Vehicle Recognition Training Saves Lives

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> *"Fratricide is the employment of friendly weapons and munitions with the intent to kill the enemy or destroy his equipment, or facilities, which results in unforeseen and unintentional death or injury to friendly personnel."*
> — **U.S. Army Training and Doctrine Command (TRADOC) Fratricide Action Plan**

The first reported ground fratricide incident during Operation Iraqi Freedom (OIF) occurred shortly after midnight on 25 March 2003, when one British tank fired on another near Basra. The tanks were engaging pockets of Iraqi soldiers near a bridge over the Qanat Shat Al Basra canal, which runs along the western edge of the city. In a nearby sector, a troop of tanks was tracking, through their thermal sights, a group of enemy personnel that had been reported by the battle group headquarters. The "target" was reported as an enemy bunker position. The targeted tank was unfortunately in turret-down position, its crew working on the turret top and was misidentified by the second tank crew as the reported "enemy" troops. The tank commander requested clearance to shoot, which was granted. Two shots of high explosive shell (HESH) fired at 4,000 yards blew the turret off the tank, killing two of the crew and seriously wounding two others. Both tanks were fitted with visual and thermal Combat Identification Panels (CIPs) in working order, but the second tank crew could not obtain a clear visual view due to the hull-down position of the tank, according to the article "Blue-on-blue Ground Incidents during OIF," which appeared in Issue 2-2004 of *Defense Update*, International Online Defense Magazine.

This dramatic and costly incident, and others with similar fratricidal results during OIF, amplifies the continuing need for not only a viable technical solution to combat vehicle identification (CVI) but also the imperative to improve our overall combat identification (CID) training. As statistics verify, CID is still an unresolved problem on the modern battlefield even during stability and support operations. (Information taken from the U.S. Army Combat Readiness Center's March 2006 issue of *Countermeasure.)*

CID is made up of a multitude of facets: Situational awareness and target identification within specified rules of engagement are the cornerstones. Individual and collective training is the glue that binds these aspects together. To help prepare our forces to prevent or reduce the potential for fratricide and simultaneously increase combat effectiveness, U.S. Army TRADOC is currently implementing a five-tiered training approach for CID. This training will provide "trigger pullers," a graduated and increasingly robust training program to meet current and projected CID challenges. Regardless of the technology, or the ability of the command and control architecture to provide near perfect situational awareness, once the vehicle commander or individual shooter reconfirms the target is hostile before firing, the final decision to engage a target by direct fire is and will always be relegated to the shooter — the gunner with his finger on the trigger.

The basis and foundation of the TRADOC 5-tiered CID training plan is CVI training within a graduated training model (see Table 1). The primary CVI training aid of choice is the Recognition of Combat Vehicles (ROC-V) and Training Aids, Devices, Simulators, and Simulations (TADSS) with embedded imagery from the ROC-V program. ROC-V is a thermal sight

Figure 1 — TRADOC Combat Identification Tiered Training Model

Tier Level	Type Training
1. Individual	CVI with ROC-V
2. Individual and Team	Advanced Gunner Training Simulator (AGTS), Bradley Advanced Training System (BATS), Unit Conduct of Fire Trainers (UCOFT), Close Combat Tactical Trainer (CCTT)
3. Team and Unit	Gunnery, ranges, New Generation Army Targetry System (NGATS)
4. Unit and Collective	Force-on-force training exercises with JCIMS at home station and CTCs
5. Collective and Joint	Virtual mission rehearsals, combined arms rehearsals, rock drills

training program that runs on any computer with the Windows operating system. ROC-V helps Soldiers learn to identify the thermal signatures of combat vehicles through the use of an interactive curriculum that teaches the unique patterns and shapes of vehicle "hotspots" and overall vehicle shapes. ROC-V also provides Soldiers with practical experience in the use of their individual weapon thermal-sensor image controls. Through the use of virtual sight controls, soldiers learn to effectively adjust their thermal optics to find targets and reveal their thermal identification cues. ROC-V includes training and testing to support the U.S. Army Soldiers Manual Common Task (SMCT) Skill Level 1 for visual vehicle identification.

