forces to traditional long-term development and production programs.
- Our current activities ranges from COTS procurement to systems development & demonstration.
- We are looking to industry for cutting edge technology that can assist in providing enhanced capabilities while reducing system size and weight without losing performance.
- The Focus is on IR&D, and S&T partnerships within industry to provide the state-of-the-art COTS products that are attractive to Infantry Weapons Systems



Where we are located!





Product Group Principals:

PGD: LtCol Scott A. Huelse 703-432-3688

PM MERS: Mr. Mark Richter 703-432-3744

PM R&R: Mr. William Barnebee 703-432-3638

PM ONS: Mr. Eric Miller 703-432-3612

PM IW: LtCol Tracy Tafolla 703-432-4641

Competency Alignment Team / Strategic Business Team

- **Business Manager:** Mr. Robert Forrester 703-432-3670
- **Contracts Manager:** Mr. David Marr 703-432-3724
- **Lead Financial Manager:** Ms. Barbara Fielding 703-432-3733
- **Lead Engineer:** Mr. Vincent Ellis 703-432-3694
- **Lead Logistician:** Mr. Richard Fielding 703-432-3690
- **Technologist:** Mr. George Gibbs 703-432-3676
- **ManPower, Personnel & Training:** Mr. Richard St. Armour 703-432-3726



		FY08	FY09	FY10	FY11	FY12	FY13	
Marine Expeditionary Rifle Squad	RDT&E	\$3.6M	\$4.2M	\$4.4M	\$4.6M	\$4.8M	\$4.9M	
	PMC	\$3.0M	\$4.1M	\$3.3M	\$3.4M	\$4.4M	\$4.5M	
	Marine Expeditionary Rifle Squad – Equipment Integration							
	Marine Enhancement Program – Infantry Focus							
	Distributed OPS							
Reconnaissance & Amphibious Raids	RDT&E	\$1.0M	\$1.0M	\$0.5M	\$0.4M	\$0.4M	\$0.4M	
	PMC	\$13.1M	\$13.2M	\$15.2M	\$19.3M	\$5.7M	\$5.1M	
	Underwater Recon Capability			JPADS				
	CRRC , UBA , Family of Raids & Recon upgrades & Sustainment							



		FY08	FY09	FY10	FY11	FY12	FY13
Optics & Non-Lethal Systems	RDT&E	\$10.5M	\$6.6M	\$6.7M	\$6.8M	\$6.9M	\$7.1M
	PMC	\$40.8M	\$25.7M	\$23.7M	\$23.9M	\$16.7M	\$18.7M
	Sniper Capability Sets - Optics						
	Thermals Illumination						
	Family of Individual Optics – Fusion & Technology Improvements						
Non-Lethal Capabilities							
Infantry Weapons	RDT&E	\$2.0M	\$2.6M	\$2.2M	\$1.8M	\$1.8M	\$1.8M
	PMC	\$59.6M	\$24.0M	\$12.1M	\$13.4M	\$12.6M	\$12.9M
	Infantry Automatic Rifle						
	Mortar upgrade & Sustainment						
Small Arms upgrades & Sustainment							



- **The next speaker is:**

**Mark Richter
PM MERS**

**Infantry Weapon Systems
Product Group 13
PM Marine Expeditionary Rifle
Squad**

Program Manager: Mark Richter





PM Marine Expeditionary Rifle Squad

Mr. Richter

Description: This program is tasked with the integration, modernization, and portfolio management of everything worn, carried and consumed by the Marine Rifle Squad.

- PM MERS works with all Product Groups and Program Managers within Systems Command.
- Conduct physical system level to component level integration of new and legacy equipment worn by Marines within the Rifle Squad. Provide integration recommendations and attributes for new equipment requirements.
- Gruntworks Squad Integration Facility



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RDT&E	\$3.6M	\$4.2M	\$4.4M	\$4.6M	\$4.8M	\$4.9M
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Marine Expeditionary Rifle Squad	Marine Expeditionary Rifle Squad – Equipment Integration					
	Marine Enhancement Program – Infantry Focus					
	Distributed OPS					



PM Marine Expeditionary Rifle Squad

Mr. Richter

Near-Term Program Initiatives

- **Torso Load Bearing System Integration** - integration and ergonomic initiatives
- **Headborne System Integration** - integration of protection, sensors, communication, and displays.
- **Weapon System Integration** - weight, human factors, C2, and power management on squad level weapons
- **Weight Effects vs Infantry Performance**
- **Mobility Platform Integration**



