Ground Transportation and Engineer Systems

Product Group 15 Overview

Mr. Gordon W. Taylor
Product Group Director
(703) 432-3822
Gordon.taylor@usmc.mil
• GTES is the Marine Corps principle agent for system acquisition and total life cycle system management of
  – Ground Transportation (Light, Medium, & Heavy)
  – Combat Mobility (LAV, MRAP)
  – Engineer Systems
  – Expeditionary Power Systems
  – Containers

• Our Program teams have Total Life Cycle Management responsibility for their equipment

• Our external customer is the warfighter and other services

• Our internal customers are MCSC Program Managers who require power generation equipment or a ground transportation or combat mobility platform as part of their system
Product Group Principals:

PM, Motor Transport: Thomas H. Miller
PM, Engineer Systems: William Macecevic
PM, Expeditionary Power Systems: Michael Gallagher

Competency Alignment Team
- Business Manager: Jack Cave
- Contracts Manager: Stephen Caracciolo
- Lead Financial Manager: Steven Costa
- Lead Engineer: Julie Redfern
- Lead Logistician: Natalie Boddy
- Lead Technologist: William Story
Ground Transportation Portfolio

PM Motor Transport

Light Fleet Tactical Vehicles and Trailers
- HMMWV
- HMMWV Armor
- Interim Fast Attack Vehicle
- Internally Transportable Vehicle
- Organic Trailers

Medium/Heavy Fleet Tactical Vehicles and Trailers
- MTVR Trailer
- 5 Ton Trucks & Trailers
- Flatrack Refueling Capability
- Logistics Vehicle System
- MHET/M870 Family
- P19 Fire Trucks
- M969/970 Refuelers
- P19 Replacement
- MK970 Refueler
Combat Mobility Portfolio

Program Manager, Light Armored Vehicle (LAV) and Marine Personnel Carrier (MPC)
The Mine Resistant Ambush Protected (MRAP) family of vehicles provides the Operating Forces multiple mission-role platforms capable of mitigating Improvised Explosive Devices (IEDs), Underbody Mines and Small Arms Fire (SAF) threats which are currently the greatest casualty producers in the Global War on Terror (GWOT). MRAP vehicles will support the following missions:

**Category I**
**Urban Combat Operations**

- IDIQ Contracts awarded to nine manufacturers.
- All Services Procuring

**Concept of Operation:**
Small unit combat operations in urban or confined areas - Mounted patrols, reconnaissance, communications, command and control, and direct interaction with civilian population.

**Characteristics:**
- 4x4
- 6 pax
- Curb Wt: 30,000 lbs
- Cbt Wt: 38,000 lbs
- Payload: 6,000 lbs

**Category II**
**Multi-mission Operations**

- IDIQ Contracts awarded to nine manufacturers.
- Army includes Ambulance Variant

**Concept of Operation:**
Ground logistics support operations - Reconfigurable vehicle capable of convoy security, combat engineering, ambulance, troop & cargo transportation.

**Characteristics:**
- 4x4 and 6x6 variants
- 10 pax
- Curb Wt: 30,000/38,000 lbs (4x4/6x6)
- Cbt Wt: 38,000/52,000 lbs (4x4/6x6)
- Payload: 6,000/14,000 lbs (4x4/6x6)

**Category III**
**Mine/IED Missions**

- Buffalo procured under sole source contract to FP II.
- Navy and Marine Corps Only

**Concept of Operation:**
Explosive Ordnance Disposal - Route Clearing; detect and disarm or detonate IEDs, mines and other explosive devices.

