# USING THE ITE TO PREPARE FOR FUTURE AIR GROUND OPERATIONS

MAJ P. JOHN CULPEPPER

In March 2014, the 3rd Combat Aviation Brigade (CAB), 3rd Infantry Division conducted a mission rehearsal exercise (MRX) to prepare Task Force (TF) 1-3 Attack Reconnaissance Battalion for a future rotation to the Joint Readiness Training Center (JRTC), Fort Polk, La. The MRX utilized the Integrated Training Environment (ITE) at Fort Stewart, Ga., to provide the commander and his staff a tough, realistic training event.

TF 1-3 and 3rd CAB had recently returned from Afghanistan, and this MRX served as their first training exercise within the decisive action training environment (DATE). This first step proved critical as the units transitioned their mindsets from counterinsurgency to decisive-action operations against a near-peer threat. The training objectives for this MRX forced their staffs to use both digital and analog systems within their command post, conduct the military decision-making process (MDMP), and plan and conduct air ground operations (AGO) in a constructive and virtual simulation. With the help of the 2nd Battalion, 7th Infantry Regiment, TF 1-3 was able to conduct AGO utilizing the Close Combat Tactical Trainer (CCTT) and the Aviation Combined Arms Tactical Trainer (AVCATT) to train on close combat attack (CCA), interdiction attack (IA), and air assault operations. These tasks represent the return to decisive-action tasks utilizing virtual trainers to increase proficiency prior to live exercises or combat training center (CTC) rotations. The goal of this article is to inform both ground and aviation commanders on the capabilities of the ITE to train mission command and AGO at home station and to reintroduce decisive-action tasks aviation units will conduct in support of ground forces.

## The Integrated Training Environment

ITE was utilized to make this exercise a tough and realistic event to prepare the unit for future live training. The ITE, a system of systems, by design combines and connects key training enablers in a persistent and consistent manner to accurately stimulate mission command systems (MCS) to meet the commander's training objectives within the appropriate operational environment. Key components of the ITE include the live, virtual, constructive – integrating architecture (LVC-IA) and DATE. With the ability to stimulate MCS, the staff and commander are able to manage operations just as they would in a live exercise or real-world operating environment. The difference is the unit does not have the logistical or support requirements inherent with a live exercise. Training with the ITE allows the commander to focus almost exclusively on the identified training audience and the training objectives.

DATE is a document that provides detailed information to build an operational environment to operate in and conduct a range of military operations. The DATE provides detailed information commanders and staffs need to understand the environment and create the conditions that challenge leaders to think critically and become more adaptive. For this exercise, the Caspian Sea region was overlaid on the Fort Stewart terrain so that the operational environment could support virtual and constructive training simultaneously on correlated terrain. The area of operations was constructed to support an east-to-west movement that utilized the Atlantic Ocean as the Black Sea and parts of coastal Georgia as Gorgas (see Figure 1). Although live training was not a training objective for this exercise, the products now exist to fully utilize live instrumented units within the ITE for future exercises.

The storyline for this exercise involved defeating elements of the Atropian military that conducted a coup to overthrow the legitimately elected Atropian government. The DATE merely sets the conditions of the operational environment by providing the political, military, economic, social, information, infrastructure, physical environment, and time (PMESII-PT) variables for each of the countries. The Training Brain Operation Center (TBOC) assisted in the development of the scenario by building the operation and fragmentary orders for the exercise. Based on the TBOC's recommendation, we selected the Atropian military coup scenario because it allowed for a realistic, smaller opposing force (OPFOR) to confront our aviation battalion, which was supporting a brigade combat team (BCT). The scenario also utilized the DATE's hybrid threat with insurgent and local militia forces working in concert with

