

Project Manager Combined Arms Tactical Trainers (PM CATT)—Supporting the Reserve Component (RC)

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Almost every leader in the U.S. Army Reserve (USAR) or Army National Guard (ARNG) can tell you a good news story about Training Aids, Devices, Simulators, and Simulations (TADSS) and how they have multiplied the effectiveness of a good drill weekend's training. Those same leaders can also tell you bad news stories about how their training plans have suffered because the right training aid was not available on the weekend they needed it.

PEO STRI oversees the EST 2000 production, fielding, and sustainment. The EST 2000 enables Soldiers to go through initial and sustainment marksmanship training, along with collective gunnery and tactical instruction. (U.S. Army photo by Doug Schaub.)

If used correctly, a good training aid or simulator can improve a Soldier's skills and provide vital safety training before the Soldier is in the actual situation. TADSS can significantly reduce time spent in the field, improve training scores, reduce training costs, enhance unit safety, and multiply the unit's chances of success in combat.

The Army is placing renewed emphasis on the use of TADSS in today's demanding training environment, especially since today's Soldiers understand the power of virtual training devices and simulators. PM CATT, part of the Army's Program Executive Office Simulation, Training, and Instrumentation (PEO STRI) in Orlando, FL, takes a leading role in putting needed, high-tech TADSS into the hands of USAR/ARNG Soldiers.

USAR/ARNG Soldiers have probably used many of their devices without knowing that a dedicated team of engineers, technicians, and support logisticians stands behind those devices and simulators and is striving to improve each and every device as the

Army's combat equipment improves and changes. PM CATT's mission is to manage the acquisition, fielding, and life-cycle support of virtual TADSS, while stressing the need for continual improvement and support. PM CATT is responsible for 58 TADSS systems that are either in the field or are being rapidly developed to meet the training needs of today's Army operations.

TADSS Systems

One of PM CATT's biggest successes has been the ongoing development and fielding of the Engagement Skills Trainer (EST) 2000, the high-tech equivalent of an old-fashioned shooting gallery. It allows the Soldier to practice individual marksmanship skills and combat leaders to improve their unit's collective gunnery skills. It offers various engagement scenarios and records the individual Soldier's hits and misses, which provides effective feedback in unit after action reviews (AARs). All this is safely done before a single round is fired on a live-fire range. PM CATT has fielded more than 330 ESTs to USAR/ARNG installations and plans to field 227 more.

control, computing, communication, and intelligence interoperability. To date, PM CATT has fielded 116 CFFTs to USAR/ARNG installations and plans to field 87 more.

A recent success for PM CATT has been the fielding of more than 190 high-mobility multipurpose wheeled vehicle (HMMWV) Egress Assistance Trainers (HEATs). This system was rapidly developed and fielded in partnership with Red River Army Depot, Texarkana, TX, in direct response to urgent demands from units supporting the overseas contingency operations. This device includes a full-sized M1114 HMMWV cab and simulates the rollover of a vehicle in combat situations, giving Soldiers hands-on practice in extracting themselves and their buddies from a crippled vehicle in various rollover angles. A key secondary safety lesson is geared toward proper vehicle load planning and equipment tie-down; as the simulator rolls, anything that is not properly secured becomes a projectile and gives the crew a "hard-knock" lesson. So far, 100 HEAT systems have been fielded to RC units.

A key system that PM CATT has developed and is currently fielding to ARNG units is the Shadow Unmanned Aerial Vehicle (UAV) Crew Trainer (SCT). The National Guard Bureau recognized a need for a unique crew trainer and approached PM CATT with a request to build a simulator. Live UAV missions are often difficult to conduct at home stations where Federal Aviation Administration airspace limitations do not allow actual deployment of UAVs. This trainer allows Shadow units to virtually fly an entire mission without ever having to launch their UAVs. To date, eight SCTs have been delivered and another 17 are planned to be fielded.

PM CATT has also seen success with the ongoing development and fielding of the Aviation Combined Arms Tactical Trainer (AVCATT), which is a mobile, transportable, multistation



PEO STRI's MSTC teaches Soldiers basic combat casualty care through both classroom instruction and hands-on training. (U.S. Army photo by Doug Schaub.)

