Joint Combat Identification (ID) Marking System (JCIMS) Continues to Save Lives

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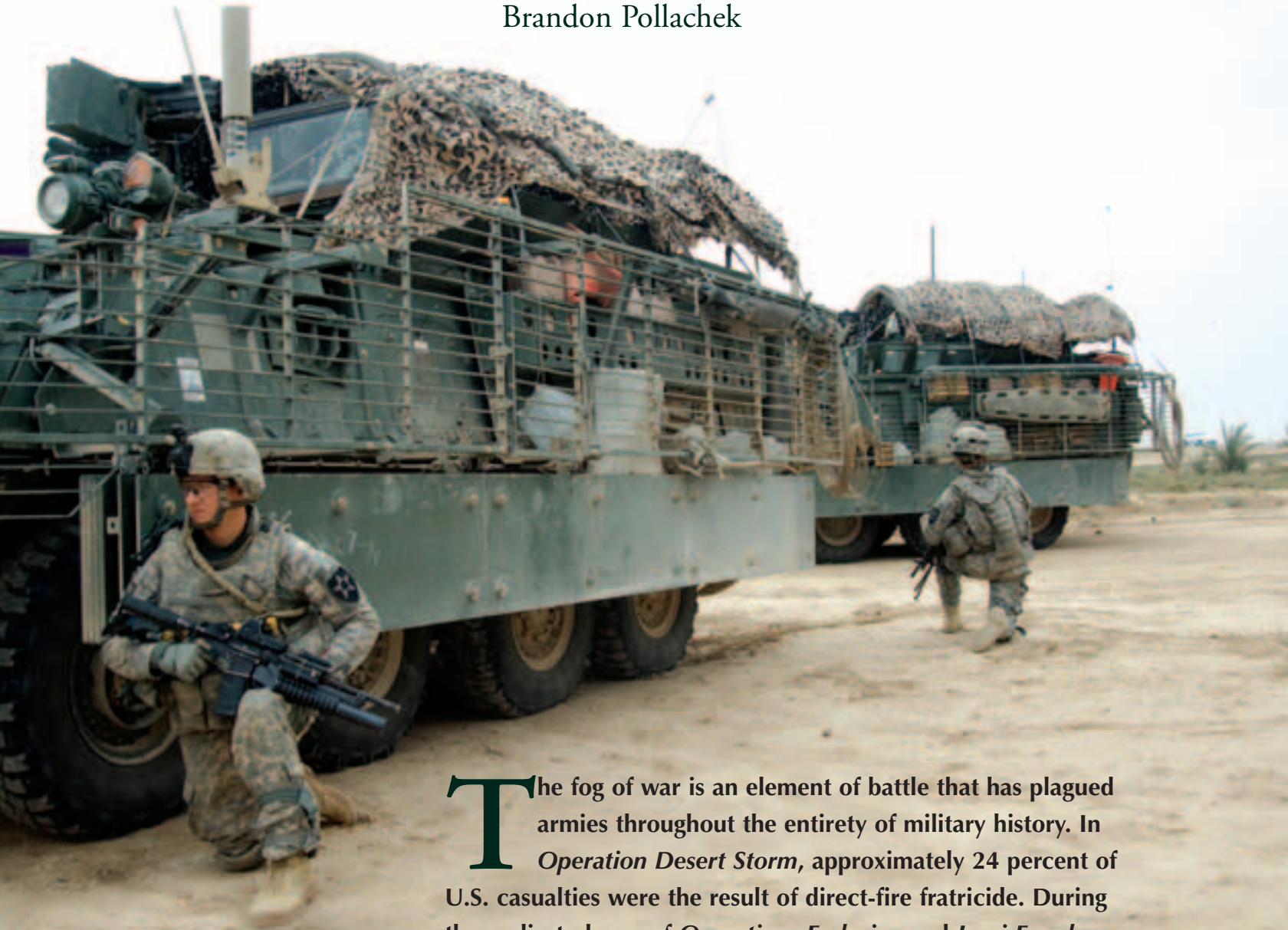

The fog of war is an element of battle that has plagued armies throughout the entirety of military history. In *Operation Desert Storm*, approximately 24 percent of U.S. casualties were the result of direct-fire fratricide. During the earliest phases of *Operations Enduring* and *Iraqi Freedom* (*OEF/OIF*), all eyes were keeping careful watch to see how ground forces world correct previous friendly fire problems.

Soldiers from Bravo Co., 5th Battalion, 20th Infantry Regiment, 3rd Stryker BCT, 2nd Infantry Division, form a security perimeter around the village of Sanajar in the Diyala province of Iraq without concern of being mistaken as a potential target by friendly forces because of JCIMS. (Photo by MC1 Kirk Worley, U.S. Navy.)

A USMC M1A1 Abrams main battle tank can positively identify friendly forces that have JCIMS with the use of IR and thermal optical technologies. Additionally, the M1A1 Abrams is also being protected from friendly fire with JCIMS installed on the platform. (USMC photo by Cpl Theodore W. Ritchie.)

