# Victory Starts Here

## A Short 45-Year History of the US Army Training and Doctrine Command

**Del Stewart**

**TRADOC Military History & Heritage Office**

Combat Studies Institute Press
US Army Combined Arms Center
Fort Leavenworth, Kansas

The cover photo is a collage of US Army photos.

Upper left: A US Army AH-64D Apache Attack Helicopter, assigned to the 1-151st Attack Reconnaissance Battalion, flies in front of a wall of fire during the South Carolina National Guard Air and Ground Expo at McEntire Joint National Guard Base, SC, 6 May 2017. Photo by Tech. Sgt. Jorge Intriago.

Upper right: Troopers of 2nd Cavalry Regiment during Saber Junction 17 at Hradcany Air Field, Czech Republic, 29 April 2017. Photo by Sgt. Devon Bistarkey.

Lower left: Paratroopers of the 82nd Airborne Division participate in the Best Squad Competition, at Fort Bragg, NC, 23 May 2017. Photo by Sgt. Jesse D. Leger.

Lower right: Engineer Soldiers with 2nd Cavalry Regiment during Saber Strike 17, Bemowo Piskie Training Area, Poland, 8 June 2017. Photo by Sgt. Justin Geiger.

Source: All photos acquired from the US Army (Official) Home Page at https://www.army.mil/ on 7 July 2017.

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Elizabeth J. Brown

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## Foreword

It is with pleasure that I bring to your attention and recommend for your reading the following 45-year short history of the US Army Training and Doctrine Command (TRADOC). The Global War on Terrorism is now ongoing for 17 years and counting. During the last few years, TRADOC has pioneered the intellectual reform known as Multi-Domain Operations (MDO), previously called Multi-Domain Battle (MDB); published a new edition of Field Manual 3-0 *Operations;* and developed the concept of Large Scale Combat Operations (LSCO), which together focus the Army on reestablishing its preeminence in traditional combined arms warfare, rather than the more recent counterinsurgency (COIN) operations. But TRADOC still has much to do in the years to come. The Army is about to form a new command to cover the vital tasks of futures and modernization, and some of today's TRADOC will soon go into that organization. The rest of TRADOC will continue training and educating the force, while also formulating the doctrine by which the whole Army operates—all in pursuit of continued excellence. As always with TRADOC: Victory Starts Here!

Stephen J. Townsend
General, US Army
Commanding General
US Army TRADOC

## Preface

What follows is the fourth edition of a short history of the US Army Training and Doctrine Command (TRADOC). This 45-year version comes at a pivotal moment in TRADOC's history. Since its creation in 1973 in one of the most historically significant organizational reforms in US Army history, TRADOC has been the service's primary provider of concepts, doctrine, training, education, and future forecasts. As this study goes to press, most of the concepts and future forecasts portions of TRADOC, along with similar elements of other Army commands, are being formed into a new command, but TRADOC will continue to provide the vital services of training, education, and doctrine formulation to both the Army and the nation.

The author of this 45-year short history, Mr. Del E. Stewart, as a professional historian and as both a former senior NCO and now a retired Chief Warrant Officer 3, brings unique and noteworthy perspective to this monograph. For the first time in these short histories, TRADOC's Command Sergeants Major are listed and their careers summarized along with the Commanding Generals whom they served. Also, as a former Army concepts developer, Mr. Stewart has incorporated those aspects as well into this summary and analysis of TRADOC's history. The final product, therefore, is richer and deeper than ever before.

As always, the TRADOC Military History and Heritage Office will gladly accept input from the readers of this volume.

J. Britt McCarley, Ph.D.
Director, TRADOC Military History
and Heritage Program
Fort Eustis, Virginia

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# Chapter 1
# TRADOC: A Historical Summary

## Post-World War I to 1973

After World War I, the forces which eventually created TRADOC were expressed in various iterations, but can be summarized as: limits on the span of control. In 1940, General Headquarters (GHQ), US Army, soon experienced conflicts between its training responsibilities on the one hand, and the command and control (C2) of ground combat troops and their supporting forces on the other. Training generally got short shrift, as filling manpower requirements was often deemed more important.

The functions of training and warfighting were separated in 1942; the newly reorganized War Department retained control of ground combat forces and supporting elements, while the training responsibility was transferred to the newly established Army Ground Forces (AGF). For cost-effectiveness, these functions were again combined into the AGF in 1945, per the recommendations of both the Patch and Simpson boards, despite past experience. In 1948, the redesignated Department of the Army established the Office of the Chief of Army Field Forces (OCAFF) as its training arm. The predictable problems of span of control, etc., led to yet another call for reorganization under yet another Committee—the Davies Committee—which resulted in the creation of the Continental Army Command (CONARC) in 1955, again combining training with C2 of ground forces.[1]

CONARC was responsible for all active Army units in the Continental United States (CONUS) as well as training centers, schools, and doctrine development. In 1962, combat developments was transferred to the purview of the newly created Combat Developments Command (CDC). Span of control was again clearly too large, resulting in the Parker Board of 1969. The Chief of Staff of the Army (CSA), General (GEN) Creighton W. Abrams Jr., then initiated OPERATION STEADFAST, which was executed by his Assistant Vice Chief of Staff, Lieutenant General (LTG) William E. DePuy. Per the recommendations of OPERATION STEADFAST, the CDC and CONARC were both inactivated, and on 1 July 1973, two new organizations were activated: the United States (US) Army Forces Command (FORSCOM) assumed control of the Active Duty armies and units in CONUS and the US Army Training and Doctrine Command (TRADOC) assumed control of training centers, Army schools, doctrine development, and combat developments.

Both TRADOC and FORSCOM maintained their own installations until the US Army Installation Management Agency (later US Army Installation Management Command, or IMCOM) assumed responsibility for all Army installations in 2002. The establishment of TRADOC was something revolutionary in the US Army. For the first time in its history, basic and advanced individual training, Army branch schools and Army colleges, Reserve Officers' Training Corps (ROTC), analysis, doctrine development, and combat developments were all the responsibility of a single headquarters. That TRADOC was a major command (MACOM) under the leadership of a full general indicated its importance in the new scheme of things.

TRADOC put combat developments into the schools, and focused upon the development of the Army's tactical organizations, weapons and equipment, doctrine, and the training of soldiers within that doctrine. TRADOC also needed to reorient the Army's thinking toward the Soviet Union's dangerous and growing strategic threat to the North Atlantic Treaty Organization (NATO) alliance. The situation was exacerbated by what military observers in the US and Europe described as a *lost decade* of weapons development by the US Army, stemming from a 10-year concentration on fighting and equipping for the Vietnam conflict.

TRADOC came into existence during the American defense policy reorientation from Vietnam to NATO, Europe, and the challenge of the Warsaw Pact buildup. Those efforts fundamentally transformed the Army into a modernized, trained, and ready force. The US Army helped rebuild and synchronize with other NATO forces, and that successful alliance of trained forces was a significant component of the successful political-military-economic challenge which ultimately brought an end to the Cold War in 1989–91. The highly trained, professional Army of Excellence (AOE) combat units helped restore democratic government to Panama in OPERATION JUST CAUSE in 1989–90, and later expelled the armies of Iraq from Kuwait in OPERATION DESERT STORM in 1991. This same Army increasingly provided peace operations and humanitarian relief in places such as Somalia, Bosnia-Herzegovina, Haiti, and Rwanda; and aided victims following various natural disasters, and the terrorist attacks on the Pentagon and the World Trade Center in September 2001.

In 1973, TRADOC had the first immediate task of solving why there seemed to be a shortage of quality junior noncommissioned officers (NCOs) in the Army. The simple answer was that any junior NCOs from World War II, Korea, or even the early stages of Vietnam would no longer be j*unior* but either senior NCOs, or retired. A definitive, proper education system was required, something that went beyond the technical dimen-

sions of the Military Occupational Specialty (MOS)—or job—that a Soldier might hold. This eventually resulted in the established of the tiered NCO Education System (NCOES).

While beginning to grapple with the issue of NCO training, the second major event—one which is still studied extensively today—was the Yom Kippur War, also known as the Ramadan War, '73 War, and the October War. This began on Saturday, 6 October 1973, and ended Thursday, 25 October 1973. A coalition of mostly Arab states led by Egypt in the south and Syria in the north, augmented by forces from Iraq, Jordan, Saudi Arabia, Algeria, and Morocco, conducted a surprise attack against Israel on their holiest of Holy Days. Many of the Arab states had been supplied by the Soviet Union/Warsaw Pact, while Israel had received US/NATO equipment. That fact caused many military analysts from several nations, east and west, to view the conflict in terms of a proxy war between the US and the Union of Soviet Socialist Republics (USSR) (Cyrillic alphabet: CCCP). When the Israel Defense Forces (IDF) succeeded while fighting at odds greater than 3:1, TRADOC, as the conceptual and doctrinal arm of the Army, engaged in detailed talks to learn how this was accomplished. This resulted in a revolution in US Army doctrine, simultaneous with the push for new equipment to counter the expansionist Warsaw Pact threat in Europe, detailed in Chapter 4, *Doctrine.*

## Challenges after TRADOC's Creation

Throughout the 1970's and 1980's, pressure on multiple fronts—diplomatic, informational, military, and economic (DIME)—resulted in the collapse of the USSR and the Warsaw Pact. This created a new strategic world by the early 1990s. For a brief decade, the United States remained as the single superpower in an international order in which it could act with greater freedom to support national independence and democratic and free-market institutions.

To many policy makers, the situation seemed to dictate a smaller Army whose readiness was assured by new technology. As LTG H.R. McMaster, former Army Capabilities Integration Center (ARCIC) Director was fond of publicly stating, this tragic faith in technology is an errant philosophy that simply will not die, like a vampire, no matter how many times it is proven invalid.[2] In the mid-1990s, TRADOC institutionalized these new directions as the mid-future Army XXI, which included Force XXI, the TRADOC-led effort to determine future force structure based on digitally equipped forces.

Beginning in late 1999, a number of major Department of the Army (DA) initiatives—collectively termed *Transformation*—looked to the weapons, force structure, training, and doctrine of the Army well into the 21st century. TRADOC was in the vanguard of that effort. Technological advances enabled increased accuracy, range, payload, and lethality from synchronized near-real-time intelligence, surveillance, reconnaissance (ISR), merged with sensors autonomously capable of target detection, categorization, recognition, identification, and communications. This evolution of a new strategic world and the emergence of a higher form of warfare and killing occurred simultaneously with a US military establishment sharply drawing down in the wake of the retrenchment of Soviet power. Against this background of radically altered strategic assumptions came the attack on the United States on 11 September 2001, and the beginning of the Global War on Terrorism (GWOT).

