



MARINE CORPS SYSTEMS COMMAND
UNITED STATES MARINE CORPS

Advanced Planning Briefing to Industry 2006

Armor and Fire Support Systems

Product Group 14

Overview

Mr. Robert Williams, Jr., Product Group Director



To equip operating forces with assault amphibious vehicle systems, fire support systems, a high mobility artillery rocket system, an expeditionary fire support system and tank systems to accomplish their war-fighting mission.

Through the use of Portfolio Management (PfM), AFSS manages its portfolio of programs in a coordinated, strategic fashion that maximizes the combat capabilities to the Operating Forces.



AFSS Programs

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 (EFSS/ITV)

PM Tank Systems

Armored Vehicle Driver Vision Enhancement
M1A1 Firepower Enhancement
M1A1 Safety Modification Program
M1A1 Tank Sustainment Program
M88A2 Hercules Tank Recovery Vehicle

PM AAVS

RAM/RS Program
AAV Modification Kits
Foreign Military Sales

PM HIMARS

High Mobility Artillery Rocket System
Guided Multiple Launch Rocket System Rockets
Marine Corps Transparent Armor Gun Shield



Product Group Principals:

<i>PM FSS:</i> Mr. James Ripley	703-432-4323
<i>PM TANKS:</i> LtCol John Swift	703-432-4325
<i>PM AAVS:</i> Mr. Bryan Prosser	703-432-4321
<i>PM HIMARS:</i> Mr. Jim Westerholm	703-432-4204
<i>PM EFSS:</i> Mr. John Garner	703-432-3258

Strategic Business Team:

Business Manager: Mr. Sushil Baluja	703-432-4253
Lead Engineer: Mr. Edward Lerner	703-432-4259
Lead Logistician: Mr. Jeffrey Gibbs	703-432-4272
Lead Financial Manager: Mr. Jeffrey Speer	703-432-4274
Contracts Manager: Mr. Edwin Wright	703-432-4284
Technologist: Mr. Craig Melton	703-432-3492



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Appropriations	FY 06	FY 06 Supplemental	FY 07
RDT&E	16.883		15.660
O&MMC	7.110	20.750	9.509
PMC	235.	193.316	138.346