### Figure 1 — Fort Stewart LVC-IA Terrain Box (Caspian Sea Scenario)
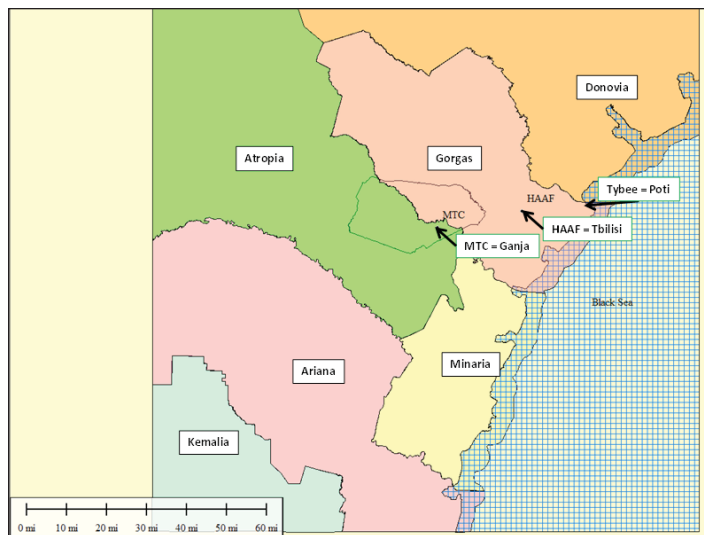
the Atropian forces and supported by Ariana.

To stimulate the training audience's MCS, this exercise employed the LVC-IA to tie together the CCTT, AVCATT, and Joint Conflict and Tactical Simulation (JCATS). The CCTT and AVCATT are virtual training devices (simulators) with real people executing simulated actions. JCATS is a constructive simulation that involves simulated people executing simulated actions relying on the simulation for outcomes. These systems were originally designed as independent training aides. The LVC-IA was and continues to be developed to link these systems together through the architecture created in order to train multiple echelons across training environment boundaries. Companies from 2-7 IN supported this exercise by providing a company commander, platoon leaders, and fire support officer each day in the CCTT. Simultaneously, 40 miles away, pilots flew virtually in AVCATT and conducted AGO with the maneuver unit. JCATS represented the remainder of the blue force (BLUFOR) units and all OPFOR units. What makes the LVC-IA so useful is that it combines all of the advantages of using selected training aids, devices, simulators, and simulations (TADSS) into one near seamless environment within which ground and aviation forces can work together and improve AGO tasks and battle drills.

Some key advantages of utilizing virtual trainers include an expanded training environment, adjustable environmental conditions, repetition, and playback in support of the after action review (AAR). One of the most difficult aspects of training a mechanized force at Fort Stewart is the limited and compartmentalized training areas available that units can train on and reduce noise pollution surrounding communities' experience. By employing the LVC-IA to train within the ITE, our training area expanded to 180 square kilometers, and the limits of the Fort Stewart boundaries disappeared. By leveraging the high fidelity terrain data base, both the ground and aviation units could execute longer and more realistic movements to gain the tactical advantage over the enemy. The virtual environment was built to replicate the real-world environment so all of the map products were relevant; we simply added a layer to change training areas and city names in accordance with the DATE scenario. This environment allows units to transition from wooded areas to highly populated cities which more accurately represent the range of conditions a unit may operate within. The virtual environment also eliminates the constraints placed on firing



Photos by SGT William Begley

*Pilots from 3rd Combat Aviation Brigade conduct a mission brief in the AVCATT prior to execution. The AVCATT and CCTT were integrated in order to conduct CCA missions.*

weapons such as Hellfire missiles. For instance, units could conduct CCA anywhere without real-world limitations due to surrounding communities or restricted firing areas. With more area available, the air assault conducted during this exercise was at a realistic distance to stress all aspects of the operation.

Another advantage of virtual training absent from live training is the ability to quickly and easily change environmental conditions. Environmental conditions include everything from weather to illumination that impact the training audience's ability to maneuver. Poor weather conditions can prevent or significantly hamper aviation units from conducting live training due to safety and risk concerns. However, pilots may be expected to fly in those same (poor) conditions to support the ground unit in combat. Virtual training allows the commander to challenge leaders to operate in nearly any environmental condition(s) without the risk of loss or injury to Soldiers and equipment. This exercise was conducted during daytime hours in clear weather since this was the first exercise in which most of the ground units, Soldiers, and pilots had the opportunity to train together. However, in future exercises, as proficiency is gained, conditions will change to provide more dynamic, challenging environments and conditions. For instance, missions will be conducted where the unit begins movement at dusk but is engaged by OPFOR or does not make it to the objective until dark. In this manner, all the tasks of transitioning from day-to-night driving and operating under low visibility will be conducted in the exercise.