Once again, TRADOC was challenged to develop doctrine and train soldiers for different type of warfare than that of the Cold War, or the first Gulf War of 1990–91. The war in Afghanistan (2001-present) was marked primarily by counter-insurgency operations (COIN) while the War in Iraq (2003-2011) was characterized by both conventional and counter-insurgency warfare.

In the midst of developing appropriate training for the new warfare challenge, TRADOC was subjected to the 2005 Base Realignment and Closure (BRAC), resulting in closing Fort Monroe and constructing new buildings for the headquarters and ARCIC on nearby Fort Eustis, VA.

Figure 1. TRADOC Headquarters, Fort Eustis, Virginia.

# Chapter 2
# TRADOC: Leadership

## The Commanders

During its 45-year history, TRADOC had 15 commanders. Their unique contributions are detailed below.

### GEN William E. DePuy

Figure 2. General DePuy.

GEN William E. DePuy served as TRADOC's first commander from July 1973 to 1977. He initially addressed TRADOC's mission to get the Army ready to fight the next war, and his primary concerns were improvements in individual training, better support for training in units, new training doctrine, and a new emphasis and direction for combat developments activities. To correct the training difficulties inherited from the Vietnam War, DePuy adopted a *back to basics* approach. Officer training courses were to prepare officers for their next assignment, the physical aspects of basic combat training (BCT) were toughened, and advanced individual training (AIT) was made more performance-oriented. Another of DePuy's major projects was the production of *how to fight* manuals and films that set forth Army doctrine in simple language. In addition, the Army Training and Evaluation Program (ARTEP) brought standardization to Army training.

GEN DePuy and the TRADOC staff also made combat developments a prime concern. The process had to be harnessed to the present and near future. Heavily influenced by the 1973 Yom Kippur War with its increased lethality, especially in armored warfare, GEN DePuy adjusted his emphasis from training the Army to *win battles* in the general sense, to specifically winning *the first battle of the next war.* This was a direct lesson learned from the initial battle of the Yom Kippur War, which was so critical to the Israeli Army success. Due to the small size of the TRADOC headquarters staff, the functional centers and schools undertook a major portion of the combat developments mission and the systems acquisition process.

GEN DePuy instituted the installation contract system as a major innovation for improving management of the TRADOC structure and its installations. That document provided a medium for agreement between each installation commander and the TRADOC commander, specifying the tasks to be performed and the resources provided. Believing that doctrine should emanate from the highest levels of leadership, GEN DePuy created a Tactical Doctrine Office separate from both combat developments and training functions that reported directly to him. During his tenure, the capstone document, Field Manual (FM) 100-5, *Operations,* was significantly revised to provide the basis for the aforementioned *how to fight* series and came to play a more central role in defining Army doctrine.

**GEN Donn A. Starry**

Figure 3. General Starry.

GEN Donn A. Starry assumed command of TRADOC from GEN DePuy in July 1977. The key concept for internal affairs during his tenure was *decentralization.* Accordingly, he began a pronounced decentralization of major projects to the integrating centers and schools. Also in line with that approach was his decision to move the three-star TRADOC deputy commander position from Fort Monroe, co-located with TRADOC headquarters, to Fort Leavenworth, KS.

Doctrinally, GEN Starry sought to answer what had come to be a substantial discussion and controversy over the Active Defense concept of the 1976 version of FM 100-5. He brought to TRADOC the idea of an integrated and extended battlefield—the *Central Battle*—to engage the enemy not only at the point of attack but also in depth. Another revision of FM 100-5 began almost immediately. The concept required extension of the combat developments period out 8 to 10 years, departing from GEN DePuy's focus on near-term problems. Following this approach, GEN Starry hoped to harness the combat power of the oncoming generation of weapons and other modernization efforts.

GEN Starry inherited from GEN DePuy a process already underway to restructure divisions. He redefined division restructuring within a larger context that resulted in the first *Battle Development Plan* in 1978. Concep-

tualization of what came to be termed *Division 86* and subsequent studies of corps and echelons above corps defined *Army 86,* which was the framework for force development that replaced the DePuy division restructuring. The fundamental conceptual and doctrinal premises for the studies were known as AirLand Battle.

GEN Starry assumed and expanded GEN DePuy's initiatives on training in a program dubbed Army 1990. Of special concern was TRADOC's promotion of the need for a Combined Arms and Services Staff School (CAS3) for captains. Subsequently, the findings of a panel known as the Review of Education and Training for Officers (RETO) revolutionized both organization and execution in TRADOC schools.

After commanding TRADOC, from 1981-1983 GEN Starry finished his illustrious career as Commander, US Readiness Command—a Unified Combatant Command headquartered at MacDill Air Force Base, FL.

**GEN Glenn K. Otis**

Figure 4. General Otis.

GEN Glenn K. Otis followed General Starry as TRADOC commander in August 1981. Internal to the command were his *3Ms*—management goals of mobilization planning, maintaining the force, and modernization of the force. In all three areas, training stood first in his list of priorities. Mobilization planning involved development of programs of instruction, training base expansion capacity, and equipment requirements. Maintenance of the force concentrated on training and maintaining the momentum of the previous command. Force modernization challenges included managing the phase-in of interim and new organizations and the development of support packages for training (spare parts, maintenance, and field manuals). Given the recommendations of the RETO Study, ongoing changes in enlisted training, and the implications of AirLand Battle doctrine, GEN Otis tended to look ahead for approximately 10 years. At his last TRADOC Commanders Conference in the fall of 1982, Otis added a *fourth M*—military history.

Over the course of 1982, TRADOC headquarters developed a set of command goals—what TRADOC would do—to directly support the recently promulgated seven Army goals. The seven Army goals addressed readiness, the human element, leadership, materiel, future development, strategic deployment, and management. With TRADOC's declared purpose to prepare the Army for war, its attendant missions, as stated, were to develop doctrine, to conduct and guide Army combat developments, to develop and maintain the Army training system, and to command installations and organizations. The development of a specific set of TRADOC goals prioritized activities and served as a tool for the application of resources, a touchstone for defining future roles of the command, a resource for the development of a formal document that would come out during his successor's tenure, and a measure for progress. The new version of FM 100-5 codifying AirLand Battle, begun under Starry, was published 1982.

Many substantial initiatives came to the fore during Otis' 18-month term as commander of TRADOC. Late in 1981, Otis determined that the time had come to step back and evaluate what had been accomplished in the area of training and to plan for what would take place in the following decade. That initiative developed into the Army Training 1990 concept. In addition, a much greater use of simulators and simulations quickly developed. Significant also was the establishment of the School of Advanced Military Studies (SAMS), a postgraduate extension of the Command and General Staff College (CGSC) at Fort Leavenworth, Kansas, focusing on the operational level of war. In the force design arena, *light versus heavy* debates intensified as the Army established a High Technology Test Bed (HTTB) at Fort Lewis, WA, to experiment with lightening the Infantry Division, in *Division 86.*

GEN Otis went on to serve as Commander in Chief (CINC), US Army, Europe (USAREUR) and 7th Army, before retiring from the US Army.

**GEN William R. Richardson**


Figure 5. General Richardson.

GEN William R. Richardson followed GEN Otis as TRADOC commander in March 1983. In accordance with Secretary of the Army (SECARMY) John O. Marsh Jr.'s *Year of Excellence,* Richardson introduced the watchword for his tenure, *Excellence Starts Here.* Early in his command, he spelled out his priorities: better training, implementation of new doctrine, force modernization and integration, and mobilization of the Reserve Component. With regard to training, he spent much time tying up the loose ends of Army 1990 and overseeing a new initiative termed *School Model 86.* The former focused on performance-oriented training while the latter was an effort to give back to the director of training and the academic departments of the TRADOC schools the importance to resident instruction and doctrine writing he believed had been usurped over time.

GEN Richardson was commander at a time when much of the work of his predecessors was coming to fruition across the Army. FM 100-5 was written and promulgated, and the derivative manuals were being written in the schools; the training program was solidly emplaced; the development of the organizational design of the Army of Excellence (AOE) was undertaken; and the Big Five weapons systems were coming on line. The *Big 5* were: the M1 Abrams tank, the M2 Bradley Fighting Vehicle, the Apache Attack Helicopter, the Blackhawk Utility Helicopter, and the Multiple Launch Rocket System (MLRS).

One of the biggest challenges GEN Richardson noted for TRADOC was the recruitment and retention of good people within the command. One priority was to change the attitudes of officers and soldiers who considered assignment to TRADOC a dead end. GEN Richardson was responsible for the establishment of several new agencies and departments at Fort Leavenworth, KS. Believing the heart of the Army was TRADOC, and the heart of TRADOC was Fort Leavenworth, he continued the development of SAMS, and also created: the School for Professional Development, the Center for Army Leadership, the Combined Arms Training Activity, the Center for Army Lessons Learned (CALL), and the Combined Arms

Operational Research Activity. A final significant reorganization was the transformation of the Deputy Chief of Staff (DCS) for the ROTC into the ROTC Cadet Command as a major subordinate command of TRADOC.

**GEN Carl E. Vuono**


Figure 6. General Vuono.

GEN Carl E. Vuono succeeded GEN Richardson in June 1986. He announced that his mission focus would have two aspects. Taking a somewhat more restricted view of the concept of preparing the Army for war than had GEN Richardson, GEN Vuono stressed that TRADOC had to not only prepare the Army for war in the present, but it must look farther ahead in time as the *architect of the future.* He stressed that TRADOC must consider the whole spectrum of war, and while addressing current challenges, not neglect the design of the force 10 to 15 years out. He reoriented the 10 TRADOC goals into 6 major imperatives: doctrine, organization, training, leader development, materiel, and soldiers (DOTLMS). TRADOC's responsibility was to ensure understanding of what the Army must be to win on the future battlefield. That understanding would provide vision and direction for the Army.

GEN Vuono instituted guidelines for doctrinal development and derived the concept of the advanced collective training facilities, which led to the opening of the Joint Readiness Training Center at Fort Chaffee, Arkansas, and the Combat Maneuver Training Center at Hohenfels, Germany, and the initiation of the Battle Command Training Program (BCTP) at Fort Leavenworth, KS. Efforts in force modernization concentrated on improved application of the Concept Based Requirements System and a new emphasis on a system of systems approach to equipment modernization. Leader development was concentrated in the development of small group instruction and the invigoration of the NCOES. His program of *leading and caring* stressed excellence both in individuals and in the installations of which they were a vital part. The TRADOC Long-Range Plan, published in May 1987, was perhaps GEN Vuono's most ambitious effort. Designed to support TRADOC's mission as the architect of the future, the plan constructed a vision of the command 10 years out based on

Army long-term planning, the program objective memorandum (POM), and TRADOC goals.