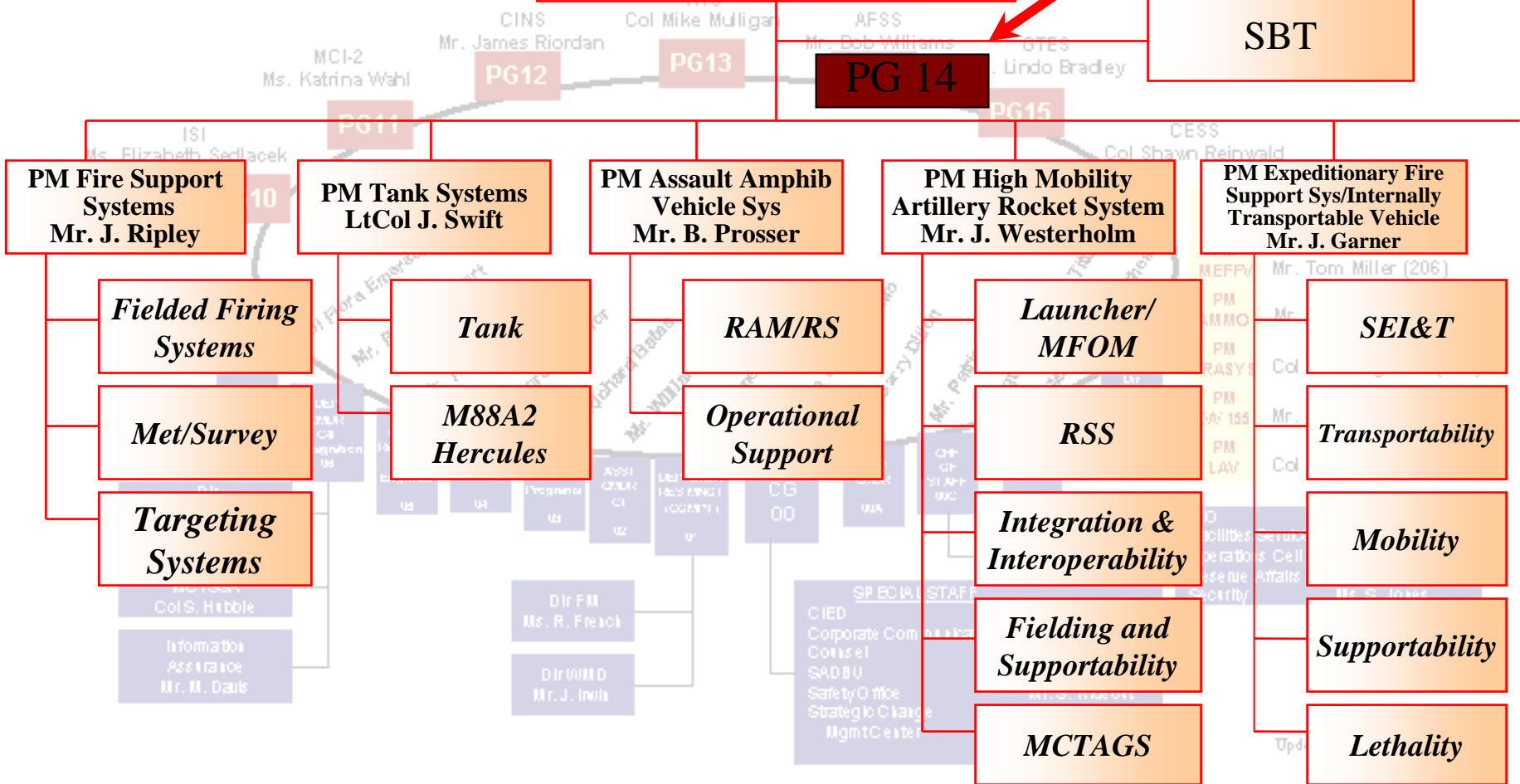


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Product Group Director
Mr. Robert Williams, Jr.

SBT





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Next....Mr. Bryan Prosser



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Product Group 14

Assault Amphibious Vehicle Systems

Mr. Bryan Prosser, Program Manager



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PM Assault Amphibious Vehicle Systems Mr. Prosser

Develop, demonstrate, procure, field, provide life-cycle support and maintain safe, reliable and cost efficient Assault Amphibious Vehicle Weapon Systems for USMC Forces



4/17/2006



APBI 2006





RAM/RS Team

- **RAM/RS Program**
- **IROAN Planning/Execution**
- **OIF Support**
- **AAV Disposal Planning**
- **Foreign Military Sales**

Operational Support Team

- **M36E3 Sight Upgrade**
- **AAVC7A1 Upgrade**
- **EAAK Reprocurement**
- **Various ECPs/Modifications (i.e., DAGR integration, tow pintle replacement)**
- **Torsion Bar replacement**
- **OIF Lessons Learned**

- **AAV7A1 originally fielded in 1972-1975 will remain in USMC inventory until fully replaced by the EFV in 2020.**
- **With industry support, PM AAVS must maintain the capabilities of the AAV FOV in support of fleet needs.**



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PM Assault Amphibious Vehicle Systems Mr. Prosser

Appropriations	FY 06	FY 06 Supplemental	FY 07
RDT&E	\$769K		\$807K
O&MMC	\$449K	\$14.2M	\$449K
PMC	\$20.8M	\$58.1M	\$12.5M



Near-Term Program Initiatives

- *UGWS M36E3 Sight Upgrade*
 - 3Q/FY06 - RFP release for open competition
- *AAVC7A1 Capability Upgrade Demonstration*
 - FY06 – Demonstrate ability to integrate EFV(C) capability into the AAVC7A1
- *Counter IED System Integration*
 - FY06 – Integration of selected system onto AAV FOV



Future Program Initiatives

- *R&D Investment*
 - FY08-09 - AAV Capability Enhancement Studies (POM-08)
 - FY08-09 - AAVC7A1 Upgrade (POM-08)
 - FY08-10 - UGWS Thermal Sight Integration (POM-08)
- *PMC Investment*
 - 4Q/FY09 – FY12 - AAVC7A1 Upgrade (POM-08)
 - FY10-12 - UGWS Thermal Sight Procurement (POM-08)



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NEXT....Mr. John Garner, Program Manager, EFSS/ITV



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Armor and Fire Support Systems

