

National Training Center on Wheels

by Major Ron A. McMurry

Army National Guard and U.S. Army Reserve maneuver units, as well as some foreign nations' armed forces, may soon see a significant upgrade to their force-on-force and force-on-target training capability. New technology is already in place, and successfully providing Army trainers with a Combat Training Center (CTC) level of quality training.

Maneuver training for the United States Army requires astute management of the interaction of a complex set of factors. Among others, these include equipment, maintenance, ammunition, weather, troops available, time and, of course, leadership. Reserve and National Guard units must train to the same standards as the Active Component, yet the Reserve Components (RC) often are burdened by the additional factor of geography. RC commanders have to consider that a given brigade or battalion command's subordinate units may be separated from each other and their maneuver training sites by hundreds of miles.

Finally, for RC commanders who have long been frustrated that their training is a factor of how much money they have for buses, a solution is at hand.

A new system, combining MILES II and GPS, is now available that has the capability to rapidly turn any available 10-acre tract into a precision maneuver training site that will rival facilities of the National Training Center (NTC).

As technical improvements transformed MILES (Multiple Integrated Laser Engagement System) to MILES II, navigational technology quantum-leaped to unearthly precision using orbiting satellites. The marriage of MILES II and the Global Positioning Satellites (GPS) was first implemented as a fixed-site system at the NTC in Fort Irwin, California.

In 1985, long before Southwest Asian hostilities, MG Crosby Saint, III Corps commander at Fort Hood, began looking for a system that would bring NTC-level training to the RC and active units. His insight eventually led to the awarding of Army contracts to LORAL, the company that developed and manufactured the original MILES equipment in 1975.¹

The Electro-Optical Systems Division of LORAL (now a part of Lockheed Martin), developed MILES II to increase the capabilities of the original MILES.² By integrating GPS, and configuring

wheeled vehicles and trailers for mobile control centers, video/graphics production, and an air conditioned classroom for AARs, the system was complete. Testing began in 1988, and the final contract was awarded by the U.S. Army Simulation and Training Command (STRICOM) to LORAL in 1993. It was accepted by the U.S. Army in 1995 to support training at Fort Hood, Texas.³

In the last two years, the Precision Range Integrated Maneuver Exercise (PRIME) has been used by units of the 1st Cavalry Division, the 4th Infantry Division, a brigade of the Louisiana National Guard, and the 3d Brigade, 49th Armored Division, Texas Army National Guard. Two platoons of German infantry, representing the Bundeswehr's Jagerbattillon 642 in Brunholder, Germany, were attached to the 49th Armored Division for annual training in June of 1996. The German platoons also used the mechanized infantry lanes of the PRIME system. German trainers echoed the accolades of their U.S. counterparts in their reviews of the PRIME armor and mechanized infantry lane exercises.⁴

The PRIME system's high "quality assurance" attribute is a result of its ability to eliminate cheating. Playback review of actual video maneuver graphics and through-sight gunnery video supports honesty in training evaluation, and may be used for focused retraining. Learning from mistakes becomes an exciting AAR discussion among troops when shown "who shot who when" on color monitors.

Prior to the original MILES, as used in the old Tactical Engagement System (TES), troops were often lulled into thinking that they were training to standard when, in reality, they were nowhere near combat ready. Inherent weaknesses of TES included cardboard targets that could not shoot back, controller subjectivity of troops firing blanks, and a general lack of accurate data that could be processed by the "honest broker" trainer.⁵

NTC training proved that MILES II and GPS could be integrated to eliminate cheating and allow for precision in identifying strengths and weaknesses.

With PRIME, each squad leader and each vehicle is outfitted with equipment that transmits precise identities and positions to the control van. This data is up-

dated automatically every few seconds. The MILES II system will not allow a "dead" soldier to fire his weapon, but another "live" soldier can use a "dead" soldier's weapon, thus allowing the most casualty-producing weapons to remain in the battle. PRIME targets have "shoot-back" capability, using a computer to designate hits or misses based upon weapon trajectory and position information. As the problem progresses, color video monitors, with standard military graphics, display precise GPS positions. Enemy coordinates, minefields, etc., are also displayed and recorded for AAR playback.

An on-board vehicle video system tapes through the gunner's sight picture and records audio from the crew's intercom. Although PRIME is promoted as a maneuver training system, these features make it a formidable gunnery trainer as well.

FM 25-100 and *FM 25-101* revised how the U.S. Army trains. PRIME takes the principles of these manuals and allows for a CTC-level of force-on-force and force-on-target training that can be set up in less than 24 hours in any available local training area. In effect, the training mountain is brought to Mohammed. The resulting enhanced monitoring of training effectiveness greatly reduces subjectivity, promotes honesty of the trainer and trainee, and provides a significant upgrade to the after-action review.

Notes

¹From an interview with Mr. Al Zimmerman, Director, Training and Simulation Systems, Lockheed Martin, Electro-Optical Systems, Pomona, California, 17 Jun 96, at Fort Hood, Texas.

²Schirmer, James, "Making MILES Work For You," *ARMOR*, Nov-Dec 1995, p. 30-33.

³Zimmerman interview, 17 Jun 96.

⁴Interview with MSG Reiner Redel, Bundeswehr Jagerbattillon 642, 15 Jun 96, Fort Hood, Texas.

⁵*TC 25-6*, Training with MILES, September 1982, p. 1-0.

MAJ Ron A. McMurry is assistant S3 of 3d Bde, 49th Armored Division, TXARNG. Also contributing to this article were MAJ Louis F. Goode and LTC Larry D. Rutherford.