**Characteristics:**
- 6x6
- 6+ pax
- Curb Wt: 45,000 lbs
- Cbt Wt: 80,000 lbs
- Payload: 38,000 lbs
Combat Mobility Portfolio
Combat Mobility Portfolio
Currently Fielded Vehicles

MRAP CAT I
- Cougar 4X4 model
- Mine Resistant Utility Vehicle (MRUV)
- Urban Combat Operations
- 4x4
- 6 pax
- Curb Wt: 14,000 lbs
- Cmbt Wt: 16,000 lbs
- Payload: 10,000 lbs

MRAP CAT II
- Joint EOD Rapid Response Vehicle (JERRV)/Cougar
- Multi-mission (convoy escort, troop transport, ambulance, EOD, Cmbt Engr)
- 4x4 and 6x6 variants
- 10 pax
- Curb Wt: 30,000 lbs (4x4)
- Cmbt Wt: 38,000 lbs (6x6)
- Payload: 6,000 lbs (4x4)
- 14,000 lbs (6x6)

MRAP CAT III
- Buffalo
- Mine/IED Clearance Operations
- 6x6
- 12 pax
- Curb Wt: 45,000 lbs
- Cmbt Wt: 80,000 lbs
- Payload: 38,000 lbs
Engineer Systems Portfolio

Engineer Systems

- Engineer Equipment
  - Construction Equipment
  - Material Handling Equipment
- Engineer Support Equipment
  - Bulk Fuel Equipment
  - Bulk Water Equipment
- Mobility/Counter Mobility
  - Assault Breacher Vehicle
  - Expeditionary Assault Bridge
- EOD Equipment
  - Bridging Wet/Dry
Expeditionary Power Systems

Program Manager - Expeditionary Power Systems

Advanced Power Sources

Mobile Power Sources

Environmental Control Equipment

Centrally Managed Containers
# PG 15 FYDP Investments

## Motor Transportation Systems

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## Expeditionary Power Systems

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Solicitation to Industry

• Tactical wheeled vehicle solutions that are expeditionary, mobile, ensure force protection, improve survivability, and decrease reliance on fossil fuels (NEEDED YESTERDAY)
  – Includes improvements to fielded systems

• Power generation alternatives for a variety of customers and applications (ON BOARD POWER NEEDED YESTERDAY)

• Combat Engineer equipment that is aligned with the commercial market
• Next Speaker:

Mr. William P. Maceceivc
Program Manager, Engineer Systems
Ground Transportation and Engineer Systems

Program Manager
Engineer Systems

Mr. William Macecevic
(703) 432-3598
william.macecevic@usmc.mil
Near-Term Program Initiatives

- **TACTICAL FUEL AND WATER LOGISTICS INTEGRATOR**
  - Procure sustainment systems and components for centrally managed fuel and water systems

- **SCRAPER**
  - Construction Equipment Program
  - Anticipate joint with Army

- **Water Packaging System**
  - Requirement being defined
  - Anticipate requirement for interoperability with Tactical Water Purification System and Light Weight Water Purification System

- **Mine Rollers**
  - War loss replacements

- **EOD Equipment**
  - Recapitalize Family of EOD equipment (Bomb suits, SCBA, Explosive Detectors, Total Containment Vessel)
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Future Program Initiatives

- Recapitalization of Construction and material Handling Equipment
  - Equipment master plan outlines out year projected procurements

- Route Clearance Systems
  - Requirement being defined
  - Anticipate multiple systems-capabilities: Detection, Neutralization, Detonation

- EOD Modernization
  - Technology refresh
  - Maintaining the most current technology and capability

- Tactical Fuel and Water Component Upgrades
Welcome Product Information !
• Next speaker:

Mr. Michael Gallagher
Program Manager
Expeditionary Power Systems
Ground Transportation and Engineer Systems

Program Manager
Expeditionary Power Systems

Michael Gallagher
(703) 432-3572
michael.a.gallagher@usmc.mil
Portfolio

- **Advanced Power Sources**
  - Radio Power Adaptors
  - Battery Management and Support Systems
  - On-Board Vehicle Power Systems
  - Family of General Purpose Power Supplies
  - Auxiliary Power Units
  - Renewable Energy Systems

- **Mobile Electric Power**
  - Tactical Power Generation (IAW DoD Joint Operating Procedures)
  - Mobile Electric Power Distribution
  - Integrated Power - Environmental Control - Trailer System (ITEG)
  - Floodlights

- **Environmental Control**
  - Environmental Control Equipment
  - Field Refrigeration Systems
  - Unique Power and Refrigeration Toolkits (operator level)