Another PM CATT system is the Call for Fire Trainer (CFFT), which allows forward observers from all units to practice their coordination with fires and effects from artillery, mortars, naval gunfire, and close air support. The CFFT system can train up to 30 Soldiers in a single classroom and provide recorded feedback to Soldiers regarding their performance. A newer version, the CFFT II, was approved for full-rate production in June 2009 and will provide additional capabilities that allow for integration with other simulation systems; the capability to train for classified operations; and enhancement of command,

virtual simulation device designed to support unit collective and combined arms training. AVCATT provides six manned modules reconfigurable to any combination of attack, reconnaissance, lift, and/or cargo helicopters. There are four role player stations for battalion/squadron staff, combined arms elements, integrated threat, or friendly semi-automated forces. The AVCATT has a robust exercise record and playback feature with a simultaneous AAR capability. PM CATT has fielded nine AVCATTs to USAR/ARNG installations and plans to field two more.

A new Medical Simulation Training Center (MSTC) is being fielded to numerous Active and RC locations. The MSTC is equipped with bleeding, breathing mannequins that give combat lifesavers and medics realistic first aid training for traumatic injuries. The mannequin is visually striking and realistically depicts massive wounds found in combat situations. If the mannequin does not receive proper first aid treatment, it simulates the pulmonary symptoms of a real casualty and its vital conditions rapidly deteriorate. The skills learned in the MSTC improve a combat lifesaver's chances to save a fellow Soldier wounded on the battlefield.

One of the fastest growing and most popular of PM CATT's systems being deployed to USAR/ARNG units is the Games for Training (GFT) program. Gaming technology provides training for various individual and collective tasks, improving battalion and below, individual, collective, and multi-echelon training. GFT is tailored for tactical and combined arms training configured for almost any platoon in the Army's inventory. Trainees move about in a shared, semi-immersive, first-person environment that supports mounted and dismounted operations, combat platforms, small arms, and vehicle-mounted weapons. GFT allows for enhanced skills in cultural awareness, language, improvised explosive

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device recognition, and negotiation skills. The simulation engine provides extremely realistic virtual environments with large, dynamic, highly detailed geo-typical terrain areas. The user-generated, geo-specific terrain allows for a more accurate troop training capability that can be combined with hundreds of accurately simulated military and civilian entities. This virtual environment enables scenario creation, real-time editing, rapid terrain development, and mission rehearsal with a robust 3-D AAR capability and a time-scrollable review of the training from any point of view. GFT fulfills a flexible, low-cost training solution that leverages commercial- and government-off-the-shelf games and advanced simulation technology second only to costly live training opportunities. In 2009, 16 GFT systems were fielded to the USAR/ARNG.

Recognizing RC Special Needs

PM CATT understands that 51 percent of the Army's manpower is found in USAR/ARNG units. Not only should a proportional distribution of the Army's TADSS be delivered to these units, but RC units have special needs.

In recognition of the USAR/ARNG's need for input into the development of TADSS, PM CATT has established an Assistant PM RC Training Systems. This office will be staffed by USAR/ARNG personnel who understand that the home station environment in which RC units train is significantly different than the environment found at the Army's major posts. This understanding, in turn, drives the demand for flexible, mobile TADSS that can be distributed to armories and readiness centers in hometowns across America. The mission of this office is simple:

advocate TADSS that are easy-to-use and maintain at local readiness centers; provide design input to achieve realistic, RC Soldier-friendly devices; and coordinate speedy delivery to USAR/ARNG installations.

PM CATT has become the Army's leader in providing realistic, virtual TADSS solutions to our Soldiers. As each piece of Army hardware changes, so must the training methods and TADSS that support it. PM CATT strives to ensure that the latest virtual technologies are not only built into the current generation of TADSS, but that there is room to grow and improve these systems well into the future as the pace of today's high-tech training needs accelerate. PM CATT is firmly partnered with the USAR and the ARNG and stands ready to meet the challenges of the virtual age.

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