

PM TRAYS

2021 P&S CATALOG



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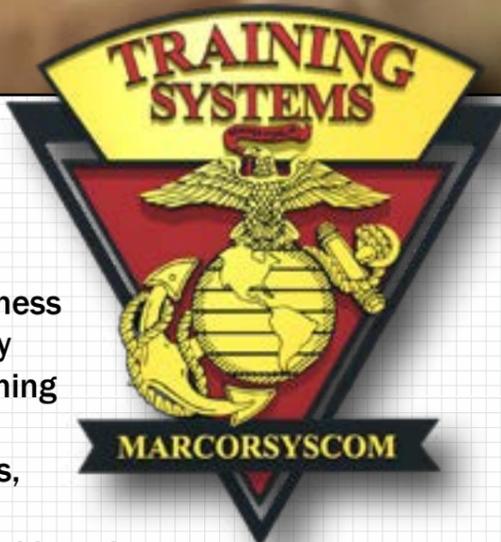
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PM TRASYS OVERVIEW

PROGRAM MANAGER TRAINING SYSTEMS (PM TRASYS)

Located in Orlando, Florida, is the Marine Corps Systems Command's independent program manager assigned for acquisition and life-cycle support of Marine Corps ground training systems, devices, and training support services. PM TRASYS improves the warfighting effectiveness of the Marine Air-Ground Task Force (MAGTF) and globally deployed maritime expeditionary forces by providing training support, and developing and sustaining training systems and devices. Various training products include simulators, mock weapons, range targets, range instrumentation, training technology research and development, distributed learning capabilities, training observation capabilities, and after-action review systems. All of this is successfully accomplished by a staff of over 150, which includes Marines, civilians and contractor personnel with professional expertise across the areas of program management, engineering, training facilities engineering, logistics, instructional systems design, procurement, contract management, cost estimation, budget and financial management, live, virtual, constructive integration, and business operations. PM TRASYS also supports customers, fielded training systems, and training support services with TRASYS Liaison Offices (TLOs) located across and outside the United States. At PM TRASYS we understand the Marine Corps' needs and visions. By providing training systems, training environments, and training support and sustainment, we are supporting Marines with their overall mission.



Dedicated to the Warfighters and their combat effectiveness, PM TRASYS works to provide the United States Marine Corps with the proper training systems and environments needed to successfully train Marines for combat operations.

PM TRASYS is the acquisition and life cycle sustainment branch for the Marine Corps Systems Command (MCSC) that supplies the Marine Corps with its current training systems, environments and support services. As the force that has the ability to strike anywhere and anytime, the Marine Corps is a force in readiness. Keeping in mind, the mission of PM TRASYS is to develop, acquire, field and sustain the training systems that

FROM THE PROGRAM MANAGER

satisfy Marine Corps training requirements. We do this for both active duty and reserve Marines, at home and abroad. Working hand-in-hand with the Training and Education Command (TECOM), we provide training capabilities focused on winning in combat in the most challenging conditions and operating environments.

Additionally, mutual respect and cooperation between PM TRASYS and our industry partners is the best way to ensure Marine Warfighters receive the Modeling, Simulation and Training (MS&T) products and support services they need to train, fight and win.

PM TRASYS is guided by five priorities established by our Commandant, General David H. Berger:

- Force Design
- Warfighting
- Education and Training
- Core Values
- Command and Leadership

Across these five interrelated areas, three major themes run throughout and form the tenets of his guidance:

- Divest of legacy and outdated policies, capabilities, doctrine, organizations, or force development strategies with the focus on where we want to be as a Corps in the next 5-15 years
- Integration fiscally and operationally between the Navy and Marine Corps are paramount
- Training and Education Continuum must change from an industrial age model to an information age model

RTS RANGE TRAINING SYSTEMS



Provides USMC bases and stations with live Force-on-Force, Force-on-Target tactical engagement training and dynamic capabilities for real time and post mission battle tracking and After Action Review. Range Systems directly impact Tactical Training and the Commander's ability to meet mandated pre-deployment training requirements, which ultimately affects Force Readiness.

FOF FORCE ON FORCE



I-TESS INSTRUMENTED-TACTICAL ENGAGEMENT SIMULATION SYSTEM



DESCRIPTION

I-TESS II is used to support direct force-on-force tactical engagement training. This system consists of the following type components: Small Arms Transmitter (SAT), Man-worn Detection System (MDS), Command and Control (C2 - mobile and portable versions), Military Operations on Urbanized Terrain (MOUT) Building Instrumentation, and Simulated Battlefield Weapons. The SAT is used on multiple rifle types and machine guns. The MDS and range equipment provides the individual Marine direct force-on-force engagement adjudication and includes the ability to support instrumentation functions such as Position Location Information (PLI) reporting.

SESAMS

SPECIAL EFFECTS SMALL ARMS
MARKING SYSTEM



DESCRIPTION

The SESAMS project provides weapons modification kits to fire low-velocity marking ammunition while precluding the weapon from firing live ammunition. This capability provides immediate visual and sensory feedback to the shooter and target during force-on-force close quarter battle scenarios, reducing risk to participants and the maintenance costs to shooting houses.



IIT INFANTRY IMMERSION TRAINER

CTE COMBAT TRAINING ENVIRONMENT



DESCRIPTION

Infantry Immersion Trainers (IITs) are small unit training ranges consisting of urban structures finished and decorated to replicate geo-specific locations paired with integrated direct fire training systems, virtual simulation screens and windows, and video instrumentation for after action review. The indoor and outdoor mixed reality training environments highly replicate current operational theaters by stimulating the Warfighter's senses; in order to stress small unit actions and small unit leader tactical, moral and ethical decision making within the context of operational culture.