- **Family of Centrally Managed Containers**
Near-Term Program Initiatives / Opportunities

- Solar Portable Power Adaptors for Comm-Equipment
- Family of Container (Tri-Con / Quad-Con / PALCON)
- On-Board Vehicle Power (HMMWV class)
- Small Field Refrigeration System
- Integrated Trailer-ECU-Generator
  - HMWMV towable
  - MTVR towable
- Vehicle Auxiliary Power Units (DACP funded)
- Radio Power Adaptors (Marine Enhancement Program)
- Marine Expeditionary Rifle Squad Power Integration (varied)
### Funding Plans

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Future Program Initiatives

- Family of Power Supplies (2012)
- Family of Battery Chargers (2011)
- Family of Radio Power Adaptors Reset (2011)
- Family of Power Supplies (2011)
- Family of Environmental Control Units (2013)
- Field Refrigeration Systems (2013)
- Floodlight Set Rebuy (2013)
- Man-Portable Power Generation (ONR Transition)
Discussion Topics

• **DOD Policy for use of Non-Standard Generators**
• **Naval Lithium Battery Safety Policy**
• **Market Research drives Acquisition Strategy**
• **Commonality with other Services**
• **Use of Federal Supply Schedules**
• **Commercial Item Procurement**
  – **Critical Performance Parameters**
  – **Value Added Features**
• **Small Business Set-Aside when applicable**
• **Source Selection**
  – **Best Value Award Determination**
  – **Production Representative Sample Verification**
• Next speaker:

Mr. Paul Mann
Joint Program Manager
MRAP Systems
Joint Mine Resistant Ambush Protected Vehicle Program (JMVP)

Joint Program Manager
MRAP

Mr. Paul Mann
(703) 432-3654
paul.mann@usmc.mil
Near-Term Program Initiatives

• Production, Integration, Delivery
  – On a steep slope of production ramp-up. Tracking very close to plan.
  – Vehicles being produced at an amazing rate, ~1200 per month vs only 77 in Apr 07
  – Total JROC-approved Acquisition Objective = 14,204 – 19,655 vehicles

• Enhanced Performance: Significant improvements in survivability and automotive capabilities in process. Block upgrade strategy in development.

• Schedule: Continued emphasis on accelerating deliveries to the field across the total program.
  – Production Schedule: Increasing production capacity, constantly improving daily and weekly flow of deliveries to SPAWAR

• GFE Integration: Throughput number of vehicles per day pacing production.
  – Consistently achieving more than 30 per day.

• Sustainment: Expediting movement to hybrid organic-Contractor Logistics Support approach. Joint Logistics Integrator provides theater support.

• Resources: Aggressively expending resources to field and sustain as many MRAP vehicles as quickly as practical based on user requirements/feedback.
## JMVP Funding Overview

As of 9 May 08

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$22.4B Funded Thru FY08

**Notes:**
- RDT&E includes qty 100 Ballistic Test Articles
- RDT&E, Procurement, and O&M for Testing, Vehicles, GFE/Integration, Spiral Devt/ECPs, Logistics Support and Transportation costs
- FY09/outyear requirements being refined
Future Program Initiatives & Needs

• Complete MRAP Vehicle Production and Fielding
  – Gentle Ramp Down of production to complete Nov 08

• Accomplish MRAP Engineering Change Proposals in response to evolving user requirements
  – 50 Mine Resistant Ambush Protected Expedient Armor Program (MEAP) kits completed, enroute to theater
  – Fully integrated EFP protected capable vehicles in production

• Complete Integration of MRAP supply chain with DoD supply efforts
  – Transition to organic supply system

• Program Transition
  – Production to Sustainment
  – Lead-Service Transition Decision points driven by events not calendar

• Potential Program Needs – Business Opportunities
  – Specialized program, engineering and logistics support services
  – Weight, space, power management
  – Survivability and other performance improvement technologies
• Next speaker:

Mr. Thomas Miller
Program Manager
Motor Transport
Ground Transportation & Engineering Systems
(Product Group #15)/PEO Land Systems
Program Manager, Motor Transport