Virtual trainers allow units to quickly reset and execute a mission or task again if the unit failed to meet the commander's

training objective(s). Resetting often involves a simple magic move back to the start position or to any other appropriate location. In contrast, live training requires physically moving the unit and OPFOR back to the start point or other location. That move can be so difficult and time consuming that resetting is not worth the effort, or time and resources prevent it. In our exercise, the ground unit took a wrong road and missed the objective. Although there was benefit from this mistake that ultimately reinforced the need to maintain situation awareness, the training objective to conduct CCA was missed. Once the ground unit realized their mistake and fought through an ambush, the unit was quickly repositioned back at the start point and the mission was conducted again. This time the lead tank was more aware of the route, and the unit made it to the objective and had an attack weapons team (AWT) in support. In a live exercise, it would have been difficult to impossible to quickly position an OPFOR along a route the training audience was not supposed to take and help reinforce the importance of troop leading procedures and situational awareness. In the virtual world, it merely takes a few mouse clicks or key strokes to quickly move or emplace an OPFOR to change the dynamics of an engagement to challenge leaders' critical thinking and adaptability.

Having the ability to see and playback unit actions in the virtual environment significantly adds to the value of AARs. In live training, observations are limited to the location and number of observer controller/trainers (OC/T). In the virtual environment OC/Ts can be anywhere on the battlefield from multiple vantage points. As the OC/Ts observe events they want to highlight in the AAR, they can move the camera to that point and begin recording. With the OC/Ts behind the screens in the control room, the unit is not distracted or alerted to OC/Ts in the area. OC/Ts can observe unit actions from a third person perspective from any angle to clearly see what units are doing. This same capability is especially important for unit commanders to understand the actions of subordinate leaders. Many leaders are familiar with some of these training tools; however, now that we are able to train together using the CCTT and AVCATT, commanders can better understand how leaders operate three dimensionally and identify the challenges associated with air and ground units attempting to see and orient on the same terrain. AARs in the virtual trainers increase the effectiveness in capturing and identifying lessons learned by leaders and aids in making Soldiers more capable and better prepared to conduct live training.

## Aviation Tasks in Support of Ground Forces

Three of the tasks assigned to the aviation battalion to support the ground unit involved CCA, IA, and the air assault. While some of these tasks were conducted during prior deployments, the significant change for this exercise involved the presence of enemy air defense systems, synchronized movement, and synchronization of field artillery. The true power and potential of the combined arms team is only realized when all members of the team work together. Practice and repetition are essential to mastering the execution and synchronization of these tasks, which is why training in the virtual trainers is critical prior to live training. Being better prepared prior to live exercises reduces the learning curve and allows the unit to achieve a higher level of proficiency in less time and cost than in live-only training.

CCA provides the maneuver commander another means to attack an enemy in close proximity to friendly forces. The distances where CCA takes place range from tens of meters to several thousand meters. It is important to note that CCA is not synonymous with close air support (CAS), which is typically provided by the Air Force and involves different requirements and procedures. CCA can be coordinated and directed by a team, platoon, or company ground unit. Tables and briefs outlined in FM 3-04.126, *Attack Reconnaissance Helicopter Operations,* provide both the ground unit and the pilot the most critical information to ensure a safe and effective use of force in close proximity.