PM Marine Expeditionary Rifle Squad

Mr. Richter

Future Program Initiatives

- **Top 5 Capability Requirements for the Future Marine Rifle Squad**
 - Sustain and Manage Power
 - Self Aid and Buddy Aid
 - Combat ID
 - Situational Awareness Internal to the Squad
 - Protection against the environment
- **Marine Corps Soldier System program**
- **Technology Harvesting opportunities**
- **Continuous Integration and Human Factors assessments**



PM Marine Expeditionary Rifle Squad

Mr. Richter

Integrated solutions with a focus on human factors is critical for optimizing emerging capabilities across today's and tomorrow's Marine Rifle Squad. Design and develop and integrated, competitive product.





PM Marine Expeditionary Rifle Squad

Mr. Richter

- **The next speaker is:**

Mr. Bill Barnebee
PM Raids & Recon

**Infantry Weapons Systems
Product Group 13
PM Reconnaissance and
Amphibious Raids**

Program Manager: Bill Barnebee





PM Reconnaissance and Amphibious Raids

Mr. Barnebee

Description: Specialized equipment for use by reconnaissance and other selected USMC units across the range of military operations.

- **Oversee** the acquisition of small craft, and equipment for explosive breaching, individual assault, combatant diving, parachuting, and airdrop delivery systems.
- Constant process of R&D for new initiatives based upon the evolving nature of warfare and life cycle management/sustainment/modification of currently fielded systems
- PM acquisitions can be short notice on COTS/NDI programs to long term R&D initiatives for cutting edge technologies.



PM Reconnaissance and Amphibious Raids

Mr. Barnebee

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RDT&E	\$1.0M	\$1.0M	\$0.5M	\$0.4M	\$0.4M	\$0.4M
PMC	\$13.1M	\$13.2M	\$15.2M	\$19.3M	\$5.7M	\$5.1M
Reconnaissance & Amphibious Raids	Underwater Recon Capability			JPADS		
	CRRC , UBA , Family of Raids & Recon upgrades & Sustainment					



Near-Term Program Initiatives

- CDDFM Display
- Tactical Hydrographic Survey Equipment/Tactical Underwater Navigation System (THSE/TUNS)
- Joint Precision AirDrop Systems (JPADS)
- Ultra - LightWeight JPADS (ULW JPADS)
- Joint Precision AirDrop Systems Mission Planner (JPADS-MP)



Future Program Initiatives

- ***R&D Investment***
 - Enhanced Underwater Breathing Apparatus (EUBA)
 - Underwater Locator Beacon (ULB)
 - 10K JPADS
- ***PMC Investment***
 - 3Q/08 – Combat Diver Full Face Mask (CDFFM)
 - 3Q/08 – High Altitude High Opening Navigation (HAHO Nav)
 - 4Q/08 – Multi-Fuel Engine (MFE)
 - 2Q/09 – Joint Precision Aerial Delivery System (JPADS)
 - 1Q/10 – Tactical Handheld Survey Equipment
- ***O&MMC Investment***
 - Life-cycle sustainment for combatant diving and parachute equipment



Open Discussion Topics

- **Low cost production of accurate underwater and parachute navigation equipment**
- **Advanced display technologies**
 - Ruggedized for military use in extreme environments
 - Low power use by components,
 - High resolution displays
 - Smaller/lighter batteries that provide extended life
- **Textiles that provide environmental and fire retardant protection while ensuring adequate wicking under body armor**
 - Full body armor integration with load bearing equipment and the uniform of the operator - a system of systems approach
- **Low cost *disposable* precision parachute canopy**



- **The next speaker is:**

Mr. Eric Miller
PM ONS

Infantry Weapons Systems Product Group 13 Optics and Non-Lethal Systems

Deputy Program Manager: Mr. Eric Miller





Deputy PM Optics and Non-Lethal Systems

Mr. Eric Miller

PM ONS manages over 40 Optics related and Non-Lethal products with an Approved Acquisition Objective of ~620,000 systems. Our Mission is to:

- Reduce System Size, Weight & Power Draw without losing performance “Lighten the Load”
- Increase Target ID Range performance
- Improve resolution in sensors and displays
- Reduce the logistics tail (Cost of maintaining 40 + programs)
- Equipment Issue (time and footprint for 202,000 Marines)
- Improve Armory staging challenges and problems