After his tour of duty at TRADOC, GEN Vuono went on to become the CSA, from 1987-1991, which definitively shattered the idea that TRADOC is virtually a career terminal assignment.

**GEN Maxwell R. Thurman**


Figure 7. General Thurman.

GEN Maxwell R. Thurman replaced GEN Vuono as TRADOC commander in June 1987, and stressed the command's role as the key player in shaping the *azimuth for the Army of the future.* As set forth in a program known as *Vision 91,* GEN Thurman's stated objective was to serve the Army in the field. That would be accomplished by writing the doctrine by which it would fight, testing that doctrine for soundness, designing well-balanced and capable forces, articulating the equipment requirements of the commanders in the field, providing combat-ready soldiers to units around the world, and developing future leaders.

Vision 91 examined the central question of how the command should position itself to meet the challenges of 1991 and beyond. That period would be a time of substantial manpower and funding constraints. Vision 91 sought to address the evolution of doctrine, especially in the joint arena; a more focused force design; a system-of-systems approach to materiel development; full-service leader development; tough, realistic training; and well-developed mission support capability.

While Vision 91 addressed the immediate period, GEN Thurman developed a 30-year TRADOC Long-Range Planning Vision, which solicited the thoughts of the subordinate commanders toward the further development of a new long-range plan.

Earlier, GEN Thurman had been responsible for the highly successful *Be All That You Can Be* Army recruiting slogan in 1979. Despite having applied for retirement, GEN Thurman was hand-picked by President George H.W. Bush to serve as Commander in Chief (CINC), US Southern Command (USSOUTHCOM). He planned and executed OPERATION

JUST CAUSE, the 1989 invasion of Panama to oust the dictator General Manuel Antonio Noriega Moreno, normally referred to as *Noriega.*

**General John W. Foss**

Figure 8. General Foss.

GEN John W. Foss assumed the leadership of TRADOC in August 1989, as the Army began a period of downsizing and strategic reorientation. A variety of factors—inter-national, national, political, and economic—had combined to compel the Army to change into a more flexible, smaller force. The concept of the three TRADOC integrating centers, which had traditionally been part of the organization, gave way in 1990 to two major subordinate commands: the Combined Arms Command (CAC) and the Combined Arms Support Command (CASCOM). Also in October 1990, TRADOC eliminated the installation contract by which the TRADOC commander had managed the outlays of the installations since the mid-1970s.

As the effects of geopolitical change were felt during the 1990s, the primary focus of the Army began to shift to the projection of land combat power from CONUS, as well as from forward-deployed forces where possible. That had implications across the force, from warfighting doctrine to organizational structure to equipment to training.

Foss addressed doctrinal challenges and changes through AirLand Battle-Future studies, doctrinal discussions, and map exercises, focusing on the nonlinear battlefield and the doctrine, organization, and logistics it would require. AirLand Battle-Future, later termed AirLand Operations, became the driving concept for TRADOC. Further, Foss directed the beginning of a revision of FM 100-5 to expand the doctrine into the strategic realm, although Operations DESERT SHIELD and DESERT STORM in 1990–91 interrupted the effort.

**GEN Frederick M. Franks, Jr.**

Figure 9. General Franks, Jr.

GEN Frederick M. Franks Jr. became the eighth TRADOC commander in August 1991. Franks set down his ideas regarding TRADOC's future in five points: lead the Army through intellectual change; sustain excellence and relevance in training and leader development; propose modernization alternatives to maintain the technological edge for soldiers on future battlefields; foster organizational excellence; and focus on soldiers. The new TRADOC commander began afresh the doctrinal revision of FM 100-5. Convinced that doctrine was the basis of change and had to be a centerpiece of TRADOC activity, revision of FM 100-5 became a top priority to lead the Army through the intellectual readjustment from the Cold War to the post-Cold War Army. In addition, GEN Franks instituted battle laboratories as a means to develop the capabilities for a *force projection* Army. The battle laboratories focused on the areas where the battle appeared to be changing and encouraged experimentation using simulations, prototypes, real soldiers, and real units to make the best use of technology and new requirements.

In his long-range planning guide for TRADOC, Franks interpreted TRADOC's missions specifically. They were to set training standards and run the Army schoolhouse, provide modernization alternatives while representing the user to allow the Army to retain the battlefield edge, help the Army look to the future in warfighting, and foster organizational excellence.

**GEN William W. Hartzog**

Figure 10. General Hartzog.

GEN William W. Hartzog became the ninth commanding general of TRADOC in October 1994. Like GEN Franks, GEN Hartzog's efforts to meet the challenges of being the TRADOC commander took place against a background of a new global reality in which the primary concern was no longer a classic European air and ground war, but rather the possibility of many small operations. Further, the dramatic downsizing of forces to levels not seen since the pre-World War II era also shaped both GEN Hartzog's and TRADOC's thinking and policy. Another factor that he had to consider in shaping the force of the future was the Army's increasing involvement in peace operations, nation-building, and humanitarian relief.

GEN Hartzog's thinking about the 21st century Army was established in the Force XXI Operational Concept. The key to the developmental work on Force XXI was a digitized Experimental Force (EXFOR) that stood up at Fort Hood, TX, in 1994. Central to the shape of future forces was a series of advanced warfighting experiments (AWE) beginning in April 1994, prior to GEN Hartzog's arrival at TRADOC, and continuing through March 1998. Looking even further into the future was an Army After Next project that sought to establish criteria for the Army by 2020.

GEN Hartzog's tenure saw the publication of two versions of TRADOC Pamphlet (Pam) 525-5, *Force XXI Operations,* based on the Force XXI concept and leading to the publication of a new FM 100-5, *Operations.* The concept also guided the development of tactics, techniques, and procedures (TTP) to be employed by the EXFOR in executing the various AWE. In turn, TTP supported further doctrine development for the execution of operations across the seven battlefield operating systems and at each echelon of operations.

**GEN John N. Abrams**

Figure 11. General Abrams.

GEN John N. Abrams began his 4-year command of TRADOC in September 1998. His vision for the command was to prepare the Army for *decisive victory* in the full range of required joint and combined operations. This focus meant providing soldiers and leaders with disciplined training based on fully developed doctrine, leader development, organizations, and materiel. It also meant providing a readiness infrastructure for training and projecting Army forces. Coupling that determination with the requirement to transform the Army's education and training, Abrams led the Army's effort to rethink the entire leader development process, including resident training, advanced distance learning, and individual study.

During GEN Abrams' command, two forces of change were propelling the Army in new directions: the ongoing efforts to make the Army more deployable and the revolution in computer and communications technology that had the potential of increasing battlefield awareness at all levels. In an address on 12 October 1999, CSA GEN Eric K. Shinseki made the case for transformation of the Army, specifying the need for both doctrinal and materiel change. A large portion of the challenges posed fell on TRADOC as the Army's *architect of the future.* Responsibility of a Brigade Coordination Cell (BCC) for designing two Interim Brigade Combat Teams (IBCTs) at Fort Lewis, WA, also fell to TRADOC. This led to the successful adoption of the Interim Armored Vehicle STRYKER as a ground combat vehicle used as part of an Infantry formation.

To further the understanding of possible future warfare, GEN Abrams instituted a series of Seminar War Games (SWG) beginning in July 2001. The SWG simulated the long-range deployment of an interim force and looked to define the objective force of the future and the Future Combat System (FCS). Unfortunately, the FCS effort resulted in the expenditure of $18 billion with few tangible results.[3] Transformation also called for a revision of the Army's capstone doctrine, FM 100-5, *Operations.* A new version, renamed and carrying the Joint Services number of FM 3-0, was published in the summer of 2001. The new doctrine was clearly cogni-

zant of the changes in the nation's geostrategic position and addressed the problems of deployment, asymmetric warfare, and the need for joint operations from major theaters of war to humanitarian relief.

Effective 15 February 2002, the US Army Accessions Command was established as a subordinate command of TRADOC. The new command included the US Army Cadet Command (USACC), the US Army Recruiting Command (USAREC), and the US Army Training Center (USATC), Fort Jackson, SC. The purpose of establishing the command was to combine accessions and initial entry training (IET) under a single headquarters.

**GEN Kevin P. Byrnes**

Figure 12. General Byrnes.

GEN Kevin P. Byrnes assumed command of TRADOC in November 2002, and was the first TRADOC commander whose entire tenure occurred during wartime. Reassessing the command's missions, he reaffirmed that training and leader development would be TRADOC's number one priority, especially at the IET and NCOES levels. Quality instructors and exported training—making use of technology for distance learning to reach soldiers wherever they served—would also be important. In addition, GEN Byrnes stressed innovation, jointness, accession and recruiting, development of the future force, and people. As part of the development of the future force, GEN Byrnes emphasized a sense of urgency in helping the Army accelerate the transformation process and in enhancing the credibility of current Transformation initiatives, especially by soliciting ideas and proposals from industry. Perhaps even more important was the necessity to demonstrate the links between Army transformation and Department of Defense (DoD) joint initiatives, to include joint exercises. GEN Byrnes planned for TRADOC to become a futures command that would serve the Army well on the fielding of the Objective Force and be a link to US Joint Forces Command (USJFCOM), Norfolk, VA, and the other Services. (USJFCOM existed from 7 October 1999-31 August 2011.)

In line with Byrnes' goals, TRADOC headquarters was reorganized, and a Futures Center was established in October 2003. The center realigned functions and resources from the TRADOC staff and the objective force task force to develop and integrate into a joint warfighting environment, all aspects of the future force from concepts to capability. It was tasked to develop and integrate joint and Army concepts, architectures, and doctrine, organizations, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) capabilities.

Under GEN Byrnes' direction, TRADOC planned and briefed downsizing options to Congress during the Base Realignment and Closure (BRAC) sessions of 2005. This effort was done to preserve the schools and branches, regimental history, and to realize savings by consolidating or relocating schools and functions.[4]

A few months before he was scheduled to retire, GEN Byrnes stepped down from command of TRADOC for personal reasons.[5]

**GEN William S. Wallace**

Figure 13. General Wallace.

GEN William S. Wallace assumed command of TRADOC in October 2005. Like his predecessor, he was a wartime commander. GEN Wallace's view was that TRADOC was the *architect of the Army* to shape both today's Army and the future combat force. The mission of TRADOC was to recruit, train, and educate the Army's soldiers; develop its leaders; support training in units; develop doctrine; establish standards; and build the future Army. GEN Wallace also believed that TRADOC thought for the Army. As such, it had to meet the demands of a nation at war while simultaneously anticipating solutions to the challenges of tomorrow. To properly perform these functions required changes in the way TRADOC viewed its mission. All activities were directed to provide input that reflected and assisted with the Contemporary Operating Environment (COE). Basic and advanced training were conducted to reflect the wartime challenges faced by soldiers in the field. Because much of the military operations occurred in cities in Iraq, military operations in urban terrain (MOUT) became part

of training as did training in dealing with different cultures. Stability operations became the key to success, and doctrine needed to reflect this development.