The three components of a CCA involve the CCA fragmentary order (FRAGO), check-in brief, and the CCA brief. Standardized procedures and practice help reduce the risk of fratricide and increase the effectiveness of the combined arms team. The CCA FRAGO communicates critical information from the ground unit to the pilot. FRAGO information should note whether or not changes have been made since the final conditions check. Once the aircraft are in the area, the pilot gives the ground unit a check-in brief to inform them of their restrictions and limitations. These briefs are important anytime a new aircraft team checks in

**Figure 2 — CCA Brief from FM 3-04.126**



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*The author (right) briefs BG Peter L. Jones, the 3rd Infantry Division's deputy commanding general-support (middle), and COL John D. Kline, 3rd CAB commander (left), on the commander's training objectives and expected end state of the MRX.*

because the brief provides details such as team composition, ammunition type, and station time. The CCA brief is used to initiate the attack and helps reduce the risk of fratricide and ensure enemy destruction. Table 3-5 of FM 3-04.126 provides the most complete transmission of information between ground and air units (see Figure 2).

Since most CCA missions are hasty, conducting team training and battle drills in virtual trainers are critical to build familiarity and confidence for the future. One of the most difficult parts of CCA is clearly understanding where friendly forces are located in relation to the enemy. During this exercise, ground commanders and pilots realized how difficult referencing ground features can be. While the tank crew thought it was clear what corner of the intersection they were marking, the pilots at altitude and moving from a different direction could not see the same reference cues. Misunderstandings like this could lead to delays in the attack or worse — fratricide. Repetition while varying the conditions as crews gain proficiency can help ensure that CCA missions are timely and lethal. In the future, ground unit Soldiers and pilots will switch roles in the AVCATT and CCTT. This training method will help the ground and air units gain a better understanding of the other's limitations and capabilities. This type of training is nearly impossible in real aircraft, and the difference in perspective is enlightening.

The IA can be hasty or deliberate and is used to disrupt or destroy an enemy force from limiting friendly forces freedom of movement or from reinforcing an enemy force. Deliberate IA missions can be planned as a branch plan on a decision support matrix. IA may be planned to prevent an enemy from conducting their most dangerous course of action, destroying a fleeting high-value target or tied to a key objective. IA are often hasty as in the case of intelligence-gathering assets discovering an impending enemy attack. This exercise directed a deliberate IA as national intelligence assets determined that an Ariana armored force was moving north into Atropia to reinforce the military coup. Since these

missions are mostly out of direct contact with friendly forces, a number of additional planning factors must be considered such as recovery of downed aircraft or refueling to remain on station long enough to effectively destroy the enemy.

Air assaults are some of the most difficult missions to execute due to the high level of synchronization required to maintain the element of surprise and build friendly combat power. Air assaults can be utilized for a variety of reasons such as emplacement of reconnaissance elements, seizure of an objective, or dislocate enemy forces. The ITE is a valuable training tool to practice air assaults within DATE as it allows the commander and staff to coordinate fires, visualize the movement of aircraft and equipment, and react to enemy actions.

## Conclusion

ITE provides the commander and staff the ability to train in tough and realistic environments. This exercise challenged our leaders' ability to execute mission command within the DATE. The commander and staff refined battle drills and digital and analog products. Utilizing the CCTT and the AVCATT allowed both the ground unit and the pilots the opportunity to practice AGO and refine procedures necessary to make the combined arms team more lethal while reducing the risk of fratricide. The use of the IA provided the ground commander the means to destroy an enemy force from reinforcing the objective well before other friendly assets could maneuver into place. And finally, the air assault planning drove the staffs to coordinate all the critical tasks necessary to conduct the mission. The missions conducted in the ITE with support from the LVC-IA allowed commanders to utilize all MCS while subordinate units practiced battle drills, thus preparing units to train at a higher proficiency during live exercises and which will increase lethality in combat later.

**MAJ P. John Culpepper** currently serves as simulations officer for the 3rd Combat Aviation Brigade, 3rd Infantry Division, Hunter Army Airfield, Ga. As a Functional Area 57 officer, he supports the commander in developing training exercises and establishing the knowledge management program throughout the brigade. His previous assignments include serving as an assistant professor in the Department of Geography and Environmental Engineering, United States Military Academy (USMA), West Point, N.Y.; and commander of F Company, 35th Engineer Battalion (One Station Unit Training), Fort Leonard Wood, Mo. He has a bachelor's degree in geographic information science from USMA, a master's degree in geography from the University of Utah, and a master's in geophysics from University of Missouri-Rolla.