



U N I T E D S T A T E S M A R I N E C O R P S

U.S. Marine Corps (Ground) Liaison Report

11 September 2016

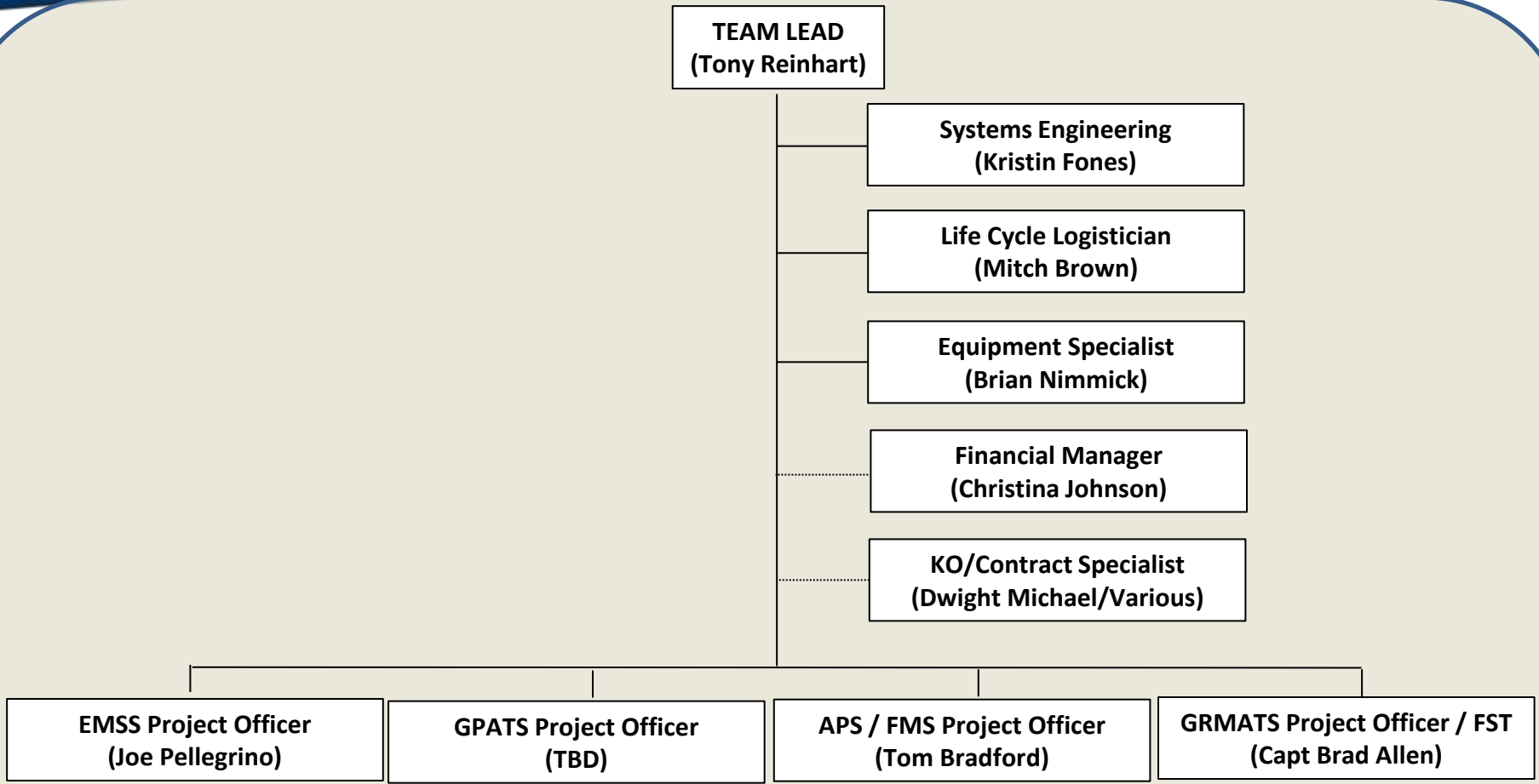
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USMC ATE/TPS Overview

- 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



GPATS

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

GRMATS

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**



AN/USM-718 (ATS2000)



AN/USM-718A (GRMATS 7200)

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

Application Program Sets

- 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

Thank You!

Questions?