DESCRIPTION

CTE incorporates "real world" conditions, which replicate urban environments commonly encountered within the theater of operation. These training systems include a variety of technologies and configurations to target various training scenarios and objectives supporting a variety of training tasks related to the deployment and maneuver of Marines in urban settings. These training systems are comprised of non-permanent building structures constructed of various materials configured for training in both live fire and non-live fire environments. The structure, character, density, and features of each system are designed to reflect logical functions that are typical within the settings being replicated (e.g., residential, commercial, industrial, recreation, religious, etc.).

TVCS

TACTICAL VIDEO CAPTURE SYSTEM

FET

FAMILY OF EGRESS TRAINERS

DESCRIPTION

The Tactical Video Capture System (TVCS) provides video-based Real-Time Visualization (RTV), Situational Awareness (SA), and After Action Review (AAR) capabilities to support Marine Corps live training. TVCS provides these capabilities through the use of a Commercial Off

The Shelf (COTS) integrated Video Management Software (VMS) suite containing a Graphical User Interface (GUI), 2D (Two Dimensional) High Definition (HD) displays, configurable video based alarms, and the ability to provide quick access to any desired camera view and audio during a training exercise. The HD view and other system tools are used in real-time to observe the Marine's Urban Warfare tactics and highlight strengths and weaknesses for later use during both group and individual AAR evaluation sessions. TVCS provides performance feedback to Marines via immediate "Hot Wash", Full AAR, and or a video Take-Home Package (THP) allowing for continued analysis of tactics, techniques and lessons learned.



UET

UNDERWATER EGRESS TRAINER



DESCRIPTION

The Underwater Egress Trainer (UET) program consists of classroom instruction and familiarization of the training methodology – knowledge based training; followed by the performance-based training in the “dunker” devices. The Modular Amphibious Egress Trainer (MAET) uses a generic fuselage section representing rotary aircraft, amphibious, cockpits and cabin emergency escape exits. The MAET trainer acts as a ‘dunker,’ which functions closely to the general characteristics of a ‘ditched’ aircraft. During a training exercise, the MAET is lowered into a pool, and turned up to a 180 degree rotation on its longitudinal axis. MAET lifting systems (hoists and gantries) provide, at a minimum, a two-speed rate of descent/retract. Students are able to practice under-water egress from the MAET in an upright position (zero degree rotation), an inverted position (180 degree rotation), or in any position in between zero and 180 degrees. Current systems are able to simulate CH-46, CH-53 and MV-22 configurations and are adaptable to future platforms. The Submerged Vehicle Egress Trainer (SVET) has the same modular core and rotational capabilities as the MAET, but dedicated for ground vehicle simulation. It is equipped with modules for the High Mobility Multi-Purpose Wheeled Vehicle (HMMWV) and a generic amphibious track platform. The Shallow Water Egress Training (SWET) is an individual seat-type device used prior to and in conjunction with MAET and SVET to introduce water submersion and the proper use of current Supplemental Emergency Breathing Devices (SEBD) such as the Intermediate Passenger Helicopter Aircrew Breathing Device (IPHABD) and Survival Egress Air (SEA).