Program Manager:
Thomas H. Miller
PH: 703-432-4436;
Thomas.H.Miller3@usmc.mil
PM Motor Transport Portfolio:
- Light Tactical Vehicles (GTES)
  - USMC HMMWVs and HMMWV Armor
  - Light Tactical Trailers
  - Military Motorcycles
- Medium/Heavy Tactical Vehicles (GTES)
  - MTVR Trailer
  - Flatrack Refueling Capability (FRC)
  - Medium and Heavy Tactical Trailers
  - Support for Legacy Vehicles:
    - 5 Ton Trucks
    - Logistics Vehicle System Vehicles and Armor
- PEO Land Systems Programs
  - Medium Tactical Vehicle Replacement (MTVR)
  - Logistics Vehicle System Replacement (LVSR)
• **Near term program initiatives – GTES Programs**
  
  – **Flatrack Refueling Capability**
    
    • Logistics Vehicle System Replacement (LVSR) compatible system, dispenses and de-fuels from USMC aircraft and provides refueling capability for the MLG and Division.
    
    • IOC: 4th Qtr FY09; FOC: 1st Qtr/FY12; AAO: 381
    
    • Supplier: TBD – conducting market research
  
  – **MTVR Trailer**
    
    • Replaces the current M105, M149, and M353 trailers; matches the MTVR’s increased mobility without degrading its operational capabilities.
    
    • IOC: 1st Qtr/FY10; FOC: 4th Qtr/FY13; AAO: 6,615
    
    • Supplier: Choctaw Manufacturing, McCallister, OK
• Near term program initiatives - GTES
  – High Mobility Multi-Purpose Wheeled Vehicles (HMMWVs)
    • Continuing to procure HMMWVs through the Army TACOM
    • Assessing and incorporating safety and RAM upgrades (ex. Vehicle Emergency Egress windows, Fire Extinguisher Systems, Seat Belts, etc.)
    • Assessing armor upgrades with MCLB Albany Maintenance Center and Nevada Automotive Test Center (NATC)
  – Motor T Modifications
    • Funding line to develop and field modifications to improve the operation and safety of fielded Motor T systems (RAM, safety, cost and obsolescence, etc.) as a result of safety hazards, quality deficiency reports, and other initiatives.
    • Request industry’s assistance in providing ideas for vehicle/trailer modifications in these areas
• Future initiatives - GTES
  – P-19 Replacement:
    • Potential new program to procure Aircraft Rescue and Firefighting vehicles to replace the aging A/S32P-19A fleet in support of expeditionary airfield operations and the supporting establishment. The ARFF vehicles will be equipped with fire suppression compounds and extinguishing agents, handheld extinguishers, and specialized rescue tools used by firefighters extinguishing aircraft or structural fires. Add-on armor capability is required. Addresses replacement vehicles for the tactical fleet plus bases & stations. P-19 vehicles (TAMCN D1064) were introduced into service in 1984 with a service life of 12 years.
    • Proposed AAO: 180
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*Note: Includes PB09 core funding and requested 08 supplemental; does not include POM-10 funding request.*
• Near term program initiatives – PEO, LS Programs
  – Medium Tactical Vehicle Replacement (MTVR)
    • Continuation of installing MTVR Armor Systems (MAS)
    • Continuation of MTVR new production for USMC and Navy “Grow the Force” and other requirements
    • Supplier: Oshkosh Corporation
  – Logistics Vehicle System Replacement (LVSR)
    • Full Rate Production Decision Review for Cargo variant (1QFY09)
    • Milestone C for Trailer and Wrecker variants (1QFY09)
    • Cargo IOC: 3rd Qtr/FY09; FOC: 2nd Qtr/FY13; AAO: 1699
    • Supplier: Oshkosh Corporation
• Future initiatives – PEO, LS
  – LVSR:
    • Product improvements, such as an upgraded alternator
    • Potential acquisition of Army PLS trailers for tandem tow capability
    • Potential future armor improvements (better protection, reduced weight)
  – MTVR
    • Life cycle cost reduction initiatives, to improve reliability, maintainability, reduce corrosion, etc.
    • Continuing armor improvements (better protection, reduced weight)
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*Note: Includes PB09 core funding and requested 08 supplemental; does not include POM-10 funding request.*
• Next speaker:

LtCol Ben Garza
Program Manager
Joint Light Tactical Vehicle (JLTV)
PEO Land Systems

Joint Light Tactical Vehicle (JLTV)

Program Manager: LtCol Ben Garza
**Mission:** Jointly develop, produce, field and sustain a safe, reliable, suitable and effective family of Joint Light Tactical Vehicles

**Vision:** JLTV – Providing our Joint Warfighter with the very best in light tactical vehicle payload, protection and performance
The Balanced Solution – JLTV Family of Vehicles and Trailers

**PAYLOAD CATEGORY A**
- Payload: 3,500 lbs
- Performance: Exceed HMMWV
- Transport: 1x EAT* CH 47/53
- 2x IAT** C130

**Sub-Configurations**
- General Purpose Mobility (4 Seat) - Army/USMC

**PAYLOAD CATEGORY B**
- Payload: 4000/4500 lbs
- Performance: Exceed HMMWV
- Transport: 1x EAT* CH 47/53
- 1x IAT** C130

**Sub-Configurations**
- Infantry Carrier, Fire Team (6 Seat) - Army/USMC
- Reconnaissance (6 Seat) - Army
- C2OTM (4 Seat) – Army/USMC
- Heavy Guns Carrier (MP, Patrol, Escort) (4 Seat+ Gunner) - Army/USMC
- ITAS (TOW) Carrier (4 Seat) - Army/USMC
- Utility (2 Seat) – USMC
- Ambulance (3 Seat+2 Litters) - Army/USMC

**PAYLOAD CATEGORY C**
- Payload: 5,100 lbs
- Performance: Exceed HMMWV
- Transport: 1x EAT* CH 47/53
- 1x IAT** C130

**Sub-Configurations**
- Shelter Carrier / Utility /Prime Mover (2 Seat) - Army/USMC
- Ambulance (3 Seat+4 Litters) - Army/USMC

* EAT: External Air Transport
** IAT: Internal Air Transport

Program focus during Technology Development Phase is on these key configurations build key vehicles, 1 A, 2 B, 1 C

Trailers for each payload category to have equivalent payload and mobility to support prime movers.
### JLTV FYDP Investments

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Technology Development Phase / System Design & Development
Questions?
• Next speaker:

Col Mike Micucci
Program Manager
Light Armored Vehicle (LAV)
and
Marine Personnel Carrier (MPC)
Program Manager
Light Armored Vehicles
Overview

Colonel Mike Micucci, USMC
PM LAV Mission - Research, development, acquisition and life cycle support for USMC Light Armored Vehicle family of vehicles.

Our Location – MARCORSYSCOM program office supported by TACOM in Warren, Michigan

- **LAV** – in the Light Armored Reconnaissance Battalion.
  - Conduct reconnaissance, security, and economy-of-force operations, limited offensive or delaying operations that exploit the unit’s mobility and firepower.
  - Eight-wheeled armored combat vehicle with a 25-year history to remain in service until to 2025 and possibly beyond.

- **MPC** – will reside in the Amphibious Assault Battalion.
  - Provide armor-protected mobility for infantry battalion maneuver task forces. 2 MPCs will lift a reinforced rifle squad.
  - The MPC program balances vehicle performance, protection, and payload attributes.
PEO Land Systems
PM Expeditionary Fighting Vehicle
PM JPMO, Lightweight 155

PM Light Armored Vehicles MPC
PM LVSR, PM JLTV
PM MTVR, PM GATOR, PM CAC2S
PM CAC2S