Product Group 14

Expeditionary Fire Support Systems/Internally Transportable Vehicle

Mr. John Garner, Program Manager



Description

- EFSS will be the principal indirect fire support system of the vertical assault element of a Ship-To-Objective-Maneuver (STOM) force
 - 66 EFSS - 2 Mobility Platforms (PM), 120mm RTM, Ammunition, and Trailer
- ITV will provide a deployed Marine Air-Ground Task Force (MAGTF) and Marine Expeditionary Unit - Special Operations Capable (MEU-SOC) with a vehicle that is internally transportable in selected rotary and fixed wing aircraft
 - 496 Light Strike Variants & 50 Utility Variants
- IOC 2nd Qtr FY07

LSV



PM-W



PM-T





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PM Expeditionary Fire Support Sys/Internally Transportable Vehicle Mr. Garner

EFSS

Appropriations	FY06	FY06 Supplemental	FY07
RDT&E	\$6.9	\$0	\$4.0
PANMC	\$5.6	\$0	\$15.9
PMC	\$5.6	\$0	\$7.4

ITV

Appropriations	FY06	FY06 Supplemental	FY07
RDT&E	\$0*	\$0	\$0
OMMC	\$0.1	\$0	\$1.2
PMC	\$3.6	\$51.8	\$2.8

*\$5.5M FY05 funding deferred to FY06



Near-Term Program Initiatives

- *EFSS LRIP Decision - June 2006*
- *ITV LRIP Decision – June 2006*
- *Combined EFSS/ITV OT&E – October thru December 2006*



Future Program Initiatives

- ***R&D Investment***
 - Armor (underway)
 - Precision Extended Range Munition (TBD)
 - Digital Communications (FY07 – FY08)
 - Onboard Ballistic Computation (FY07 – FY08)
- ***PMC Investment***
 - Procure Armor Kits (FY2007)



Open Discussion Topics

- *GD-OTS Prime Contract but many opportunities for subs to participate – Current Examples*
 - *Air Ride Technologies*
 - *General Motors Transmissions (Power Train)*
- *Future – Armor development in process*



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NEXT....Mr. James Ripley, Program Manager, Fire Support Systems