HEAT

HIGH MOBILITY MULTI-PURPOSE WHEELED VEHICLE (HMMWV) EGRESS ASSISTANCE TRAINER

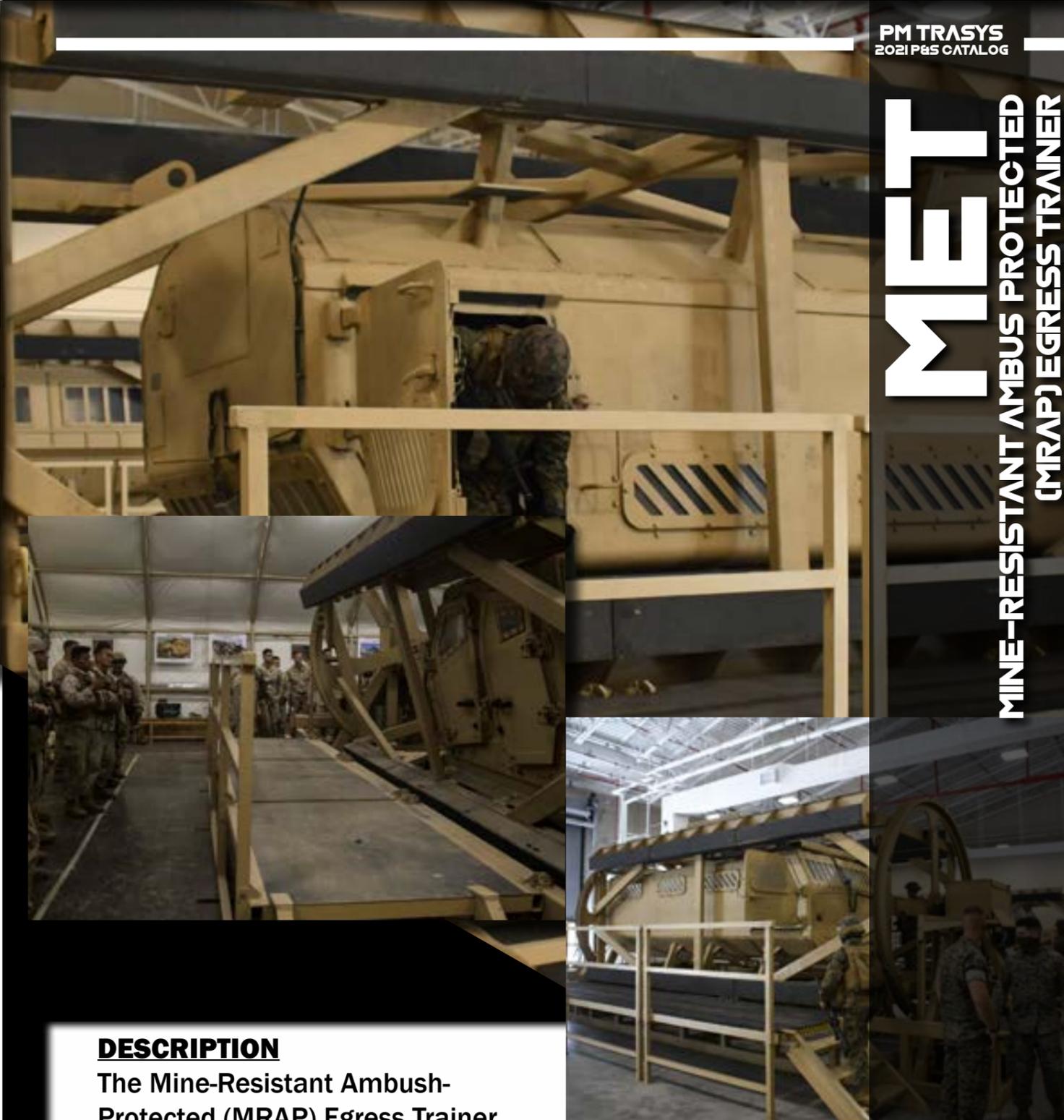


DESCRIPTION

The High Mobility-Multi-purpose Wheeled Vehicle (HMMWV) Egress Assistance Trainer (HEAT) provides a realistic and relevant training environment for Marines to train tactical vehicle egress procedures in various degrees of vehicle rollover. Marines experience the real effects of a vehicle rollover, practice egress through cab doors and turret opening, receive reinforcement of the importance of wearing a seat belt and learn the procedures and effort levels required to execute vehicle egress.

MET

MINE-RESISTANT AMBUS PROTECTED (MRAP) EGRESS TRAINER



DESCRIPTION

The Mine-Resistant Ambush-Protected (MRAP) Egress Trainer (MET) is used to train Marine crews and passengers to safely egress a roll-over situation through the repetitive use of emergency egress drills. The MET consists of a vehicle cab suspended over a raised platform by two rotating wheels. MET variants currently fielded by the Marine Corps are the Cougar and Buffalo.

JET

JOINT LIGHT TACTICAL VEHICLE
EGRESS TRAINER



DESCRIPTION

Joint Light Tactical Vehicle (JLTV) Egress Trainer (JET) is similar to the HMMWV, with seating for four (4), and a gunner compartment. The JET is a variant of the MET modified by removing the MET variant capsule and then replacing it with a JLTV cab. The JET is capable of continuous or intermittent rotation allowing for the simulation of safety and survival procedures during a JLTV rollover. The JLTV cab interfaces with the existing mounting structure and tube weldments of the Vehicle Cage Assembly.



RTAP
RANGE TRAINING AIDS PORTFOLIO



DESCRIPTION
The RTAP includes Ranges, Targets, Atmospherics, and Battlefield Effects Simulators These ranges enable rifle and pistol qualification, fam fire, live fire and maneuver, and escalation of force training Targets include fielding and installation of all types of automated stationary and moving infantry and vehicle targets, and automated scoring systems for traditional ranges and MOUT Facilities.

GTSS
GROUND TRAINING SYSTEMS SUPPORT



DESCRIPTION
The Ground Training Systems Support (GTSS) contract provides contractor sustainment support services for ground training systems at USMC bases, stations, and training centers. The services provided include: systems operations, maintenance, inventory management, supply services, and user training and instruction to support training events at training environments while integrating the use of training devices. The ground training environments supported include the Immersion Training Range Support (ITRS), Military Operations in Urban Terrain (MOUT), and several ground training ranges. GTSS services also support various ground training instrumented systems, such as the Instrumented Tactical Engagement System (I-TESS) and Tactical Video Capture System (TVCS). Through the GTSS warehouses, training devices such as Special Effects Small Arms Marking System (SESAMS), Battlefield Effects Simulators (BES), and portable target systems are also available for training. The GTSS contract also supports other stand-alone trainers such as the Egress Trainers (HEAT and MET), Pit Safety Sentry Systems, and other part-task trainers.

STSS SYNTHETIC TRAINING SYSTEMS

Product Manager Synthetic Training Systems provides a holistic approach to managing, Project Team Lead Live Virtual Constructive Training Environment (PTL LVC-TE), Project Team Lead Combat Vehicle Systems (PTL CVTS) and Project Team Lead Marksmanship Training Systems (PTL MTS). PTL LVC-TE includes the following programs: MAGTF Tactical Warfare Simulation (MTWS), Combined Arms Command and Control Trainer Upgrade System (CACCTUS), Deployable Virtual Training Environment (DVTE), Supporting Arms Virtual Trainer (SAVT), Live Virtual Constructive - Training Environment (LVC-TE), Leader Focused Decision Games (LFDG), Virtual Reality Simulator - Hologram Battle Lab (VRS-HLB), Streamlined After Action Review Tool: Visualization (SMART-Viz), Family of Ground Training Systems. PTL CVTS includes the following programs: Combat Vehicle Training System 3.0 (CVTS), Combat Convoy Simulator Modification Program (CCS Mod), Marine Common Driver Trainer (MCDT), Family of Maintenance Trainers, MCCES Electronics Course. PLT Marksmanship: Indoor Simulated Marksmanship Trainer (ISMT), Future Marksmanship Trainer (FMT).