When GEN Wallace assumed command, the existing edition of FM 3-0 was already 4 years old, and had been published prior to the attacks on the World Trade Center and the Pentagon on 11 September 2001. The 2008 version of FM 3-0 was evolutionary but had four revolutionary aspects. It stressed the importance of stability operations with a *whole of government approach,* it acknowledged the critical nature and influence of information operations, it forged an operational concept that drove initiative and embraced risk to create opportunities, and it emphasized the central role of the commander in full spectrum operations.[6] To accomplish TRADOC's missions, Wallace set the command's priorities as safety; supporting our nation at war; recruiting and training quality warriors; developing adaptive, innovative leaders; and designing the Army's modular force. He also coined the motto *Victory Starts Here.*

There were significant reorganizations of TRADOC during GEN Wallace's tenure as commander. TRADOC continued to design the current Army modular force and the future combat force. The Futures Center established under GEN Byrnes grew and became the ARCIC in 2006. In 2007, the TRADOC staff was reorganized to more closely align the command's responsibilities with those of the Army Staff. These changes made TRADOC more responsive to Army missions. A third change occurred near the end of Wallace's tenure when the US Army Accessions Command (USAAC) became directly subordinate to the DA in October 2008, before being eliminated on 18 January 2012. GEN Wallace also helped implement the Congressional BRAC guidance pertaining to the establishment of the Centers of Excellence (CoEs).

**GEN Martin E. Dempsey**

Figure 14. General Dempsey.

GEN Martin E. Dempsey assumed command of TRADOC on 8 December 2008. Prior to his assignment at TRADOC, GEN Dempsey was the Deputy Commander of US Central Command, later serving as Acting Commander of the same from 28 March to 30 October 2008. Upon assuming command of TRADOC, GEN Dempsey was immediately presented with a unique set of challenges. He was a wartime commander because the Army was still fighting in Afghanistan and Iraq, but resources were being reduced. Because he was new to TRADOC, GEN Dempsey allowed himself 90 days before he promulgated a vision for the command. One problem he saw was the time it took to get new doctrinal material to the field and make revisions to training. Rather than have a completely hierarchical organization in which most major decisions were made by the TRADOC commanding general, GEN Dempsey decided that TRADOC should be doctrinally decentralized and become *commander–centric.* This allowed the commanders of the relatively newly established CoEs and their school commandants to make appropriate doctrinal decisions, while the TRADOC Commander concentrated on the future. Another of GEN Dempsey's goals was to streamline the processes that generated products. Developing adaptive leaders was a top priority. An additional focus was his support of the Army Force Generation (ARFORGEN) model. One of the significant milestones of GEN Dempsey's tenure was the publication of the December 2009 TRADOC Pam 525-3-0, titled *The Army Capstone Concept—Operational Adaptability: Operating Under Conditions of Uncertainty and Complexity in an Era of Persistent Conflict.* It described what the future Army must do as part of the joint force to achieve the nation's strategic objectives. It was predicated on the Army's enduring missions and the future operational environment. Arguably the most important doctrinal development of GEN Dempsey's time as TRADOC Commander was the publication of a new edition of FM 3-0, *Operations,* in February 2008.

On 11 April 2011, GEN Dempsey left TRADOC to become the CSA, and then on 1 October 2011, he became Chairman of the Joint Chiefs of Staff. GEN Dempsey is first former TRADOC Commanding General to achieve the latter position.

**GEN Robert W. Cone**

Figure 15. General Cone.

GEN Robert W. Cone was Commanding General, TRADOC, from 29 April 2011-14 March 2014. He had previously served as Commander, III Corps and Fort Hood, TX, and Deputy Commanding General (DCG)–Operations, for US Forces-Iraq. Like his most recent predecessors, he was a wartime commander facing a number of unique challenges, one of which was the move of HQ, TRADOC from Fort Monroe, VA, to nearby Fort Eustis, VA, pursuant to the 2005 BRAC process. After several years of preparation, the Headquarters arrived at its new location, in phases, throughout summer 2011 with minimal interruption in operations.

As the conflict in Afghanistan continued to wind down, GEN Cone faced the task of reorienting training, doctrine, and materiel development from an *Army of Execution to an Army of Preparation.* This meant developing doctrine to prepare the Army to fight both conventional and so-called asymmetrical warfare, and prepare adaptive leaders for that type Army.

Doctrinal review and change involved the creation of a specific hierarchy, upsetting more than a century of simple Field Manual use. This vision was called Doctrine 2015.[7] At the top were the Army Doctrinal Publications (ADPs), which provided brief conceptual overviews of general doctrine—that is, *fundamental principles*—and that doctrine was then reinforced in greater detail by the Army Doctrine Reference Publications (ADRPs). Even greater detail was found in the new versions of the FMs. ADP 3-0, *Unified Land Operations,* was short and covered military principles that tended to change little over time. Other publications covering the operational and tactical levels of war were intended to be more detailed

and subject to more frequent changes. All these publications were becoming Internet based to provide the most rapid and widespread distribution to multiple audiences, including field units.

After almost 35 years of service, GEN Cone retired, and shortly passed away after long illness, aged 59, on 19 September 2016.

**GEN David G. Perkins**

Figure 16. General Perkins.

GEN David G. Perkins was Commanding General, TRADOC, from 14 March 2014-2 March 2018. GEN Perkins had previously served as Commander, Combined Arms Center, Fort Leavenworth, KS, so he arrived already familiar with TRADOC's goals and objectives. GEN Perkins defined TRADOC priorities as follows: Design the Army; Acquire and Build for the Army; and Improve the Army.[8]

*Design* means: research, analysis, & integration; statistical and mathematical analysis; and understanding emerging world trends. Major lines of effort include preparing for the Future Operational Environment; understanding Multi-Domain Battle (MDB); laying the ground-work for the *Big 6+1* capabilities; preparing for Force 2025 and Beyond (F2025B) and the related F2025 Maneuvers; and acquisition reform.

The terms *Acquire and Build* mean: Soldier and Civilian recruiting efforts; ROTC cadet education; and basic training for enlisted soldiers and officers. This means improving the entire accessions enterprise, with an eye towards the Soldier of 2020.

*Improve* means: Institutionalizing lessons learned (e.g., Center for Army Lessons Learned, etc.); officer education; research; senior NCO education; and enlisted and NCO career paths/models. All these efforts are to be reinforced and supported through the Army University as an overarching model. This means adapting the institutional army; updating or creating new doctrine; initiating better talent management; and having good career maps for NCO 2020.

GEN Perkins was also responsible for a conceptual revisit of the Army Capstone Concept, TRADOC Pam 525-3-1, *The US Army Operating Concept: Win in a Complex World* (w/Change 1), dated 31 October 2014.[9] It is with that concept as a bedrock that the rest of the Army Functional Concepts, ADPs, ADRPs, and FMs are aligned.

In October 2017, TRADOC's Combined Arms Doctrine Directorate (CADD), Fort Leavenworth, KS, released the new FM 3-0, *Operations,* which provides doctrine on how the Army—as a component of the joint team—conducts sustained, large-scale operations against a regional peer, within the constraints of current force structure and capability. This iteration of the venerable FM aligns roles (shaping the operational environment, conflict prevention, large scale combat, consolidating gains, etc.) with the range of military operations (ROMO). Doctrine is now connected to the developing MDB concept. The new version of FM 3-0 is at: http://www.apd.army.mil/epubs/DR_pubs/DR_a/pdf/web/ARN5095_FM%203-0%20FINAL%20WEB.pdf.

**GEN Stephen J. Townsend**

Figure 17. General Townsend.

General Stephen J. Townsend assumed duties as Commander, United States Army Training and Doctrine Command on 2 March 2018, after serving as Commander, XVIII Airborne Corps, the US Army's rapid deployment contingency corps, and Fort Bragg, North Carolina. General Townsend has led and commanded troops at every echelon from platoon to corps and combined joint taskforce. His combat and operational experience include OPERATION URGENT FURY, Grenada; OPERATION JUST CAUSE, Panama; and OPERATION UPHOLD DEMOCRACY, Haiti. During OPERATION IRAQI FREEDOM, he led 3-2 Stryker Brigade, Task Force Arrowhead, on offensive operations across Iraq during *the Surge.* He served four tours in Afghanistan during OPERATION ENDURING FREEDOM culminating as Commander, 10th Mountain Division (Light). Most recently, General Townsend led all US and multi-national troops fighting the Islamic State in Iraq and Syria as Commander, Combined Joint Task Force-OPERATION INHERENT RESOLVE.

## The Command Sergeants Major[10]

**CSM John F. LaVoie, July 1973–May 1977; Deceased 2014.**

Figure 18. CSM LaVoie.

CSM John F. LaVoie was a highly decorated soldier and veteran of WWII, Korea, and Vietnam. CSM LaVoie was a pioneer for TRADOC.[11] His initial efforts included establishing and upholding training standards, and the initial permanent establishment of formal NCOES.[12] Another challenge to the army and its training base was that there was no longer an endless manpower supply, because the Army became all-volunteer when the draft ended. The Vietnam War concluded, and the social strife of that war created deep divisions within America, some of which persist. Separately from all the above, the 1973 Yom Kippur War occurred, proving that it was indeed possible to fight and win while outnumbered. Lessons learned from that conflict continue to resonate.

Unfortunately, no oral history interviews were conducted with CSM LaVoie, and he passed away in 2014.[13]

**CSM Haywood F. Wren, June 1977–August 1980; Deceased 2000.**

Figure 19. CSM Wren.

In addition to continuing the lines of effort established by CSM LaVoie, CSM Haywood F. Wren was involved in supporting the Army of Excellence efforts. This included getting the right enlisted personnel involved with the High Technology Test Bed, as well as the Modified Table of Organization and Equipment (MTO&E) builds for the Army of Excellence. Supporting the CG, he was also instrumental as regards enlisted support

to all the lines of effort for the TRADOC Systems Managers—which later became TRADOC Capability Managers.

Unfortunately, since no oral history interviews were conducted with CSM Wren, we do not have his reflections upon his tenure.

**CSM James B. Craft, August 1980–August 1983; Deceased 27 June 2013.**[14]

Figure 20. CSM Craft.

CSM James "Jim" B. Craft continued the lines of effort established by his predecessors, to include finishing out the Army of Excellence effort. In support of the CG, he also assisted with combined training and gender integration efforts. As fielding of the *Big 5* systems was conducted, he was also responsible for coordinating with other CSMs throughout the Army regarding standards of training for the new equipment.