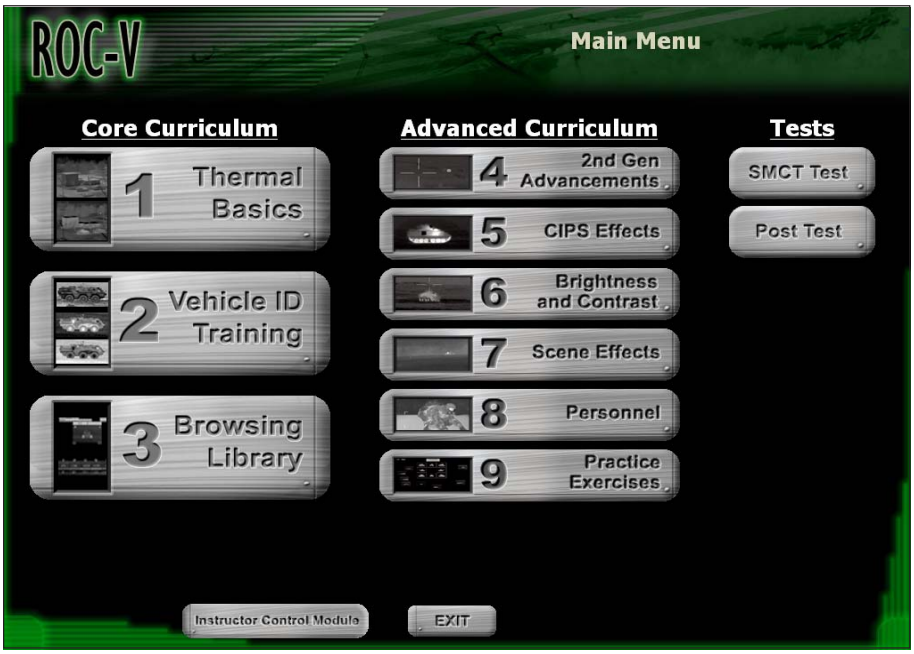
ROC-V is currently the standard ground CVI training tool within the U.S Army and Marine Corps. HQ TRADOC has directed implementation of ROC-V across multiple mission area specialties for both soldier common skills and specialty CVI training. The training program includes paper trainer versions for reference without a computer. The instructor control module permits individual and collective training, testing, and tracking of scores. ROC-V is the only training aid available for currently fielded JCIMS devices. ROC-V is available via Web site download at https://rocv.army.mil. (This Web site is provided only for authorized U.S. Government use and requires an authenticated login.)

A recent survey of sample ROC-V users that accessed the ROC-V Web site in 2005 indicated 79 percent stated ROC-V program improved their individual CVI skills, and 87 percent rated the ROC-V program as an effective CVI training aid. The survey also provided specific recommendations to improve the program to better meet the needs of the warfighter. Feedback from instructors and graduating students at master gunner schools also indicates user satisfaction with the training program. Many recommendations from these users have been incorporated into the current version of ROC-V.

Representatives from the four armed services are involved in direct consultation with the ROC-V development team to produce the next generation of ROC-V to meet other specific mission area applications. The ROC-V team has already produced a look-down aspect angle version for the air-to-ground mission areas such as fixed-wing close air support, attack and reconnaissance rotary-wing platforms, and AC-130 gunships. It is currently in use by USMC light attack helicopter squadrons. This same product improvement has potential utility for tactical Unmanned Aerial System (UAS) sensor analysts. Army Training Support Center (ATSC) has assumed responsibility for distribution of compact disc versions of ROC-V through the Joint Visual Information Activity, Tobyhanna, Pennsylvania at http://dodimagery.afis.osd.mil. ATSC designed these compact discs as a supplemental distribution method to the Web-based, online download method for those soldiers that cannot access the Web site. TRADOC, in partnership with Program Executive Office for Simulation, Training and Instrumentation (PEO STRI), is working towards embedding ROC-V imagery within combat vehicle tactical trainers and adoption into TADSS and future combat system trainers. Future efforts also include the development of a web-based SCORM conformant course that can be hosted by the individual services.

Leaders must ensure they have a plan to reduce the risk of fratricide. Along with improving situational awareness during operations, the key is tough, realistic CVI training before operations. ROC-V meets that training requirement. The ROC-V Computer-Based Training (CBT) is exponentially ahead of traditional training methods. Bottom line — ROC-V training saves lives.

Figure 2 — ROC-V Main Menu Screen



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