CACCTUS

COMBINED ARMS COMMAND AND CONTROL TRAINING
UPGRADE SYSTEM



DESCRIPTION

CACCTUS is an entity level constructive training system providing a scenario driven, simulated environment in which Marines can practice the teamwork required to command, control and coordinate the use of supporting arms. CACCTUS supports training of Combined Arms Techniques, Tactics and Procedures (TTPs) for all elements of the Marine Air Ground Task Force (MAGTF), from individual Fire Support Team (FiST) up to and including the Marine Expeditionary Brigade (MEB). Distributed Operations capability links each CACCTUS allowing for larger training events. This immersive environment integrates deployed C4I systems, provides 2D and 3D visuals, communication elements and After Action Review (AAR) capability. CACCTUS is composed of Government off-the shelf (GOTS), Commercial off-the shelf (COTS), and Non-Developmental Item (NDI) hardware and software.



CCS COMBAT CONVOY SIMULATOR

CVTS COMBAT VEHICLE TRAINING SYSTEMS



DESCRIPTION

Combat Convoy Simulator (CCS) is an immersive, virtual environment in which Marines conduct convoy training. The CCS Modification program will accomplish a system replacement of the legacy CCS system. The CCS Modification fielding plan includes fielding of workstations, servers, monitors, network devices, projectors, upgraded simulated weapons systems, closed-circuit television, sound generation system, image generators, simulation, and operating systems. New equipment training will be provided at each location which will include new systems capabilities such as simulation of training Counter IED and tracking of dismounted players. Fielding will begin April 2020 through December 2020 at USMC sites: Camp Pendleton, CA; Twenty-nine Palms, CA; Kaneohe, HI; Camp Hansen, Okinawa; Camp Lejeune, NC; and conclude with USN sites at NAS Point Mugu, CA and Gulfport, MS.



DESCRIPTION

CVTS is a family of systems that provides gunnery and tactical training for the Tank, Light Armored Reconnaissance (LAR), and the Assault Amphibian communities. The Tank and LAR requirements are satisfied by the M1A1 and Light Armored Vehicle-25 (LAV-25) Advanced Gunnery Training Systems (AGTS). The AGTS provides Crew, Section and Platoon training. Sub-variants of the AGTS provide flexibility to support training in different environments. The AGTS Sub-variants includes the Relocatable AGTS (RAGTS), Mobile AGTS (MAGTS), Deployable AGTS (DAGTS) and Table Top AGTS (TAGTS). The Assault Amphibian requirements are satisfied by the Assault Amphibious Vehicle Turret Trainer (AAV-TT). CVTS is a Gateway to live fire and used to hone combat skills and improve readiness.