Unfortunately, no oral history interviews were conducted with CSM Craft, and he passed away in 2013. Therefore, we have no further insights into his challenges, successes, and related matters.

**CSM William J.H. Peters, August 1983–August 1987**

Figure 21. CSM Peters.

Serving under TRADOC CGs GEN Richardson and GEN Vuono, doctrine formulation and collective training were key focus areas for CSM William J.H. Peters' efforts. This collective training focus included the newly established Battle Command Training Program. The new paradigm of DOTLMS likewise needed reinforcement among the NCO ranks. NCOES was revamped with his encouragement. Promotion was linked to successful completion of schools, to include what was then called Primary Leadership

Development Course (PLDC) for Specialists (SPC) in promotable status, newly promoted Sergeants (E5), etc. The Army moved from Active Defense to AirLand Battle, and the doctrine for the latter was promulgated through all ranks and related training.

CSM Peters entered the Army in 1955, when soldiers reported to their units for training. Having lived through the lack of a formalized training program, and having served two tours in Vietnam, he strongly believed in the TRADOC mission, in training standards, and meeting the standards. In his oral history interview, when asked what his priorities were, he responded,

> My first priority was NCO training. My second priority was soldier training...If you're responsible for training and you send a soldier in harm's way, and he gets killed because you didn't train him to standard, you should stand trial for murder. What we do is a serious business.[15]

**CSM Henry J. Goodwin, October 1987–April 1991**

Figure 22. CSM Goodwin.

Serving under TRADOC CGs GEN Thurman and GEN Foss, CSM Henry J. Goodwin's tenure was highlighted by the fall of the Berlin Wall, OPERATION DESERT SHIELD, and OPERATION DESERT STORM.

The turbulence of force restructuring, new models of experimentation, revisions of the core manual FM 100-5, *Operations,* and related matters all affected personnel, morale, and retention. These were some of the challenges he faced in support of the CG TRADOC.

**CSM W.E. Woodall, May 1991–June 1994**

Figure 23. CSM Woodall.

OPERATION ABLE SENTRY in Macedonia, under UN auspices, began during CSM W.E. Woodall's tenure. This mission continued until 1999, when it came under NATO control and was renamed Task Force Sabre. That mission continued until 2001, when it was relocated from Macedonia to Kosovo.[16] This was arguably the modern beginning of interest in Stability Operations in doctrine.

His tenure was also marked by the greatest drawdown since TRADOC was founded, at the end of OPERATION DESERT STORM; as well as the transition of post-Cold War reformulation of doctrine and training.

**CSM Gilbert F. Paez, July 1994–July 1996**

Figure 24. CSM Paez.

CSM Gilbert F. Paez primarily supported TRADOC CG GEN Hartzog. This was also a period of significant force downsizing to levels not seen since the pre-World War II era. Also, the Army was increasingly involved in peace operations, nation-building, and humanitarian relief, most notably in the Balkans (Bosnia-Herzegovina), with Task Force Eagle and the peace Implementation Force (IFOR), followed by the multi-year Stabilization Force (SFOR). The SFOR mission finally ended in 2004.

In 1994, the digitized Experimental Force (EXFOR) stood up at Fort Hood, TX. This helped shape future forces via the advanced warfighting experiments (AWE) from 1994 through March 1998.

**CSM James C. McKinney, August 1996–September 1998**

Figure 25. CSM McKinney.

When contacted for comment regarding challenges and accomplishments, CSM James C. McKinney modestly provided the following: "I supported my Commander; and their accomplishments were supported by me as the TRADOC CSM."[17]

During his tenure, OPERATION ABLE SENTRY in Macedonia continued under UN auspices. SFOR replaced IFOR in Bosnia-Herzegovina.

**CSM John J. Beck, October 1998–October 2001**

Figure 26. CSM Beck.

CSM John J. Beck served under CGs Hartzog and Abrams. In October 1998, Army Basic Combat Training was expanded from 8 weeks to 9 weeks to accommodate additional training resulting from the Drill Sergeant sexual assault scandal at Aberdeen Proving Ground, MD. Two initiatives of note during his tenure were the Army After Next and Force XXI. The Advanced Warfighting Experiment(s) also continued. TRADOC Pam 525-5, *Force XXI Operations,* was promulgated. The Brigade Coordination Cell (BCC) was established at Fort Lewis, WA, in support of FCS/Transformation. The Army adopted the Stryker combat vehicle for the IBCT, with the first two IBCTs being at Fort Lewis. During his tenure, the Institute for NCO Professional Development (INCOPD) was also established.

**CSM Anthony J. Williams, October 2001–February 2005**[18]

Figure 27. CSM Williams.

CSM Anthony J. Williams joined the Army in 1972. His overseas tours included Korea, Germany, Turkey, and Hawaii. He was a graduate of the Field Artillery Advanced Course, the First Sergeants Course, the Sergeants Majors Course (Class 35), and the CSM Course. He served at all levels from Private to CSM, including serving as CSM for the 25th Infantry Division Artillery (DIVARTY), CSM of III Corps Artillery, CSM of the Field Artillery School and Fort Sill, CSM of the US Army Sergeants Majors Academy, and CSM of TRADOC. His awards and decorations include the Defense Service Medal, Legion of Merit (2d oak leaf cluster (OLC)), the Meritorious Service Medal (5th OLC), the Army Commendation Medal, the Army Achievement Medal (2d OLC), the Parachutist Badge, the Air Assault Badge, and the Drill Sergeant Badge. He received the Ancient and Honorable Orders of St. Barbara, the Order of Saint Maurice, and the Ancient Order of Saint Christopher. He is a Lifetime Member of the prestigious Sergeant Morales and Sergeant Audie Murphy Clubs. CSM Williams is the recipient of the Field Artillery Tattoo, and was inducted into the US Army Sergeants Major Academy's Hall of Honor in 2012.

During his tenure, OPERATION ENDURING FREEDOM in Afghanistan and OPERATION IRAQI FREEDOM were both initiated.

**CSM John D. Sparks, February 2005–February 2008**


Figure 28. CSM Sparks.

CSM John D. Sparks primarily served under TRADOC CG GEN Wallace. Like his predecessor, CSM Sparks was a wartime NCO leader and trainer. He reinforced GEN Wallace's view was that TRADOC was the *architect of the Army* to shape both today's Army and the future combat force. TRADOC's missions were to recruit, train, and educate the Army's soldiers; develop its leaders; support training in units; develop doctrine; establish standards; and build the future Army. The Contemporary Operating Environment (COE) model influenced all the above. Basic and advanced enlisted training were adjusted to reflect real wartime challenges. Because much of the military operations occurred in cities in Iraq, military operations in urban terrain (MOUT) became part of training as did training in dealing with different cultures. Stability operations became the key to success, and doctrine needed to reflect this. During his tenure, the first Surge in Iraq occurred. What had been PLDC was renamed the Warrior Leader Course, the Basic NCO Course (BNCOC) common core training became distance learning, BNCOC was renamed Advanced Leader Course, and the Advanced NCO Course (ANCOC) was renamed the Senior Leader Course. He initiated concepts such as Warrior University, College of the American Soldier, and expanded education opportunities for Soldiers and NCOs.[19]

**CSM David M. Bruner, March 2008–September 2011**

Figure 29. CSM Bruner.

CSM David M. Bruner primarily supported TRADOC CG GEN Dempsey. This included efforts to streamline conceptual and doctrinal processes, and developing adaptive NCO leaders. During his tenure, Undersecretary of Defense for Acquisition Ashton Carter cancelled the $160 billion FCS project.[20] This resulted in a massive effort to rewrite concepts and doctrine, and to revise training accordingly, all while continuing to fight in Afghanistan and Iraq.

In 2009, a series of new concepts, ranging from the overarching Army Operating Concept to a suite of functional concepts, were promulgated by Joint and Army Concepts Division, ARCIC, TRADOC. Together, these also resulted in a major requirement to revise doctrine and training throughout TRADOC CoEs.

**CSM Daniel A. Dailey, November 2011–February 2015**

Figure 30. CSM Dailey

The following are excerpts from CSM Daniel A. Dailey's oral-history exit interview summarizing his tenure: Some of his challenges included completing the *NCO 2020* study, and assisting with the establishment of The Army University. "Take all those lines of effort, and improve them. It is not enough to 'just be a picture on the chain of command wall because that doesn't do it for soldiers.'" Also, "It is necessary to take a historic view on why we are here and how we got here. In 1776, NCOs had four tasks, as written by Baron von Steuben. Today there are 56,000 tasks for NCOs.

As NCOs we have changed over time. We as NCOs need to continue to change and improve because our adversaries are also learning and improving daily."[21]

CSM Dailey is the first TRADOC CSM to become the Sergeant Major of the Army.

**CSM David S. Davenport, February 2015–Present Day**

Figure 31. CSM Davenport

In his oral-history interviews, CSM Davenport said his initial efforts were to see what TRADOC was doing, and determine how to gain process efficiencies. "One improves innovation through communication," which is why he has initiated an unprecedented outreach effort. Another focus area has been leader development. He visited all the CoEs, and read about *NCO 2020,* the DA Inspector General reports, and all of TRADOC's own surveys and studies. Through it all, he saw three lines of effort for his office: (1) Developing future NCOs, (2) Managing future NCOs, and (3) Reinforcing NCO Corps professionalism. "With the CSA's backing, we implemented STEP (Select, Train, Educate, Promote), which became policy on 1 January 2016." *The NCO Journal* moved from the Sergeants Major Academy, Fort Bliss, TX, to Army University Press, Fort Leavenworth, KS. The Institute for NCO Professional Development (INCOPD) was moved under Leader Development Directorate, G-3/5/7. CSM Davenport also communicates via live-streaming Town Halls, and the TRADOC web homepage. During his tenure TRADOC has made better use of One Army School System (OASS) via a tool called Institutional Training-Common Operational Picture (IT-COP). And TRADOC has continued work with Army University to recognize training for its Soldiers.[22]

# Chapter 3
# Force Design and Weapons Development

In relatively modern times, force design had been approached in a methodical manner since at least 1942.[23] TRADOC re-designed the *TOE Army,* which meant updating more than 1,200-odd tables of organization and equipment (TOE) for *type* units from platoon through corps and above. This was a continuous process, because organizations changed with new weapons and equipment, based primarily upon changes to concepts and doctrine. Since its establishment in 1973, TRADOC designed and implemented the major division reorganization known as the Army of Excellence (AOE).