JCIMS Components

The JCIMS, which has been fielded incrementally since 1995, is one solution to correcting friendly fire problems. JCIMS is managed by Product Director Target ID and Meteorological Sensors (PD TIMS) and consists of three components: Combat ID Panels (CIP), Thermal ID Panels (TIP), and Phoenix Infrared (IR) Lights. This combination, which is fielded on U.S. ground force vehicles for both the Army and U.S. Marines Corps (USMC), provides friendly forces ID through the use of IR and thermal optical technologies—a capability that helps to positively identify vehicles on the battlefield and reduce the risk of friendly fire upon their comrades.

"CIPs are passive emitters that are mounted on vehicles. When viewed through a thermal optic, a distinctive signature is visible that helps make a more informed 'shoot/don't shoot' decision at the point of engagement," said Mike Starr, PD TIMS, Combat ID liaison to the U.S. Army Armor Center.

CIPs are the primary ground-to-ground thermal marking device for the ground force, while the TIP is the primary air-to-ground marker as it offers fixed- and rotary-winged aircraft situational awareness (SA) of the location of friendly forces on the ground. The Phoenix IR Light gives off a continuous signal, which can be viewed by forces using image intensification technologies, such as night vision goggles (NVGs). During mounted operations, the Phoenix IR beacon is used primarily by drivers of combat and support vehicles to maintain SA of where they are, relative to the other platforms in their formation. The Phoenix IR beacon is also a resource for dismounted Soldiers equipped with NVGs and is used to mark personnel, caches, obstacles, obstacle lanes, sectors of fire, etc. When used with the appropriate tactics, techniques, and procedures (TTPs), the CIP, TIP, and Phoenix IR Light significantly reduce the chance of mistakenly engaging friendly units.

"JCIMS is compliant with the *NATO Standardization Agreement 2129*," notes Starr. The standardization agreement, *Identification of Land Forces on the Battlefield and in an Area of Operation*, ensures that the system meets the wavelength and optic requirements for the NATO community. With various NATO ground and air forces participating in the Afghanistan coalition force, it is imperative that they be able to positively identify targets before engaging.

The JCIMS components themselves are relatively simple technologies that are fairly inexpensive. Following their introduction into the Army and USMC arsenals in 1995, the system's capabilities have significantly improved over time.

For more than a decade, JCIMS has proven to be a simple but effective lifesaving capability for U.S. ground forces and will continue to provide the friendly force target ID needed by our warfighters to avoid incidents of fratricide.

However, the improvement is not necessarily related to changes made on the two types of panels and the Phoenix IR Light. Increased performance has been advanced by the optical technologies used to view them, such as the Long Range Advanced Scout Surveillance System (LRAS3), first and second generation forward-looking IR (FLIR), and NVGs—all of which have improved and, therefore, enhanced the ability of Soldiers, Marines, and NATO forces to identify friendly forces.

Fielding

Since first coming online 15 years ago, more than 80,000 JCIMS have been fielded for use by the Army and USMC. The systems are protecting everything from M1 Abrams tanks to high-mobility multipurpose wheeled vehicles to Stryker vehicles. Currently, the Army is installing the 3-component system on Maneuver Brigade Combat Team (BCT) vehicles in both the active component and Army National Guard. Additionally, USMC has mandated that JCIMS be incorporated onto the vehicles for all deploying Marine Expeditionary Units.

Fielding of JCIMS will continue through FY11 with 8–12 BCTs being equipped and trained each year. The U.S. Army Training and Doctrine Command institutional training centers, as well as the combat training centers at Fort Irwin, CA, and Fort Polk, LA, have been equipped with JCIMS, so units can train with the actual system during maneuver exercises prior to deployments.

Soldiers with 8th Squadron, 1st Cavalry Regiment, move in a convoy in Stryker armored vehicles, to Taktehpol, Afghanistan. Their vehicles can be positively ID'd by coalition forces because of JCIMS. (Photo by TSgt Francisco V. Govea, U.S. Air Force.)

JCIMS Future

The future for JCIMS includes new mounting methods that will ensure the panels stay affixed to the vehicle they are protecting, which is a response to lessons learned in *OEF*/*OIF*. As new vehicles are introduced into the U.S. ground forces inventory, PD TIMS is planning to interface JCIMS with the Joint Light Tactical Vehicle and other modernization ground platforms.

JCIMS, which was once a quick-fix solution and the result of a Combat ID General Officer Steering Committee directed by former Chief of Staff of the Army GEN Gordon Sullivan in 1991, has become a mainstay in the Army and USMC inventory. "For more than a decade, JCIMS has proven to be a simple but effective lifesaving capability for U.S. ground forces and will continue to provide the friendly force target ID needed by our warfighters to avoid incidents of fratricide," said Michael Karpie, Acting Director, PD TIMS.

An additional boost for combat ID is in the works as the Army and USMC work out the requirements of the Joint Cooperative Target ID-Ground (JCTI-G) system, which would be a more robust, active cooperative target ID capability. The JCTI-G would provide Soldiers and Marines with a greater understanding of the battlefield and build upon the success that JCIMS has brought in terms of preventing fratricide. It is anticipated that the JCTI-G program will enter the Materiel Solution Analysis phase this fiscal year.

U.S. ground forces using the LRAS3 in conjunction with the JCIMS can verify friendly forces when targeting. (U.S. Army photo.)

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