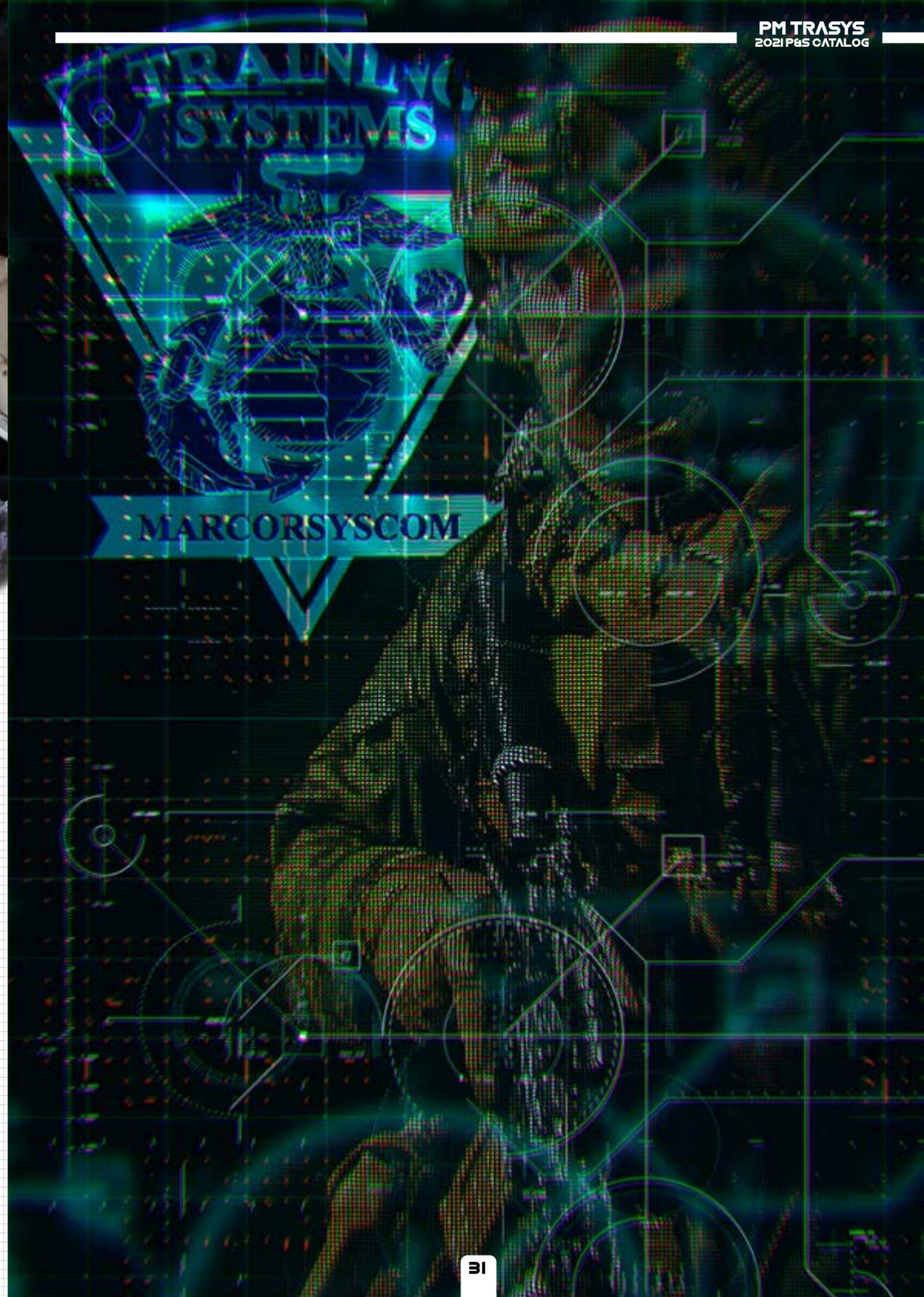
DVTE

DEPLOYABLE VIRTUAL
TRAINING ENVIRONMENT



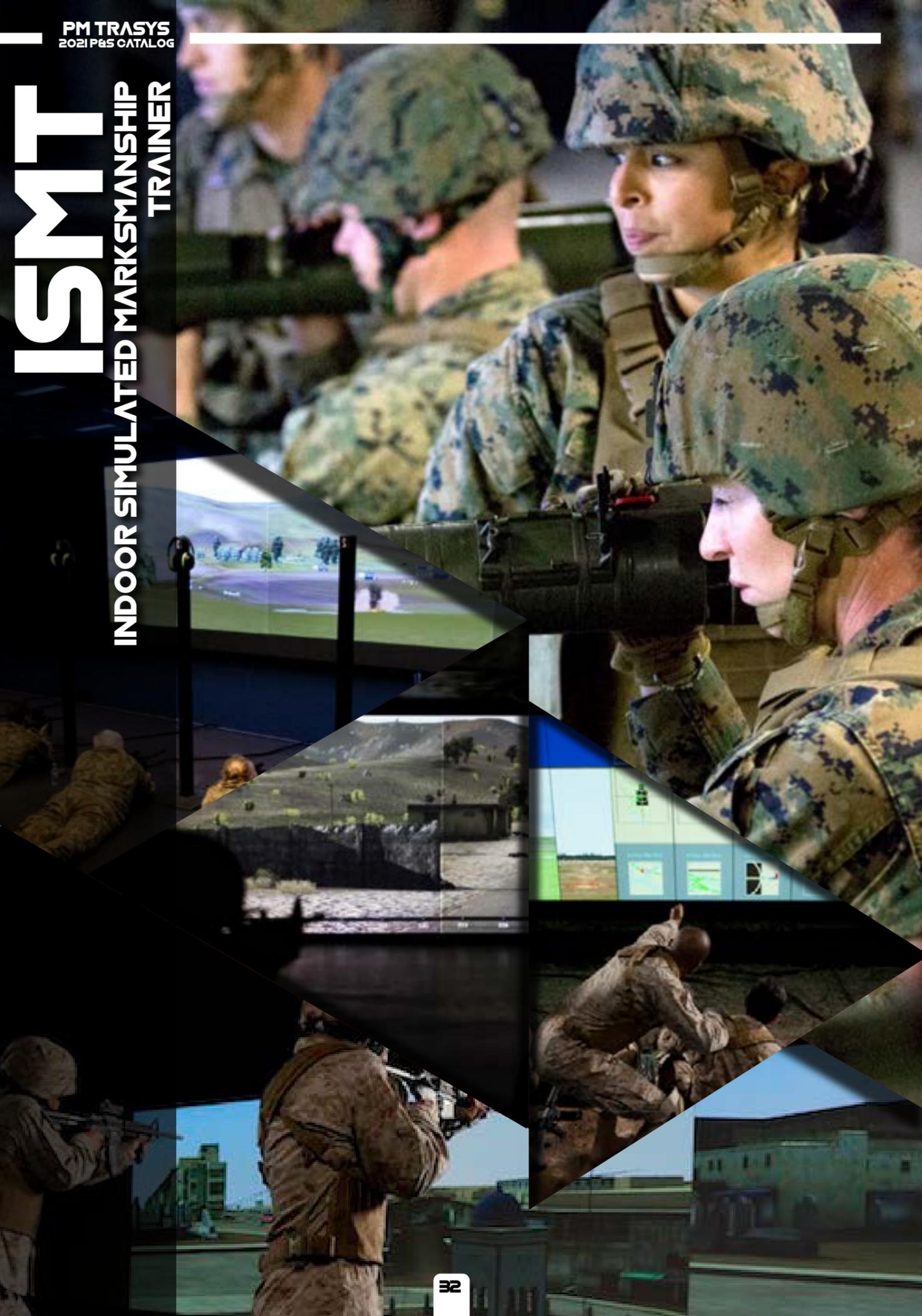
DESCRIPTION

The Deployable Virtual Training Environment (DVTE) is a laptop PC based simulation system developed in order to sustain individual, team, and unit critical war fighting cognitive skills associated with the application of combined arms, squad, and platoon level tactics, various Recognition Of Combatants (ROC) packages and language/cultural training. DVTE is capable of emulating organic and supporting Infantry Battalion weapons systems and training scenarios to facilitate Training and Readiness (T&R) based training while aboard ship, forward deployed, in garrison or school house environments.