## Army of Excellence

The TRADOC-designed Army of Excellence (AOE), implemented by DA from 1984 to 1986, was the first major reorganization of the tactical army since the Reorganization Objective, Army Divisions (ROAD) of the early 1960s. The TOE of the AOE supported AirLand Battle doctrine and the generation of weapons introduced in the 1970s and 1980s. The AOE owed much to the Division Restructuring Study (DRS) of 1976 as well as the *Division 86* project and the *Army 86* studies that followed. Both studies were influenced by the lessons of the '73 Yom Kippur War, and therefore focused on heavy armor and mechanized infantry divisions. DA approved neither study, so GEN Donn A. Starry began anew, since the heavy division was critical to operations in Europe during the Cold War. Studies of *Division 86* (non-mechanized), *Corps 86,* and *Echelons Above Corps 86* were completed in 1980. After crises in Afghanistan and Iran in the same period, *Army 86* planners began studies of rapidly deployable units, because US Army forces also had to be prepared to meet contigencies in the non-NATO world.

In 1980, the CSA, GEN Edward C. Meyer, established a High Technology Test Bed (HTTB) in the 9th Infantry Division at Fort Lewis, WA, to test concepts toward development of a lighter *high technology light division.* TRADOC and the Army Materiel Command (AMC) cooperated with the division's parent commands, I Corps and the Army Forces Command, in this effort. Although valuable ideas emerged from the test bed, no high-technology light division was fielded due to lack of funding. This was a major dilemma. Heavy divisions were needed to meet the mechanized threat posed by the Warsaw Pact, and the Army had a fixed end strength of 780,000 personnel. The problem ended in June 1983 when CSA GEN

John A. Wickham, Jr., directed the TRADOC commander, GEN William R. Richardson, to design a new, strategically deployable light infantry division with a strength of approximately 10,000 personnel that was globally deployable in approximately 500 airlift sorties. To achieve this, GEN Wickham gave GEN Richardson the authority to review and redesign the entire TOE Army. Undertaken by the Combined Arms Center (CAC) with support from the TRADOC branch schools, the AOE effort developed and put in place the force designs of the 1980's Army. All elements of the tactical Army were reexamined. The AOE organizations modified, but did not replace, *Army 86* designs. The notable exception was the new light infantry division, which was a three-brigade organization with a strength of 10,800 men. It was designed to operate in cities, forests, and mountain areas where heavy forces were at a disadvantage, and to buy time for heavy forces that deployed more slowly. The design was certified by the 7th Infantry Division (Light) at Fort Ord, CA, and supported by the TRADOC test organizations from 1984 to 1986.

In the AOE, TRADOC force designers reduced the heavy divisions to approximately 17,000 personnel. Significant transfers from division to corps in field artillery, air defense artillery, and combat aviation left the divisions smaller, with less organic combat power. The redesigned corps thus provided a more powerful fighting organization at what was then considered the operational level of war. The AOE design of heavy divisions and corps moved Army tactical organizations more fully into consonance with doctrine. There was criticism that the AOE had overemphasized combat power at the expense of support units, was too light, and lacked tactical mobility, but it met the immediate challenge of deterring the Soviet threat during the Cold War. The AOE also began the development of lighter, more rapidly deployable forces.

## Force XXI

The successor to the AOE began on 8 March 1994, when CSA GEN Gordon R. Sullivan directed the start of a major campaign effort to lead to the future Army in the early years of the 21st century. The Force XXI redesign was supposed to be the last of the major operational Army reorganizations of the 20th century. But Force XXI later gave way to the *Transformation* effort directed by CSA GEN Eric K. Shinseki beginning late 1999, due in part to the failure with deploying forces to Kosovo in OPERATION JOINT GUARDIAN, and in particular the forces of Task Force Hawk.[24]

Force XXI was the first force redesign effort in which newly emergent, computer-driven, constructive and virtual simulation methods, equipment,

and software were joined to live field simulations to test and analyze military unit designs. *Digitization* was the rubric given this revolutionary emerging capability. In support of Force XXI, TRADOC began several major projects. First, the capstone *how to fight* doctrine was brought up to date in 1993 in FM 100-5, *Operations.* A year later, the command published TRADOC Pam 525-5, *Force XXI Operations: A Concept for the Army of the 21st Century.* Also in 1994, TRADOC accepted a project known as *Joint Venture,* and proceeded to redesign the operational Army on a new information-or-knowledge basis. Concurrently, a modern Louisiana Maneuvers (LAM) task force, begun in 1992, developed scenarios for the Army of the future.

From 1993 to 1995, TRADOC created the means of concept development and testing for Force XXI, a division-sized Experimental Force (EXFOR). Late in 1994, the Army established the 4th Infantry Division (Mechanized), at Fort Hood, TX, as a Force XXI test bed. From 1994–1998, TRADOC held advanced warfighting experiments (AWE) and simulations regarding the emerging digitization concept. These exercises and experiments from platoon to theater levels were variously directed by TRADOC's battle laboratories and CAC's National Simulation Center.

## Transformation

As TRADOC looked forward to the 21st century, the Force XXI operational concept remained unfinished, even at the conceptual level. Then, 12 days into fiscal year 2000, CSA GEN Shinseki, led the Service in a radically different direction. Related to, but different from, his 12 October 1999 announcement, *Army transformation* expanded to mean *responsive, deployable, agile, versatile, lethal, survivable, and sustainable.* Transformation was seen as a sweeping program to enhance the Army's capabilities and change how it would fight in the post-Cold War world. Combat-ready brigades in the target Army would be deployable anywhere in the world in 96 hours.

The transformed Army would be comprised of three key elements: the *legacy force,* the *interim force,* and the *objective force.* The legacy force centered on the major weapons systems that the Army currently had in its inventory. The interim force would provide crossover capabilities between the legacy force and the objective force during the development of the latter. The objective force was envisioned as a totally revamped Army with regard to equipment, organization, and training. The backbone of the interim force would be six to eight Interim Brigade Combat Teams (IBCT), the first two of which were established at Fort Lewis, WA, beginning in 2000. These experimental units operated under the direction of

TRADOC's DCG for Transformation and the Brigade Coordination Cell (BCC), Fort Lewis.

The FCS would be the primary weapons and troop carrying platform for the objective force. The FCS was envisioned as a "system of systems" employing a common vehicle platform. For the IBCT in the interim period, the Army chose a wheeled light armored vehicle known as the Light Armored Vehicle (LAV) III, later renamed Stryker. In July 2001, to help design a force projection Army that was decisive across the spectrum of conflict in the 21st century, TRADOC commander GEN John N. Abrams established Seminar War Games (SWG) at the headquarters. Those fora brought together senior leaders, representing all the Army's functions and responsibilities, to play out scenarios. As part of the reconsideration for reorganization, they created *units of action* (UA) and *units of employment* (UE) that were different from the familiar "companies," "battalions," "brigades," and "divisions." The intent or vision was that this allowed the (notional) creation of new types of units without slavish ties to previous organizational constructs. Transformation initiatives represented an all-encompassing effort to accomplish the Army's vision and to change the way the Army thought, trained, and fought. This effort to fundamentally shift the paradigm failed when the UE was modified to UEx and UEy, indicating Division and Corps, respectively.[25] Shortly afterwards, language was again modified back to Brigades, Divisions, and Corps.

## Army 2020/Force 2025 and Beyond

As the Iraq War officially ended on 18 December 2011, and the war in Afghanistan wound down, the strategic security environment for the United States remained both complex and unpredictable, and promised to remain so indefinitely. The US continued to be a global military power, but faced a host of complex relationships with both competitors and partners. Global economic conditions forced many nations, including the US, to make hard fiscal choices. The future operational environment required the Army to prepare its forces for a range of military operations and activities broader than its recent COIN focus. The most significant developments were TRADOC's *Army 2020* efforts. A series of studies and projects pursued many of those holistic objectives. The overarching goal was to determine how to make the transition from the force of 2013 to the Army of 2020 in an era of fiscal austerity, and still accomplish all that the Army must do as part of the joint force. In July 2014, the effort was redesignated Force 2025 and Beyond (F2025B).[26] This goal was designed to better support the full range of joint force commanders' future requirements, creating opportunities to better achieve national objectives.

A new set of challenges arose with an over-extensive drawdown under the Obama administration, which caused significant concern as regards the ability to keep NATO promises for mutual security. The eye-grabbing headline, "If Russia Started a War in the Baltics, NATO Would Lose in 36 Hours," which was predicated upon a serious set of wargames in a study conducted by RAND, caused a significant new analytical effort. The impact of the Russian New Generation Warfare (RNGW) study is still being felt, and the RNGW study was a contributing factor towards the development of the Multi-Domain Battle (MDB) white paper and concept.[27]

## Weapons and Equipment

From TRADOC's beginning on 1 July 1973, one of its major assigned missions was combat developments—the systematic development of new and improved organization, equipment, weaponry, and doctrine. TRADOC inherited that responsibility when Combat Developments Command was disestablished and the responsibility passed to TRADOC. Merging combat developments with the training mission in one command led to reorienting combat developments to the present and near future, and to applying new and improved doctrine, organization, and materiel solutions to field units quickly. The reorganization decentralized the combat developments mission to the Army's branch and service schools, which also held the training function. Thus the centers and schools, focused on their lanes, would develop everything from their level, rather than having far-off bureaucrats at DA or elsewhere make those decisions.

The TRADOC combat developments structure had four basic elements—the DCS for Combat Developments at the headquarters, the functional centers (renamed integrating centers in 1976), the schools, and the test and evaluation agencies. TRADOC directed its combat developments responsibilities through the DCS for Combat Developments, which was established as the focal point for assigning projects and allocating and accounting for resources. Until 1990, the three functional centers directly subordinate and reporting to TRADOC headquarters—the Combined Arms Center at Fort Leavenworth, the Logistics Center at Fort Lee, and the Soldier Support Center at Fort Benjamin Harrison—directed, coordinated, and integrated the combat developments work of the Army schools with which each was functionally associated. At the next level were the branch and specialist schools where the commandants had responsibility for both *combat developments* and the *training and education* missions. The fourth aspect of the TRADOC combat developments system was a series of agencies designed to provide data and reports from tests and experiments keyed to specific concepts and projects. Two of the most influential

were the Combat Developments Experimentation Command (CDEC) at Fort Ord, CA, and the Modern Army Selected Systems Test Evaluation and Review (MASSTER), an agency at Fort Hood, TX.

The three major combat developments concerns were materiel, organization, and doctrine. Materiel development was a joint effort of TRADOC as the primary combat developer and AMC as the primary materiel developer. TRADOC played three essential parts in the effort. The first was to formulate and document requirements for specific materiel. The second was to monitor AMC development continuously, undertaking operational tests and analyses at critical points. The third role was to redraw organizations and refashion tactics as necessary to accommodate the new item. The combat developer determined a weapon's need and operational specifications, monitored its development, and determined its ultimate issue to and use by the Army in the field.

