Armored and Fire Support Systems
Product Group 14
Overview

Robert L. Williams Jr.,
Product Group Director
Our Product Groups Portfolio consists of the following:

**PM FSS**
- Joint Enhanced Targeting System
- Common Laser Rangefinder (CLRF)
- Ground Counter Fire Sensor (GCFS)
- Ground Laser Target Designator (GLTD)
- M198 Howitzer
- Howitzer Information Tool
- Improved Position/Azimuth Determining System
- Mortar Ballistic Computer
- Meteorological Station Group, Profiler
- Modular Artillery Charge System
- Multi Option Fuze Artillery
- Portable Inductive Artillery Fuze Setter

**PM EFSS**
- Expeditionary Fire Support System
- Internally Transportable Vehicle
- High Mobility Artillery Rocket System
- Guided Multiple Launch Rocket System
- Rockets

**PM AAVS**
- RAM/RS Program
- AAV Modification Kits
- AAV C7 Upgrades

**PM TANKS**
- M1A1 Firepower Enhancement Program
- M1A1 Safety Modification Program
- M88A2 Hercules Tank Recovery Vehicle
- Armored Vehicle Driver Vision Enhancement
- Marine Corps Transparent Armor Gun Shield
We are soliciting help from Industry in order to:

• Keep systems current and capable
• Insert technology into our products
Product Group Principals:

PM Fire Support Systems, Mr. James Ripley
PM Tank Systems, LtCol Wendell Leimbach
PM Assault Amphibious Vehicles, Mr. Bryan Prosser
PM Evolutionary Firing Systems, Mr. John Garner

Competency Alignment Team

- Business Manager: Vacant
- Contracts Manager: Mr. Edwin Wright
- Lead Financial Manager: Mr. Jeffrey Speer
- Lead Engineer: Mr. Craig Melton
- Lead Logistician: Mr. Jeffrey Gibbs
### AFSS FYDP Investments

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PG-14
Areas of Interest:

- Lighter and “Better” Combat Vehicle Armor
- More accurate and lighter target location and designation
- Power Generation
- Survivability
- Mobility Enhancements
- Ammunition Enhancements (EFSS and HIMARS)
- Alternative meteorological sensing and prediction tools
- Obsolescence (parts, equipment)
• Next speaker.....

Mr. Bryan Prosser, Program Manager, Assault Amphibious Vehicle Systems
Armor and Fire Support Systems
Product Group 14
Assault Amphibious Vehicle Systems

Mr. Bryan Prosser, Program Manager
Mission:
• Lifecycle management of the AAV FOV
• Support and maintain safe, reliable and combat effective AAVs
• Develop, procure and field modifications to maintain combat readiness and effectiveness
• Three Variants in the AAV FOV
  – AAVP7A1 – Personnel
  – AAVC7A1 – Command
  – AAVR7A1 – Recovery

• Mission: To maneuver the surface assault elements of the landing force and their equipment from assault shipping during amphibious operations to inland objectives and to conduct mechanized operations and related combat support in subsequent operations ashore

• History
  – 1972 – 1975 LVT Fielded
  – 1983 – 1987 Service Life Extended Program and re-designated AAV7A1
  – 1999 – 2007 RAM/RS Upgrade

• Remain in the USMC inventory until fully replaced by EFV in 2025
Near – Term Program Initiatives

AAVC7 C2 Upgrade
- Replacing obsolete communications equipment and providing HF, VHF and UHF space LOS and UHF SATCOM capability
- Providing 6 functionally interchangeable staff work stations capable of hosting current MAGTF C2 applications

Thermal Sight System
- Fielding Started February 2008
- Fielding Complete December 2008 (except MPF)

AAV Mod Kits
- Develop and field modifications required to address issues related to safety, reliability, parts obsolescence and emerging requirements
Future Program Initiatives

Survivability, C4I and Environment/Habitability (SCE) Upgrade

- **Survivability**
  - Improved Armor System
  - Spall Liner
  - Improved Fire Suppression System
  - Blast Attenuation/Protection Seats

- **C4I**
  - Open System Architecture
  - Improved Battlespace Situational Awareness
  - Integral Navigation System
  - Improved Vehicle Intercom
  - Auxiliary Power System/Improved Power Management

- **Environment/Habitability**
  - Improved Air Quality
  - Noise/Heat/Vibration Reduction

Up-Gunned Weapons Station (UGWS) Improvements

- Stabilization & proportional controls
- Laser Range Finder
- Improved Slip Ring
- Turret Armor
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**AAV Modification Line**

| RDT&E                 | $43.2M|
| PMC                   |       |

**AAV SCE Line**
• Next speaker….

Mr. John Garner, Program Manager, Evolutionary Firing Systems
Armor and Fire Support Systems
Product Group 14

Evolutionary Firing Systems

PMM-144

Expeditionary Fire Support System (EFSS)
Internally Transportable Vehicle (ITV)
High Mobility Artillery Rocket System (HIMARS)

Mr. John Garner, Program Manager
Description:

• Responsible for the complete life-cycle management of the EFSS, ITV, and HIMARS; including developing, testing, fielding, sustaining, and planning for disposal of the systems

• Product Portfolio: EFSS, ITV, and HIMARS

• Industry Can Provide Support By:
  – Continuing / Accelerating Development of Lightweight Vehicle Armoring Techniques and Material
Near-Term Program Initiatives

- **EFSS**
  - Fielding
  - Precision Extended Range Munitions (17km)
  - Corrosion Protection