ISMT

INDOOR SIMULATED MARKSMANSHIP TRAINER



DESCRIPTION

The Indoor Simulated Marksmanship Trainer (ISMT) uses simulation to instill and sustain Marines and Sailors in marksmanship fundamentals, crew served weapons employment, call for fire, and tactical decision making. A standalone ISMT can support up to five firing points while simulating known and unknown distance ranges, or eight assigned weapons while executing tactical scenarios within Virtual Battlespace (VBS). When three ISMTs are networked together to form an Infantry Squad Trainer (IST), the system can support 15 firing points while simulating known and unknown distance ranges, or up to twenty-four assigned weapons while executing tactical scenarios within VBS.

Simulators used with the ISMT are in line with the Infantry Battalion table of equipment allocation and include the following:

Pistol: M9

Rifle: M4, M16A4, and M27

Shotgun: M870 and M1014

Grenade Launcher: M32 and M203

Machine Gun: M2, M240, M249 and Mk19

Rocket: M72, M136, and Mk153

Mortar: M224 and M252

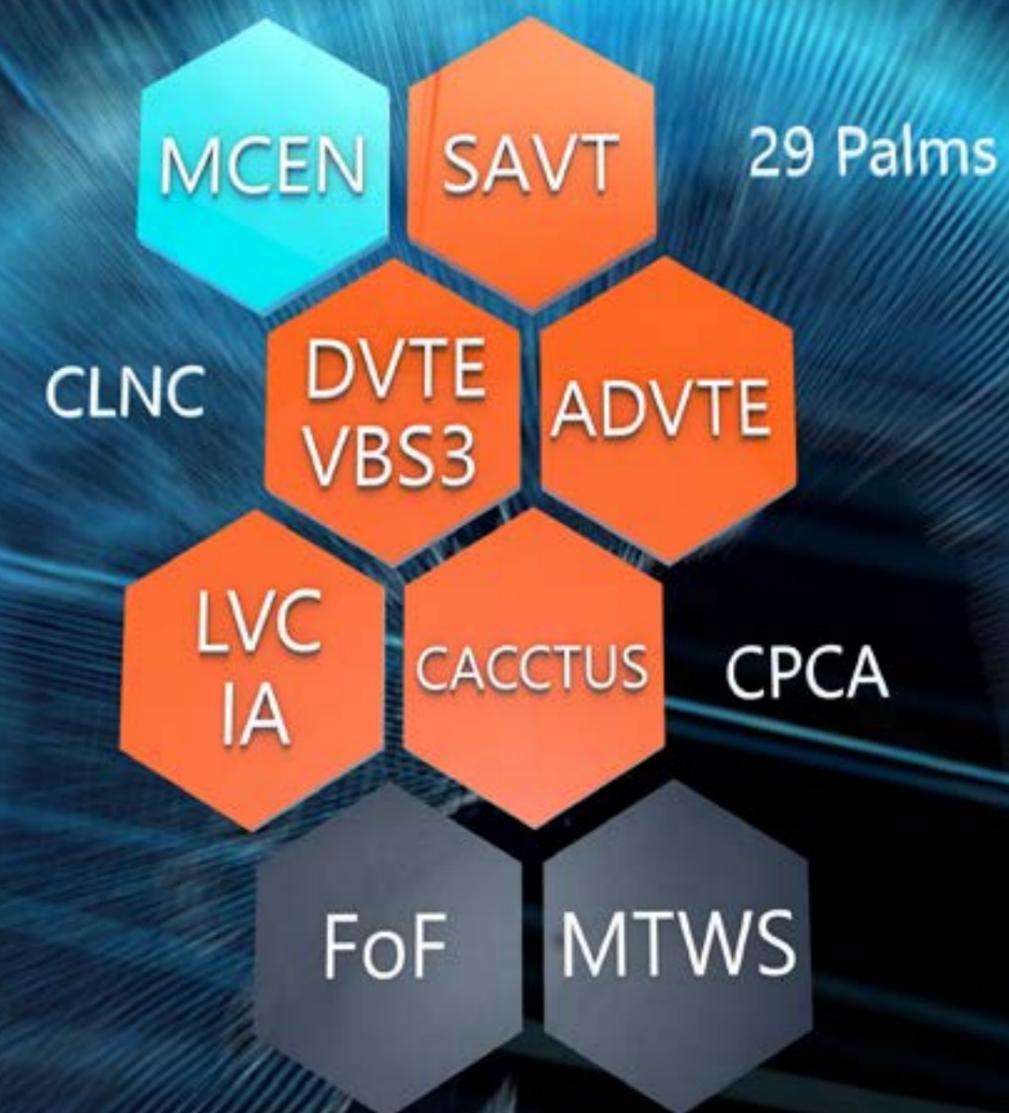
Marksmanship fundamentals are instilled and sustained through simulated qualification tables of fire that provide real time and After Action Review (AAR) feedback of the shooter's line of sight, point of aim, and triggerpull for the entire engagement. The ISMT supports Crew Served Weapon (CSW) employment by augmenting live fire with simulated qualification tables of fire, added repetitions of target engagements for Standard Operating Procedures (SOPs) refinement, and simulated collective environments where CSWs support infantry maneuver. Fires Support Teams (FST) are able to augment live fire with added repetitions in fire missions and refine Battle drill SOPs. Exercises in tactical decision making are achieved in VBS. Shoot or no-shoot scenarios are ideal for exercising tactical decision making for individuals, Team Leaders, and Squad Leaders.