Resource Mgmt
Competency Domain/Competency Leaders

Director, Financial Management

Director, Workforce Management and Development

DC Resource Management *^A
DC SIAT *^A
Systems Engineering

Director, C4I SE&I
Commanding Officer MCTSSA
Camp Pendleton, CA

Product Groups

Product Group 09 Director,
Operational Forces Systems

Product Group 10 Director,
Information Systems & Infrastructure

Product Group 11 Director,
MAGTF C2, Weapons & Sensors Development & Integration

Product Group 12 Director,
Communications, Intelligence, & Networking Systems

Product Group 13 Director,
Infantry Weapons Systems

Product Group 14 Director,
Armor & Fire Support Systems

Product Group 15 Director,
Ground Transportation & Engineer Systems

Product Group 16 Director,
Combat Equipment and Support Systems

Program Managers

Program Manager, Ammunition

Program Manager, Global Combat Support System-Marine Corps

Program Manager, Training Systems Orlando, FL

Program Manager, Robotic Systems Huntsville, AL

Program Manager, Mine Resistant Ambush Protected

Program Manager, Light Armored Vehicle
Warren, MI

Deputy JPEO,
Chemical & Biological Defense
Arlington, VA

* = SES Position
^ = Competency Director
DC= Deputy Commander
AC= Assistant Commander

Where we are located!
PM LAV Principals:

PM: Colonel Mike Micucci, USMC
Deputy PM: Dr. Bob Lusardi

- **A2 Upgrade Program**: Jim Streberger
- **ITSS and Survivability Part II**: Linda Passeri
- **C2 Upgrade**: Derald Schnepp
- **RAM Team**: John Engbloom
- **SANG Program**: Joe Wagner
- **MPC**: Bill Ross

Business/Financial Manager: Jan Boatman
Contracts Manager: Bill Abramson
Lead Engineer: Matt Koneda
Lead Logistician: Josephine Polanco
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LAV Modernization Plans

• Funded Programs
  – LAV SLEP/ Improved Thermal Sight System (ITSS)-**Fielding**.
  – LAV-C2 Upgrade- **Moving towards Milestone-C**.
  – LAV-25 Lethality Upgrade- **Working**.
  – OIF Upgrades, A2 Upgrade, LAV Re-Procurement-**Fielding**.

• **Future LAV Programs (FY08-FY09)**
  – Marine Personnel Carrier (MPC)
  – LAV Survivability Upgrades - Part II
  – LAV RAM Modifications, upgrades, and Rapid Acquisitions
- Socializing Joint Status with US Army
- Full and Open Competition
- Acquisition Objective: ~600 vehicles
- Family of Vehicles (FOV): includes P, C, R
- Initial Capabilities Document (ICD) validated & approved by MROC
- Analysis of Alternatives (AoA) completed.
- Capabilities Development Document (CDD) under development
- **Milestone A in FY10**
- Currently working Pre-Milestone A activities with Office of Naval Research (ONR)
• Currently working with ONR to mature technologies that need to be integrated on the MPC

- **Advance Lightweight Armor** Materials/Technologies
- **Advanced Seat Technology** for blast resistance, shock mitigation and roll-over protection
- **Active Protection System**
- On-Board Vehicle Power for **exportable power**
- **Fuel Efficiency** & Battlefield Power
- **Advanced Suspension**
- **TBD**
LAV Survivability Upgrade
– Part II

• Incorporate **Floor Spall Liner**
• **Protection or Relocation of Fuel Tank**
• Incorporate **Mine Blast Resistant Seating** where possible
  – LAV-25
    • VC and Gunner
    • Scouts
  – Mission Role Vehicles
    • VC and staff locations
  – Driver cannot be suspended but will need a reinforced seat and leg protection
“$5-8 Million dollars per year are provided to PM LAV for the Modifications, Obsolescence Management, Low Cost Upgrades and Rapid Acquisitions in support of the LAV fleet.”
ALL PROJECTS COME OUT THROUGH:

Federal Business Opportunities

• USMC LAV projected to remain *in service until 2025*
• LAV family of vehicles must remain
  – *Effective* in the face of increasing threat capabilities
  – *Supportable* in the face of increasing age
    (Obsolescence is a growing issue)
• The challenge: *How much survivability, lethality and mobility can be packed into an air-transportable, swim-capable LAV?*

• **Near Future:**
  - Marine Personnel Carrier (MPC)
  - LAV Survivability Upgrades
  - LAV RAM projects