- **ITV**
  - Fielding
  - Weight Reduction
  - Lightweight Vehicle Armoring
  - Communication and Medical Variants
  - Corrosion Protection

- **HIMARS**
  - Completion of Fielding
  - Procurement of Guided Multiple Launch Rocket System (GMLRS) Rocket Pods in accordance with Total Munitions Requirement
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Future Program Initiatives

- **EFSS**
  - Ammunition Capability Enhancements
    - Infra-Red (IR) Illumination
    - Rocket Assisted Projectiles (RAP)

- **ITV**
  - Weight Reduction
  - Shoring
  - Alternative Engines or Propulsion System

- **HIMARS**
  - System Capability Upgrades Throughout the FYDP
  - Continue Procurement of GMLRS Rocket Pods Throughout the FYDP
  - Sustainment of Fielded HIMARS Systems
  - Integration of New Rockets
• Next speaker.....

Mr. James Ripley, Program Manager, Fire Support Systems
Armor & Fire Support Systems
Product Group 14
Fire Support Systems

Mr. Jim Ripley, Program Manager
PM Fire Support Systems is responsible for the acquisition, fielding, and sustainment of equipment that provides the Marine Corps with its ground fire support capability
Project Portfolio

• Fielded Firing Systems
  – M198 Phase Out & LW155 Fielding Support
  – SL-3 / Ancillary Items:
  – Munitions Development, i.e. Excalibur
  – Asset Enterprise Management Information Tool (AEMIT) / Electronic Weapons Record Book (EWRB)

• Targeting Systems
  – Common Laser Range Finder (CLRF)
  – Laser Target Designators (LTD)
  – Thermal Laser Spot Imager (TLSI)
  – True North Module (TNM)
  – Joint Effects Targeting System (JETS)

• Survey / Met Systems
  – Ground Counter Fire System (GCFS / HALO)
  – MAGTF Meteorological Information Manager (MMIM)
Five Requirements for Accurate Predicted Fires

1. ACCURATE TARGET LOCATION
   - M-198
   - EFSS
   - LW155
   - HIMARS

2. ACCURATE BATTERY LOCATION
   - IPADS
   - AIMING CIRCLES
   - MASS

3. ACCURATE MET INFO
   - MSG Upgrade
   - NWP

4. ACCURATE COMPUTATIONAL PROCEDURES
   - IR Illum
   - IMX
   - Bi-Spectral Smoke
   - PIAFS
   - EPIAFS
   - MOFA
   - MACS
   - ACA2P
   - PGK
   - EXCALIBUR

5. ACCURATE MVV/AMMO DATA
   - LHMBC
   - GDU-R
   - AEMIT
   - EWRB
   - AFATDS

- CLRF
- LTD (PLDR, TLSI)
- TNM
- GLTD II
- JETS
- GCFS
- TLDHS
- AN/TPQ-46A+
- G/ATOR
- LCMR
Near-Term Program Initiatives

• **Fielded Firing Systems**
  – Equip howitzers with sensors to track Effective Full Charges (EFCs), miles traveled / terrain towed, and recoil condition

• **Targeting Systems**
  – True North Module: *RFP release in May 08.* Azimuth unaffected by magnetic fields. $2-4M in FY08 Procurement.

• **Survey / Met Systems**
  – Procurement of 3 balloon-less Met Sensor systems for Extended User Evaluation
  – Find alternate battery opportunities for Ground Counter Fire Sensor GCFS
## FSS FYDP Investments

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Future Program Initiatives

• Fielded Firing Systems

• Targeting Systems
  – Continue to research True North technology for other systems
  – **JETS**: Work with Army/AF and industry to develop range finder, spot imager and designator with a reduced footprint / weight
  – Research the Marine Corps need for hand held designators

• Survey / Met Systems
  – **GCFS**: Continue participation in Multi-National P3I Working Group (UK & Canada)
  – Replace the Meteorological Station Group (MSG) with the MAGTF Meteorological Information Manager (MMIM)
Next speaker:

LtCol Wendell Leimbach, Program Manager, Tank Systems
Armor and Fire Support Systems
Product Group 14
Program Manager, Tank Systems
PMM-142

LtCol Wendell Leimbach,
Program Manager
MISSION:

To equip operating forces with effective sustainable tank, heavy recovery, assault bridging, and support systems to accomplish their warfighting missions; and to incorporate next-generation armor and tactical vehicle technologies to ensure their continued combat dominance.

Product portfolio:
M1A1 Tank
M88A2 Recovery Vehicle / Support Equipment
Marine Corps Armored Gun Shields (MCTAGS)
Near-Term Program Initiatives

- **M1A1 Tank**
  - M1A1 Firepower Enhancement Program
  - Stabilized Tank Commander’s Weapon Station
  - Improved loader’s weapon station
  - Tank Systems Improved Reliability and Sustainability
  - 120mm Multi-Purpose High Explosive round
  - Crew Cooling
  - Improved External Auxiliary Power Unit

- **M88A2 HERCULES**
  - Improved Vehicle Commander’s Weapon Station
  - .50 cal Thermal Weapons Sight
### Tank Systems FYDP Investments

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<td><strong>Safety Mods/Tool and Test</strong></td>
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Future Program Initiatives
Active Protection Systems
C4I Integration Modernization
Survivability/Lethality Enhancement
Sniper Detection
Supportability initiatives
Vehicle Health Management
Reliability Centered Maintenance
Platform digitization (analog vehicles in a digital age)
Tanks in the Global War on Terrorism
Questions?