Deputy PM Optics and Non-Lethal Systems

Mr. Eric Miller

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Optics & Non-Lethal Systems	Sniper Capability Sets - Optics					
	Thermals & Illumination					
	Optics Modifications and upgrades & Sustainment					
	Family of Individual Optics – Fusion & Technology Improvements					
	Non-Lethal Capabilities					



Deputy PM Optics and Non-Lethal Systems

Mr. Eric Miller

Optics Near-Term Program Initiatives

- Improved Night Vision Demonstrator
- Tritium Replacement in Weapon Sights
- Sensors for Simultaneous Movement & Directed Weapons Fire
- Fused Multi-Spectral Weapon Sight (FMWS) II
- UXGA EBAPS
- Analysis of Alternatives = Family of Individual Optics





Deputy PM Optics and Non-Lethal Systems

Mr. Eric Miller

Non-Lethal / Force Protection Near-Term Program Initiatives

- **Ocular Interruption (OI)**
 - Follow-on POR to GBD-IIIC
- **Mission Payload Module Non-Lethal Weapons System (MPM-NLWS)**
- **Escalation of Force – Mission Module (EoF-MM)**





Optics Future Program Initiatives

- **Family Of Individual Optics (FOIO)** The FOIO development will consist of four programs designed to incorporate multiple functions of current systems into single platform optics.
 - **Helmet Mounted Fused Optical Sight** will:
 - provide increased field of view to increase mobility and situational awareness
 - provide shared imagery from all fused optics
 - **Crew Served Fused Optical Sight** will:
 - provide target identification in all weather conditions
 - operate to maximum effective ranges of the crew served weapons
 - **Individual Weapon Fused Optical Sight** will:
 - provide target identification in all weather conditions
 - operate to maximum effective ranges of the individual Marine's weapon
 - **Hand Held Fused Optical Sight** will:
 - provide increased field of view to increase mobility and situational awareness
 - provide shared imagery from all fused optics



Deputy PM Optics and Non-Lethal Systems

Mr. Eric Miller

Non-Lethal / Force Protection Future Program Initiatives

- **Ocular Interruption (OI)**
 - Industry can develop lighter, smaller, and effective eye-safe OI devices
- **Mission Payload Module - Non-Lethal Weapon System**
 - Industry can develop a NL payload that limits risk of permanent injury while maximizing incapacitation



Deputy PM Optics and Non-Lethal Systems

Mr. Eric Miller

Open Discussion Topics

- **Future funding constraints will require innovative solutions**
 - Fusion programs for all current optics
 - Developing an eye-safe ocular interruption device for use in Escalation of Force (EoF) Missions



Deputy PM Optics and Non-Lethal Systems

Mr. Eric Miller

- **The next speaker is:**

LtCol Tafolla
PM IW

**Infantry Weapons Systems Directorate
Product Group 13
PM Infantry Weapons**

Program Manager: LtCol Tracy Tafolla





PM Infantry Weapons

LtCol Tracy Tafolla

- **PM Infantry Weapons procures and is the life cycle manager for the Marine Corps' small arms weapons**
- **Pistols, service rifles and carbines, grenade launchers, machine guns, precision rifles**
- **Main effort: modernization through modifications to legacy systems and procurement of replacement systems**



PM Infantry Weapons **LtCol Tracy Tafolla**

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PM Infantry Weapons

LtCol Tracy Tafolla

Near-term program initiatives

- **Digital Mortar Fire Control System**
- **Rapid Engagement Precision Rifle (REPR)**
 - Semi-automatic sniper rifle
 - 7.62mm
 - 1 – 2 MOA accuracy out to 800 – 1000 meters
 - COTS
- ***Collapsible stock for M16 rifles***
 - With adjustable cheek piece
- ***USMC Long Range Sniper Rifle (LRSR)***
 - Caliber undetermined
 - 1 MOA accuracy out to ~2000 meters
 - Short developmental period



PM Infantry Weapons

LtCol Tracy Tafolla

Future program initiatives

- ***Improved projectile***
 - Terminal ballistics less affected by intervening barriers (e.g. car windshields and doors) than current service ammunition
 - For calibers currently in use by US military



PM Infantry Weapons

LtCol Tracy Tafolla

Open discussion topics