LVC-TE

LIVE VIRTUAL CONSTRUCTIVE TRAINING ENVIRONMENT



LVC-TE Increment I Program Scope



Legend

- Enterprise Resource
- Mandatory Constituent
- Desired Constituent

Drivers of LVC-TE

- Alignment of Legacy Systems with LVC IA
- Effectiveness of C2 Interfaces
- Network
- Interoperability with Joint/Other Service Training

DESCRIPTION

Live Virtual Constructive Training Environment (LVC-TE) will provide a distributed collective training capability for all elements of the MAGTF to get the “reps and sets” to increase combat readiness. It will facilitate the integration of simulators and simulations with operational equipment systems and improved capabilities encountered in a training environment, coupled with real-time feedback and debriefing. The end state is for Marines to experience their initial tactical and ethical dilemmas in a simulated battlefield vice actual combat. LVC-TE is envisioned as a transformational capability characterized by complex operational expeditionary warfare training that will federate diverse training and exercise events. To achieve this capability, LVC-TE will use an incremental strategy, initially focusing on federation of legacy systems across geographic locations and later integrating new and improved training capabilities.

MCDT

MARINE COMMON DRIVER TRAINER

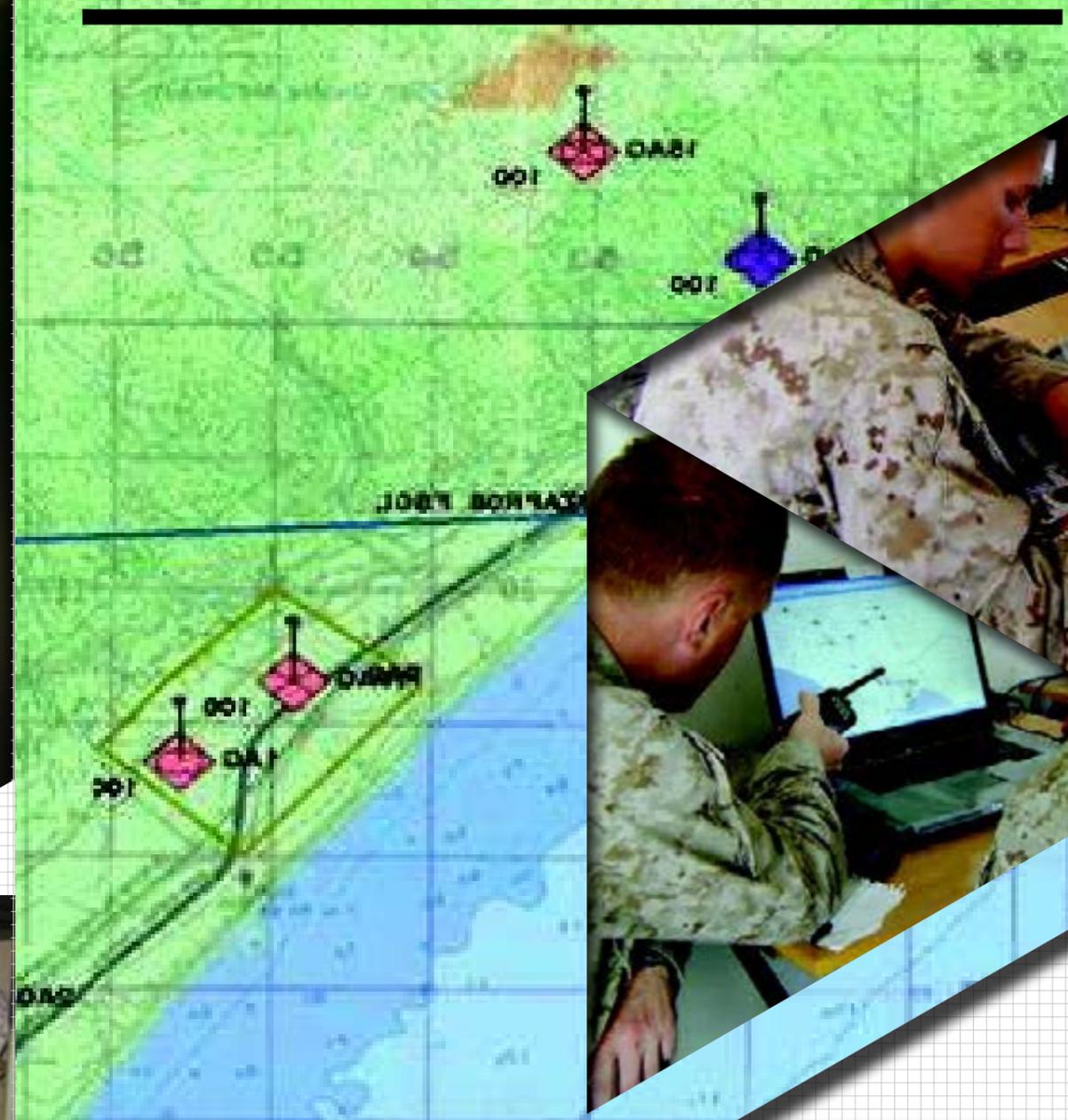


DESCRIPTION

The MCDT provides high fidelity training for motor transport operators incidental drivers from basic through advanced tactical driver training by simulating the visual, aural/audio and haptic cues for the driver of a tactical vehicle. The system can simulate driving conditions in most foreign areas of operations and conditions can be varied from flat open terrain to the treacherous off road mountain passes.

