U.S. Marine Corps (Ground)
Liaison Report

11 September 2016

L. Salzano
USMC ATE/TPS Overview

- General Purpose Automatic Test Systems (GPATS)
- Ground Radio Maintenance Automatic Test System (GRMATS)
- Application Program Sets (APS)
- On-going and Planned Programs
USMC ATS Team Organization

TEAM LEAD (Tony Reinhart)

- Systems Engineering (Kristin Fones)
- Life Cycle Logistician (Mitch Brown)
- Equipment Specialist (Brian Nimmick)
- Financial Manager (Christina Johnson)
- KO/Contract Specialist (Dwight Michael/Various)

EMSS Project Officer (Joe Pellegrino)

GPATS Project Officer (TBD)

APS / FMS Project Officer (Tom Bradford)

GRMATTS Project Officer / FST (Capt Brad Allen)
GPATS Radio Frequency (RF) Variant

- AN/USM-717(V)2
  - VIPER/T (Astronics) RF Variant
- AN/USM-657B(V)2 RF
  - TETS (ManTech) RF Variant
- Systems are form, fit, functionally the same
- Support Test Program Sets that require RF capabilities in addition to analog/digital
- (128) systems deployed for USMC users
GPATS

GPATS Electro-Optic (EO) Variant

- **AN/USM-717(V)3**
  - VIPER/T EO Variant
- Consists of a core test system with EO subsystem
- Supports testing of multiple EO devices:
  - Infrared (IR) and Image-Intensified (I2) night vision devices
  - Laser designators, illuminators, laser aiming devices, and laser range finders.
- (82) total EO systems deployed for USMC users
• GPATS Modernization Program
  – New acquisition program initiated to address current and anticipated obsolescence for GPATS (TETS and VIPER/T)
  – Common Instrument Controller (CIC) Upgrade
    • Replace current IC (laptop/docking station) with a modern solution
    • Currently under contract with Astronics Test Systems to provide two first article units and 229 production CICs
      – CDR held on 30 March
  – Graphical User Interface (GUI) Update
  – Transition to MS Windows 10
  – Radio Frequency (RF) subsystem capability enhancement
    ▪ R&D effort underway to externalize the RF subsystem
    ▪ Increase RF test capability to 40GHz range
Ground Radio Maintenance Automatic Test System (GRMATS)

- **AN/USM-718 (GRMATS Block I)**
  - (68) systems delivered in 2007 and fielded to support urgent requirement for software-defined radio test support through a Field User Evaluation
  - This system (Block I) was retired in FY ‘15

- **AN/USM-718A (GRMATS Block II)**
  - All (562) systems have been delivered by the OEM (Aeroflex)
  - AAO reduction (~450) in order to align systems primarily with intermediate level maintenance activities
Application Program Sets

- **Ground Radio Application Programs Sets (GRAPS)**
  - GRAPS are essentially TPS kits used in conjunction with AN/USM-718A GRMATS for testing USMC tactical radios
  - Astronics Test Systems completed rehost of 14 TPSs from the legacy GRMATS (Block I) to the currently fielded GRMATS (Block II)
    - Included production of 100 GRAPS kits with an additional 456 kits procured under separate contracts
Application Program Sets

- Currently Fielded GPATS Application Program Sets
  - AN/PSM-105 - AN/TRC-170 LRU/CCA
  - AN/PSM-109 - AN/TPQ-46 LRU/CCA
  - AN/PSM-112 - LAV-AT LRU
  - AN/PSM-115 - AAV MSQ-115 Diagnostics
  - AN/PSM-117 - Electro-Optic Test Suite
  - AN/PSM-118 - LAV-25 Chain Gun
  - AN/PSM-119 - LW 155 LRU Diagnostics
  - AN/PSM-123 - LAV-25A2 LRU Screening/ Diagnostics
  - AN/PSM-120 - LAV Instrument Panels/ Heads-Up Display
  - AN/PSM-124 - M1A1 Tank CCA Diagnostics
• Current Efforts in Development/Production
  – M41A4 Saber System CCA TPS Development (12 new TPSs, 2 LRIP sets)
    ▪ Initial integration concluded July 2016
    ▪ Follow-on planned for mid - FY 17
  – Power System Application Program Set (PSAPS) Production
    ▪ Production of (38) units in progress
Application Program Sets

• **Current Efforts in Development/Production**
  – **Automatic Test Systems Division - Picatinny Arsenal, NJ**
    - AN/PSM-126 Very Small Aperture Terminal (VSAT) LRU TPS Development (24 new TPSs, 6 LRIP units)
      - To be completed during March 2017
    - AN/PSM-119 Lightweight 155 Howitzer Digital Fire Control System (DFCS) LRU TPS Upgrades (New ID, cables and TPS software)
      - In progress
    - AN/PSM-112 LAV-AT (Anti-Tank) LRU TPS Development (15 new TPSs, 2 LRIP units)
      - To be completed during August 2017
Application Program Sets

- Planned FY17 Fielding – Test Program Sets
  - AN/PSM-130 LAV-25A2 Circuit Card Assemblies (CCA) TPS
    - 12 new TPSs, 15 units
    - Planned initial fielding in January 2017
  - AN/PSM-129 Saber Line Replaceable Units (LRU) TPS
    - 8 new TPSs, 25 units
    - Planned initial fielding in January 2017
  - AN/PSM-131 Tactical Remote Sensor System (TRSS) TPS
    - 6 new TPSs, 22 units
    - Planned initial fielding in January 2017
  - AN/TSM-220 Power System Application Program Set (PSAPS)
    - 22 new TPSs, 42 units
    - Planned initial fielding in January 2017
Application Program Sets

- Planned ATS Efforts
  - Assault Amphibious Vehicle (AAV) Upgrade Support
  - Shoulder Mounted Assault Weapon (SMAW) Mod II Program Support
  - LAV Foreign Military Sales (FMS) Program Support
    - Multiple programs
  - WI-FI Application Module (WAM)
    - At-system test capability for weapon systems
  - PMO will develop an ATS portfolio life cycle management plan and road map from 2QFY17 – 2QFY18
    - Intent is to determine the requirements for the next generation of GPATS/GRMATS
    - Identify any required JCIDS documents and actions
    - POM accordingly
    - Quartz Watch and RFIs to industry will be leveraged
Ongoing Efforts

• **LAV Foreign Military Sales (FMS) Support**
  – USMC TMDE providing support for FMS procurement of USMC VIPER/T systems and LAV-25 APSs
    ▪ Contract# N64267-15-C-0021 awarded to Astronics Test Systems March 2015
    ▪ (2) VIPER/T and APS FAT units
    ▪ Additional production quantities (4 units)
    ▪ In-country training/support
  – TMDE will execute additional ATE and APS procurements, as required

• **Stand Alone VIPER/T Electro-Optic (SAVEO) Test System**
  – Task order awarded to Astronics Test Systems to provide a stand-alone controller, power supply and instrumentation solution to utilize with existing VIPER/T EO collimators
  – Completed July 2016

• **Expeditionary Maintenance Support System (EMSS)**
  – Working to implement network connectivity to provide Global Combat Service Support- Marine Corps (GCSS-MC) Mobile Field Service support and access to technical manuals for weapon system maintenance
Questions?