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Product Group 14

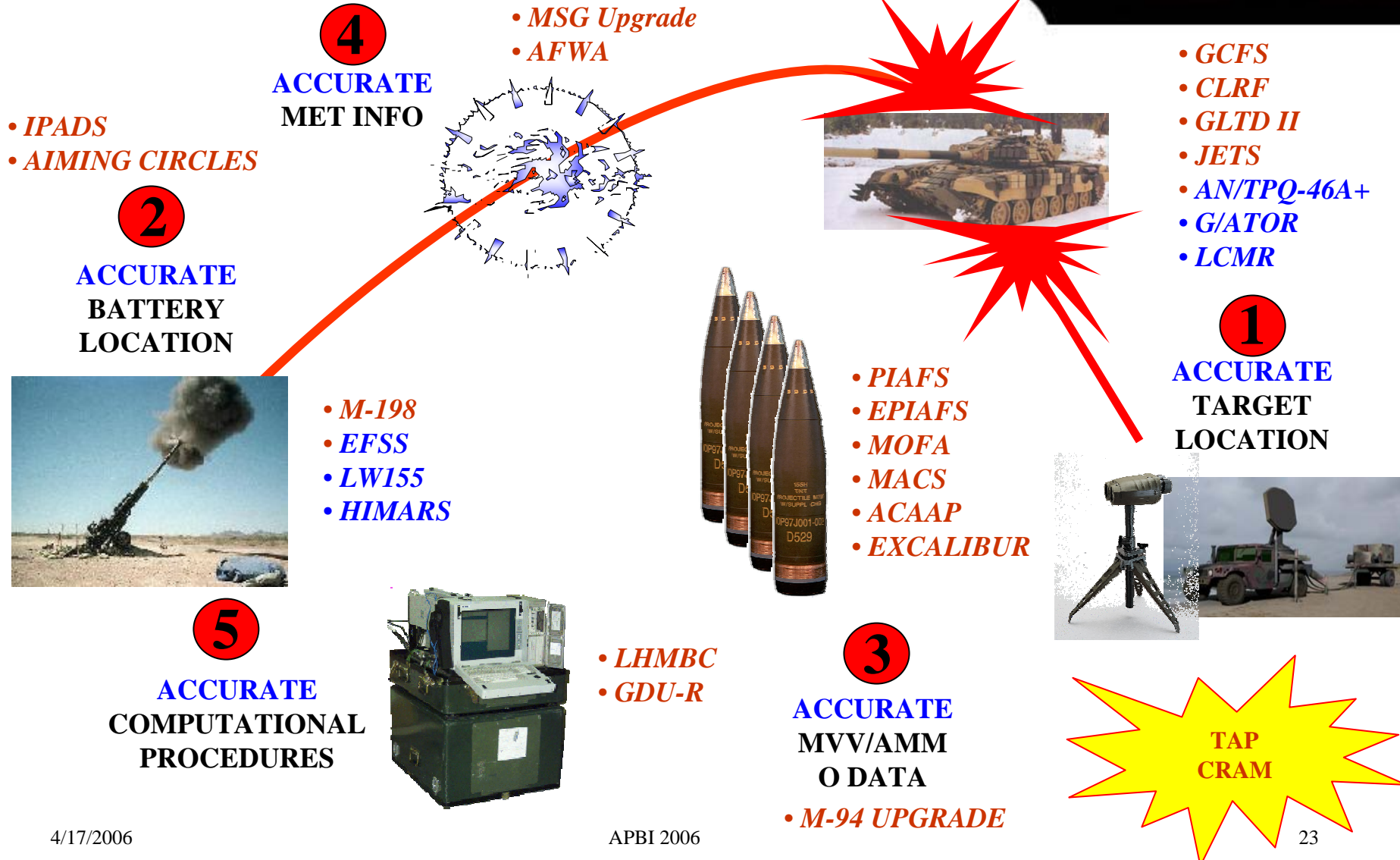
Fire Support Systems

Mr. James Ripley, Program Manager



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PM Fire Support Systems Mr. Ripley

◆ Survey/Met Team

- ❑ **Ground Counter Fire System (GCFS/HALO)**
- ❑ **Improved Position and Azimuth Determining System (IPADS)**
- ❑ **Lightweight Handheld Mortar Ballistic Computer (LHMBC)**
- ❑ **Marine Artillery Survey Set (MASS)**
- ❑ **Met Systems (Upgrades, Profiler, AFWA Access)**

◆ Fielded Firing Systems

- ❑ **M198 Phase Out and LW155 Fielding Support**
- ❑ **Aiming Circles FY 05-12**
- ❑ **Munitions (MOFA, PIAFS, EPIAFS, MACS, Excalibur, ACAAP)**
- ❑ **System Information Tool (SIT)/Autonomic Logistics**
- ❑ **Gun Display Units (GDU)**
- ❑ **Miscellaneous Ancillary (SL-3) Support**

◆ Targeting Systems

- ❑ **Common Laser Range Finder (CLRF)**
- ❑ **Laser Target Designators (LTD)**
- ❑ **True North Azimuth Detection System (TNADS)**
- ❑ **Joint Effects Targeting System (JETS)**



With the exception of JETS, which is a POM 08 issue, all the listed FSS programs are underway.

Need help :

- 1. Refreshing existing hardware with better technology**
- 2. Collecting data to track and trend system performance**



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PM Fire Support Systems Mr. Ripley

Appropriations	FY 06	FY 06 Supplemental	FY 07
RDT&E	\$4.595	\$00.00	\$4.146
O&MMC	\$2.236	\$.950	\$3.049
PMC	\$11.552	\$32.116	\$30.963



Near-Term Program Initiatives

Targeting Systems; Laser Designators and Range Finders

- **Need to reduce weight across the board**
- **Need to reduce Target Location Error (TLE) and be unaffected by magnetic fields**

Integrating the Systems Information Tool (SIT) to collect RAM data for computing

$$A_o = \frac{MTBF}{MTBF + MTTR + MLDT}$$

Integrate Air Force Weather Assessment model as meteorology input to artillery fire control.

Instrument howitzers to track Effective Full Charges (EFC), Miles and terrain towed, Recoil Condition.



Future Program Initiatives

- *R&D Investment*
 - Joint Effects Targeting System (JETS FY 08-10)
- *PMC Investment*
 - JETS or replacement/refresh LTD/LRF FY 10-12
- *O&MMC Investment*
 - Develop PBL for all systems FY 08 and out.