The Yom Kippur War of 1973 was significant to reinforcing the decision of where to place the combat developments function, which was placed in TRADOC by OPERATION STEADFAST. Members of TRADOC studied the war intensively, paying particular attention to the tremendous attrition of materiel and unparalleled lethality of modern weaponry. Those lessons greatly shaped the vision of modern war. Crucial to reform of the tactical force was recognition that modern armies in the 1970s were crossing a technological threshold. The lethality of fire, the tempo of battle, and the immense attrition of the Middle East War had demonstrated a quantum leap in weapons technology.

TRADOC took a total systems approach to weapons development, bringing trainers, logisticians, and personnel managers into the process early. The total systems methodology spawned the concept of the TRADOC System Managers (TSM), formally approved in March 1977. The TSM represented all major weapon and materiel systems in development and functioned with the power and authority comparable to the project managers of AMC. The TSM was charged with integrating and organizing the development process. Introduction of a new Concepts-Based Requirements System (CBRS) in 1980 provided a development schematic, the goal of which was to place fighting concepts at the beginning of all TRADOC's products across the board—doctrine, organizations, training, materiel requirements, leader development and education, personnel, facilities, and policy (DOTMLPF-P).

As management techniques and strategies were devised and emplaced, the 1970s and 1980s witnessed the launching of one of the most massive modernization programs in the history of the Army. The *Big Five* sys-

tems of greatly increased combat power included the M-1 Abrams main battle tank, the M-2 and M-3 Bradley Fighting Vehicles, the Black Hawk and Apache helicopters, and the Patriot air defense missile. The Multiple Launch Rocket System (MLRS) was also developed and fielded, as were individual equipment and electronic warfare protection devices. Anticipating a smaller force after the Vietnam drawdown, it was imperative to gain and maintain the technological edge in weapons and equipment. The modernization wave that began in the immediate post-Vietnam era crested in 1983. From that point, development was slower and more sporadic. By the late 1980s, modernization planning was less dramatic and aimed more at a coordinated effort, reduced budgets, and available resources. For instance, in 1986, DA commissioned the Armored Family of Vehicles Task Force to examine the next phase of modernization. The emerging concept was that of an armored family of vehicles to be built around two common chassis. A total, phased replacement of the tracked and wheeled fleet would ensure compatibility, commonality, and survivability. Simultaneously, block improvements were projected for the Abrams main battle tank and the Bradley Fighting Vehicle. Upgrades were also planned for the AH-64 Apache.

Figure 32. M-1 Abrams Tank, One of the "Big Five".

*Source:* https://www.dvidshub.net/image/3202000/scarng-4-118-cab-conducts-gunnery, image 8.

The success of the total modernization effort was demonstrated in OPERATION DESERT SHIELD/STORM in 1990 and 1991. All *Big Five*

systems deployed and performed beyond expectations. The Apache attack helicopter, the Black Hawk transport and utility helicopter, the Abrams main battle tank, the Bradley Fighting Vehicle, and the Patriot missile system validated the combat developments process and products. The Army Helicopter Improvement Program (AHIP) had resulted in the OH-58D armed Kiowa Warrior, which flew close reconnaissance and attack support for the Apache. Likewise deployed and successful were the Army Tactical Missile System (ATACMS), the longest-range surface-to-surface missile in the Army inventory, along with its companion, the MLRS. Additionally, unmanned aerial vehicles, the Joint Surveillance and Target Acquisition Radar System (JSTARS), and the XM40 series protective mask were success stories of OPERATION DESERT STORM.

Thus in TRADOC's first two decades of combat developments, the command witnessed a massive modernization program that was justified by a serious security threat. Adequate resourcing and enlightened leadership resulted in the Abrams M-1 Tank and the Bradley Fighting Vehicle, which were still in service over three decades later. With the collapse of the Soviet Union, the perceived need for weapons designed to fight a major heavily-armed adversary waned. The Army and other services downsized severely, and evolved from a forward-based force to one of force projection. While prior to TRADOC's formation, atomic weapons were the first offset strategy, superior targeting and technology were the second offset strategy against foes that vastly outnumbered US and allied forces.

*Asymmetric warfare* was the term used to describe the dominant conflict type. Heavy weapons, such as the Crusader 155-mm howitzer and the Comanche helicopter, were canceled; while weapons like the Stryker LAV proliferated. As costs rose and numbers of weapons declined, technology had to be harnessed to ensure the new generations of weapons were more accurate and lethal than their predecessors.

With decreased funding levels, equipment requirements shifted to focus on long-term development and acquisition. Weapons systems had to provide broad coverage in low-, mid-, and high-intensity conflicts as well as contingency and special operations. DA proposed four principles to guide modernization decisions: key future modernization programs would be protected, some major weapons systems would be terminated, investment in product improvements and systems modifications would be restricted, and new technologies would be advanced.

The concept of battle laboratories located at key centers and schools evolved during late 1991 and early 1992 as TRADOC reassessed requirements for the post-Cold War Army. Without a clear, external threat driving

requirements, concepts of warfare and the associated equipment needed to be reevaluated. The battle laboratories were designed to be the institutional means to determine, develop, and experiment with equipment and technology, organizational design, and training. The trend in combat developments, with battle laboratories assisting, would be for fewer starts and dollars, higher technology, better integration, and more focus on joint efforts. Modeling and simulation became a prominent element in concept- and requirements-validation, and weapons development.

The Army Modernization Plan update, published in May 1994, clarified the US Army's modernization objectives as: project, sustain, and protect the force; win the information war; conduct precision strikes; and dominate the maneuver battle. As TRADOC reached its 25th anniversary in 1998, it sought to fulfill those objectives. The Modernization Plan and the Force XXI process were designed to move the Service to Army XXI, beginning with a conceptual base and then to post-fielding improvements. Declining defense resources and force downsizing made it necessary for the Army to analyze future warfighting capabilities with an eye to development and fielding of battlefield systems that best supported the Army envisioned in the next century. As the architect of the future Army, TRADOC continued to fulfill that role. But as the command reached its 30th year in 2003, the road to the Army of the 21st century had taken some sharp turns as the Transformation initiatives looked to a lighter, more deployable force by 2020.

*Transformation* did not displace all of the tenets of Force XXI. Indeed, it built upon many of them. Force projection and sustainment remained priorities. The Army of the 21st century had to be a smaller, CONUS-based force with the required ability to project and sustain its power anywhere in the world. The thinking was that, to realize those objectives, Army systems had to be light, lethal, and modular, so more capability could be achieved with fewer resources. The Army also needed to have sufficient strategic and tactical lift assets to move its forces around the globe. The Army had to project forces efficiently by maximizing the advantage of new technologies to move only what was absolutely necessary. Improved logistical information systems and a new emphasis on split-based operations were created and designed to allow the Army to sustain its forces while projecting fewer support elements.

Additionally, new missions were also added to the Army, such as humanitarian relief and peace-keeping/peace enforcement, as in Somalia and Bosnia-Herzegovina. Modernization for the Army of the 21st century included denying information to the enemy through secure communications and direct attack against enemy command, control, communications,

computers, and intelligence (C4I) assets. Joint efforts to expand their own C4I assets were designed to give US (and some allied) forces a complete picture of the battlefield that could be transmitted to all units. The Army Battle Command System with its many components would link commanders at all echelons. Global Positioning System (GPS) receivers provided precise targeting and navigation data. A new information architecture also included communications systems to securely and rapidly move data from point to point.

A number of weapons and equipment projects underway promised to support the transforming Army deep into the 21st century. Of special importance was a vehicle for the interim force and an FCS that would provide an integrated *system of systems* for the soldier of the future. In February 2002, the LAV III was renamed *Stryker.* On 15 April 2002, the Army accepted early editions of its new *interim* armored vehicle for the IBCTs. The Stryker was a 19-ton eight-wheel armored vehicle that would provide the Army with 10 different variations from infantry carrier vehicles, to reconnaissance packages, and even to medical evacuation vehicles. The new vehicles had robust armor protection, could travel about 60 mph, possessed common parts and had a self-recovery capability. The Stryker also was designed to be deployed by C-130 aircraft and to be combat-capable on arrival in any contingency area.

The FCS program was a collaborative Defense Advanced Research Projects Agency (DARPA)/US Army joint project to design and demonstrate combat systems that could be the centerpiece of the Army's future objective force. TRADOC's role as the Army's combat developer placed the command at the forefront of defining what was needed and how systems should be integrated. Transformation planners envisioned FCS as a networked force consisting of separate robotic direct fire, indirect fire, and sensor platforms controlled by a manned C2 platform. The FCS was intended to involve both ground and air systems, connected through a sophisticated sensor and communications network.

As mentioned earlier, also under development for the objective force was the RAH-66 Comanche helicopter. More than 20 years in development, the Comanche was expected to operate either as a stealthy reconnaissance system or as a highly lethal attack platform. Concurrently, the Army was testing a tactical unmanned aerial vehicle (TUAV), known as "Shadow," which was meant to accompany initial-entry ground forces to transmit pictures of a battlefield back to a ground station. Resembling a radio-controlled aircraft, the newest TUAV had a 13-foot wingspan and could stay aloft over a target for 5 to 6 hours. Also being tested were prototypes of a High Mobility Artillery Rocket System (HIMARS), the

Army's new light artillery capability. Transportable in a C-130 aircraft, the early-entry artillery platform could launch the entire family of MLRS and ATACMS munitions to a range of 300 kilometers. HIMARS was designed to engage tube and rocket artillery, air defense concentrations, trucks, and light-armored personnel carriers.

## The Global War on Terrorism

In addition to developing doctrine and materiel for the future, TRADOC was also concerned with developing the same for the Global War on Terrorism (GWOT), which began after the terrorist attacks by radical Islamists on 11 September 2001. The challenges ranged from the application of conventional doctrine during the initial stages of the invasion of Iraq to sup- porting *asymmetric* operations in both Iraq and Afghanistan. Materiel developments included the fielding of systems very different from the tanks, fighting vehicles, and rocket launchers of the 1980s. Examples included the Enhanced Logistic Off-Road Vehicle (ELSORV), tested in Afghanistan, and the Counter Radio-Controlled IED Electronic Warfare (CREW), a device for jamming the signals that detonate improvised explosive devices (IED).