MTWS

MAGTF TACTICAL WARFARE SIMULATION



DESCRIPTION

The MAGTF Tactical Warfare Simulation (MTWS) is the Marine Corps' only constructive, aggregate-level simulation system used to support the training of Marine commanders and their battle staffs in MAGTF war-fighting principles/concepts and as well as associated command and control procedures. MTWS is designed to support the training of commanders and their staffs in exercises involving live, virtual and constructive (LVC) land, air and Naval forces at all operational command levels. The system supports all levels of command throughout the Marine Expeditionary Force (MEF) and Joint Task Force (JTF).

SAVT

SUPPORTING ARMS VIRTUAL TRAINER



DESCRIPTION

The Supporting Arms Virtual Trainer (SAVT) enhances operational readiness and tactical proficiency of USMC Digital Terminal Attack Controllers (DTAC), Forward Observers (FO), and Forward Air Controllers (FAC). The simulator provides Marines with a virtual environment for training using scenarios that require the placement of tactical ordnance on selected targets using Digital Close Air Support (DCAS) and Observed Fire procedures. These scenarios allow for practical application of Naval Surface Fire Support (NSFS), artillery and mortar fire, neutralization, suppression, illumination, interdiction and harassment fire missions.



TS4

SUSTAINMENT & SUPPORT SERVICE
TRAINING SYSTEMS

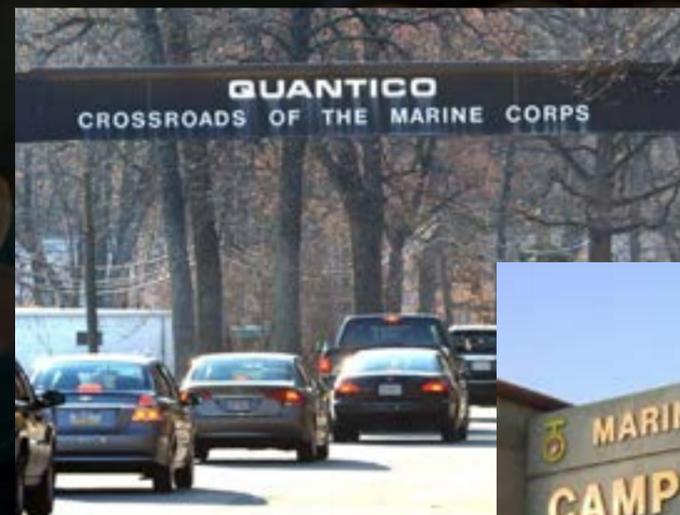


Product Manger Training Systems Sustainment and Support Services (PdM TS4) provides the Program Manager Training Systems life cycle sustainment and support services across the training enterprise. The specific efforts that will be managed within PdM TS4 include: Electronics Communication Services (ECS) Multiple Award Task Order Contract (MATOC), Equipment Related Services - Systems (ERS-S) MATOC, Equipment Related Services -Ranges (ERS-R) Single Award Indefinite Delivery Indefinite Quantity Contract and Knowledge Based Services (KBS) MATOC.



DESCRIPTION

The Immersion Training Range Support (ITRS), Home Station Training Lanes (HSTL) and MAGTF Training Command (MAGTFCT) training requires the employment of Role Players to act as Foreign Language Specialist (FLS) and civilians, insurgents, terrorist and other personnel encountered in the applicable theater of operations. Role Players are provided via commercial contract with the flexibility to incorporate changes to training requirements that reflect the current cultural, political and tactical environment where the USMC will be deployed (to include deployments outside of Operation Iraqi Freedom/Operation Enduring Freedom (OIF)/ (OEF)). Role Players support under two contracts extends to Camp Lejeune, Camp Pendleton, Marine Corps Training Area Bellows (MCTAB), Hawaii, 29 Palms, CA, Mountain Warfare Training Center (MWCT) in Bridgeport, CA and MCAS Yuma, AZ. Contracts awarded for Role Players are for total turn-key operation that includes labor, clothing, housing, food, and all services required for the SME's to perform required operations, including other incidentals needed for the equipping and preparation of these contracted personnel to serve as Role Players during pre-deployment training operations.



PM TRASY has liaison offices and staff at major Marine Corps Installations across and outside the continental United States to support customers, fielded training systems, and training support services. PM TRASY provides support through worldwide, regional, base and home station operations, logistics and maintenance contracts, and through personnel at the TRASY Liaison Offices (TLOs). The TRASY Liaison Offices are staffed with program management and technical liaisons that enable direct lines of communication with training systems customers, stakeholders, and industry support contractors. The technical liaisons provide a wide range of direct support for fielded training systems and their operation. They also have the capability to support training systems development and installation. The TLOs provide the ability to perform quick response or emergency modifications, assist with engineering and training analysis, and with the testing, acceptance and disposal of training systems.

MARINE CORPS SYSTEMS COMMAND PROGRAM MANAGER



**Mailing address:
12211 Science Drive
Orlando, FL 32826**

**pmtrasys@usmc.mil
(407)381-8762**