Open Discussion Topics

- *AFWA Employment*
- *A₀ data to track and trend all systems.*
- *Howitzer Sensors*
- *Targeting System Weight Reduction and Performance Improvement*



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NEXT....Mr. James Westerholm, Program Manager, HIMARS



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Armor and Fire Support Systems

Product Group 14

High Mobility Artillery Rocket System (HIMARS)

Mr. James Westerholm, Program Manager



PM High Mobility Artillery Rocket System Mr. Westerholm

Description: PM HIMARS has two programs in its portfolio; the USMC HIMARS and the Marine Corps Transparent Armored Gun Shield (MCTAGS). PM HIMARS is responsible for the complete life-cycle management of the USMC HIMARS and MCTAGS; including developing, testing, fielding, sustaining, and planning for disposal of the systems



USMC HIMARS



MCTAGS



- ***USMC HIMARS is in Full Rate Production***
 - First Battery (F 2/14) fielded 1Q/06
 - Initial Operational Capability (1 Battalion) planned 3Q/08
 - Full Operational Capability (2 Battalions & Supt Establishment) planned 3Q/10
- ***MCTAGS in Full Rate Production***
 - Currently fielding urgent need to II MEF in support of Global War on Terrorism
 - Complete fielding 4Q/06



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PM High Mobility Artillery Rocket System Mr. Westerholm

Appropriations	FY 06	FY 06 Supplemental	FY 07
RDT&E	\$4.083	\$0	\$6.179
O&MMC	\$2.882	\$0	\$3.220
PMC	\$147.483	\$30.000	\$58.320



Near-Term Program Initiatives

- *Procure HIMARS Systems*
 - 18 system in FY06
 - 6 systems in FY07
- *Procure Guided Multiple Launch Rocket System (GMLRS) Rocket Pods*
 - 486 rockets in FY06
- *Field MCTAGS AAO in FY06*
 - 4Q/06 - Fielding Completed
- *Field Active HIMARS Battalion (5/11)*
 - Begin fielding 2Q/07



Future Program Initiatives

- *R&D Investment*
 - Technology Insertion of HIMARS System and Munitions throughout FYDP
- *PMC Investment*
 - Procure Remaining HIMARS Systems in FY08/09
 - Continue Procurement of GMLRS Rocket Pods throughout FYDP
 - System/Capability Upgrades throughout the FYDP
- *O&MMC Investment*
 - Sustainment of fielded HIMARS systems



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NEXT....LtCol John Swift, Program Manager, Tank Systems



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Armor and Fire Support Systems **Product Group 14**

Tank Systems

LtCol John Swift USMC, Program Manager



Develop, demonstrate, procure, field, and provide life cycle support for the Main Battle Tank, Improved Recovery Vehicle and the Armored Vehicle Launched Bridge in support of the MAGTF.





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PM Tank Systems LtCol John Swift

Appropriations	FY 06	FY 06 Supplemental	FY 07
RDT&E	\$.536	\$0	\$.528
O&MMC	\$1.443	\$5.6	\$1.222
PMC	\$45.964	\$21.3	\$26.363



Near-Term Program Initiatives • *Field FEP Systems to OIF and MPF*



Attacking into the Jolan District in Fallujah

• *Field FEP Systems to OIF and MPF*

–26 system in FY06 to OIF

–116 systems in FY06/7 to MPF

• *Install Safety Upgrades*

–UTCP

–Ammo Door Pins

–QD Relocate

• *Apply OIF Modifications*

–Multi-purpose Tank Blade

–T/I Phone

–M829A3/Canister Card



Future Program Initiatives

•*R&D Investment*

- Technology Insertion for Digital Architecture and Improved Automotive Reliability

•*PMC Investment*

- Procure Fleet Wide assets for OIF Configuration
- System/Capability Upgrades throughout the FYDP

•*O&MMC Investment*

- Continued Sustainment of fielded Tank Systems



Open Discussion Topics



Future Tank Systems Improved Reliability and Sustainability through 2025

The purpose of this initiative is to conduct lifecycle modernization and support planning for the M1A1 tanks. The result of this planning will be an acquisition strategy addressing incremental technical insertion for tank systems modernization. This systematic acquisition planning approach shall ensure continued combat overmatch capability of the M1A1 tanks through their remaining lifecycle in a cost effective manner, until fielding of a replacement system (2025+). The acquisition strategy developed shall address modernization requirements in terms of survivability, sustainability, lethality, maintainability, and C4I.



Questions?