A successful counter-IED design was found in the Mine-Resistant Ambush Protected (MRAP) vehicle. This was actually a family of vehicles produced by a variety of domestic and international companies that generally incorporated a V-shaped hull and armor plating intended to provide protection against mines and IEDs. The DoD, per joint service requirements, detailed three categories of MRAP. These included Category I vehicles, weighing about seven tons and capable of carrying six passengers; Category II vehicles, weighing about 19 tons and capable of carrying 10 passengers; and Category III vehicles, intended to be used primarily to clear mines and IEDs, weighing about 22.5 tons and capable of carrying up to 12 passengers. By 2003, such vehicles were in use by both the US Army and US Marine Corps (USMC), but only in very limited numbers and for specialized missions, such as Explosive Ordnance Disposal (EOD) and other route-clearance work. These vehicles quickly gained a reputation for providing superior protection for their crews, leading to a suggestion that similar vehicles might be a better alternative for transporting troops in combat than up-armored High-Mobility Multipurpose Wheeled Vehicles (HMMWV). Large scale production of the MRAP began in 2007, and 28,000 vehicles were produced before the program ended in 2012.

Combat Identification (CID) efforts remained unsuccessful for the land domain. While CID for the Air Domain (air-air) was mostly solved by Identify Friend or Foe (IFF) systems, adopted world-wide, there was

no such universal system for the Ground Domain. Likewise, naval systems were able to distinguish friend from foe by a variety of means, so that there were no friendly fire incidents recorded for at least the past two decades prior to the conduct of the USJFCOM-led Joint Cooperative Target Identification-Ground (JCTI-G) Analysis of Alternatives (AoA), which issued its final report on 15 July 2011. Due to prohibitive costs, the Battlefield Target Identification Device (BTID) millimeter wave system was not adopted. Other systems, such as radio-based combat identification (RBCI), microwave interrogation-response, and other technical capabilities were likewise deemed cost prohibitive due to the scale required for distribution, according to the study plan.[28]

Figure 33. Mine-Resistant Ambush Protected (MRAP) vehicle on-loading.

*Source:* https://www.dvidshub.net/image/3518795/841st-transportation-battalion-conducts-mrap-loading-operation, image 3.

The Tactical Ground Reporting System combined a database of information about the war along with maps, which allowed junior officers to study the terrain in light of past incidents and share information about conditions on the ground. Troops were shown a prototype by DARPA in late 2006, and the current version was introduced in 2007. During this period, unmanned aerial vehicles (UAVs) were under constant development and used for both reconnaissance and attack. However, not all developments

were new, as the need for convoy defense saw a renewed interest in similar types of gun trucks used for convoy escort during the Vietnam War.

As the Army reduced its commitments in Iraq and Afghanistan, TRADOC again faced challenges similar to those when it was established in 1973. After a long period of COIN warfare, TRADOC faced an uncertain future in preparing the Army for conflict in the years ahead. In that regard, the full array of weapons and equipment for Army 2020 were yet to be finally developed.

# Chapter 4
# Concepts and Doctrine

## Post-World War II

Despite the emphasis on Doctrine, in reality, concepts precede doctrine, though not necessarily formally and not necessarily in writing. The first use of the atomic bomb in 1945 caused military planners to consider using nuclear weapons on the battlefield. The hard reality was that the Communist Bloc nations could field more men and equipment than the US, which meant the US needed to find another way to win besides conventional forces. This led to the creation, in 1954, of the Atomic Field Army concept.[29] That gave eventual rise to the Pentomic Divisions, the fielding of the *Honest John* nuclear-capable rocket launcher, and related doctrine, organization, training, materiel, and leader development. The primary driver to this atomic focus was US President Dwight D. Eisenhower (20 January 1953-20 January 1961), hero of the D-Day invasion of Normandy as a five-star general, later 16th CSA, and first Supreme Commander of NATO. The Eisenhower doctrine was that the US would be prepared to counter aggression from any nation controlled by international communism.

But once the Soviet Union acquired atomic weapons, American nuclear superiority evaporated. The nuclear option was no longer attractive or viable, unless one wished to engage in mutually assured destruction. This was, perhaps, why the US and its allies did not intervene during the 1956 Hungarian revolution, or during the crushing of the 1968 Prague Spring. Due to the dangers of direct confrontation between the superpowers, the long Cold War was punctuated by a variety of hot proxy wars between the US and the USSR around the world. This included the Korean War and the Vietnam War. So the First Offset Strategy for the question of *how to fight outnumbered, and win*—while not then expressed in those words—was nuclear deterrence.

## Advent of TRADOC

In 1973 several important events occurred, including: the US withdrawal from Vietnam, the official creation of TRADOC in July, and the October Arab–Israeli War. Vietnam focused the Army's attention on COIN warfare against an elusive foe. Conversely, the Arab–Israeli War was a conflict unprecedented in tempo, lethality, and consumption of resources. Significant in themselves, these events occurred against a background of

concerns over increasing Soviet power across the globe. It was obvious to GEN William E. DePuy, first Commanding General of TRADOC, that existing Army doctrine had to be revised. Thus, in 1974, he began the process of change by sending letters to some of the TRADOC school commandants and by initiating a series of conferences to discuss the Middle East War and changes in Soviet doctrine. Not satisfied with the long process of developing new Army doctrine, TRADOC schools developed circulars on *how to fight.* Traditionally, the Combined Arms Center (CAC) at Fort Leavenworth, KS, was the agency assigned to write *capstone* doctrine such as field manuals (FMs), but after several conferences concerning the issue, the task of writing a new FM on operations was transferred from CAC to the Concepts Branch of Headquarters, TRADOC, in 1975. The new FM 100-5, *Operations,* was published in June 1976. The new FM 100-5 principally focused on potential conflict against the Soviets in Europe. It recognized the reality of the modern battlefield, with its increased operational tempo and increased lethality, and emphasized that US forces would have to *fight outnumbered and win.*[30] There was also emphasis on winning the first battle. The perception was that the United States seldom won the first battle in any war, as demonstrated by the defeat at Kasserine Pass in World War II and by the Task Force *Smith* disaster in Korea. The overall doctrine right after the Vietnam War was called *Active Defense.* Despite its acknowledgment of a new strategic situation and the enhanced lethality of the modern battlefield, the 1976 edition of FM 100-5 created considerable controversy. Broadly, the criticism centered on three issues. First, the doctrine was defensive in nature and perceived by some to be an all-or-nothing defense without a substantial reserve. Second, the preoccupation with the first battle seemed to be a commitment to fight that battle without consideration of subsequent operations. Third, and perhaps most significant, the Active Defense was seen as tied too specifically to one Soviet operational maneuver that called for a massive armored breakthrough that was typical of World War II. Soviet doctrine, however, had also changed and called for multipronged attacks across the front seeking to exploit a weak point.

As published, the 1976 FM 100-5 was a tactical manual with limited focus. While it addressed the Soviet threat to NATO, it did not address US responsibilities in other parts of the world nor did it address joint operations or counterinsurgency warfare. As a conceptual foundation, it was inadequate, and this meant it was also doctrinally unsound. Therefore, as early as 1976–77, there were efforts underway to redefine the battlefield of the near future. Then-LTG Starry spearheaded these efforts while he was V Corps commander in Europe. Earlier, as Chief of Armor, he had

contributed greatly to the 1976 edition of FM 100-5 and its Active Defense approach. As V Corps commander, however, Starry had gained a new appreciation of updated Soviet doctrine and capabilities. In V Corps, the aspects of what LTG Starry referred to as the Central Battle, including target acquisition ranges and numbers of combat systems involved, were fully analyzed. He realized that the commander's view of the battlefield had to be wider and deeper than previously indicated by Active Defense. When LTG Starry became TRADOC commander, these considerations became paramount in revising FM 100-5. Nearly simultaneously, the CSA, GEN Edward C. Meyer, recognized a need for the Service to be more responsive to global needs, hence more deployable. There was also the need to revise doctrine to reflect the more current Soviet threat.

A major influence on GEN Starry's concept of the *Central Battle* was a study at the Field Artillery School, Fort Sill, OK, begun at his request. The study suggested interdicting targets deep in the enemy rear to disrupt the Soviet second echelon during an assault. That study also projected cooperation with the US Air Force, which led to the need for an integrated battle across a wider, deeper battlefield. By 1980, the *Central Battle* concept became known as *AirLand Battle,* and a new draft of FM 100-5 began. In addition to the long-recognized principles and fundamentals of war, *AirLand Battle* called for depth, agility, and synchronization, as well as an *insistence* on initiative on the part of leaders at all levels. It was a fundamental conceptual change simultaneous to being a doctrinal change. Published in August 1982, the new FM 100-5 became the cornerstone of US Army doctrine. It was revised in 1986, and *AirLand Battle* remained doctrine through the Gulf War of 1990–91. The 1982 and 1986 editions of FM 100-5 were improvements over the 1976 edition in that they briefly addressed joint operations and contingency operations; however, they remained Eurocentric and did not address COIN warfare. The Second Offset Strategy was precision munitions. And while not expressed in those terms, with historical hindsight it is clear that this was the solution employed to answer the question of *how to fight outnumbered, and win.*

With the apparent demise of the Soviet Union, the strategic position of the United States changed drastically. Although in 1991 US and allied divisions smashed Iraqi military power using the principles *AirLand Battle* doctrine, there arose the notion that a philosophy centered upon fighting a major land power on the European continent was no longer relevant. At the end of the Cold War, the United States emerged as a truly global power with the means to project its influence. Unfortunately, that did not mean peace. In the last decade of the 20th century, nearly half the countries in the world faced some sort of armed conflict, which included

ethnic strife, political or religious insurgencies, terrorism from political or transnational entities, or even criminal elements masquerading as political movements. The post-Soviet Union world contained challenges that were far more complex than those evident during the Cold War. The danger of facing a potential adversary in a land war that might turn nuclear seemed to lessen, only to reveal multiple threats to the United States that did not originate in Moscow. TRADOC commander GEN Foss began the full-scale revision of Army doctrine in 1989. The Gulf War, however, delayed further developments.

On taking command of TRADOC in August 1991, GEN Fred Franks set as his primary goal the revision of FM 100-5 and its publication by early 1993. Perhaps he was motivated by the August 1991 promulgation of TRADOC Pam 525-5, *AirLand Operations: A Concept for the Evolution of AirLand Battle for the Strategic Army of the 1990s and Beyond.* GEN Franks also envisioned Army doctrine moving in a different direction than had his predecessor. Thus, the writing team at Fort Leavenworth, KS, was changed, and the new team worked to produce a manual that was less a tactical treatise than the two preceding versions and more a statement of the Army's position in a world that required deployment from CONUS rather than a forward-based Army. It stressed the numerous missions the Army faced in the current strategic environment and took a realistic view of joint requirements in future operations. GEN Franks was careful to ensure Army-wide consensus prior to publication and that the other US Services were privy to the elements of the new FM 100-5. In this way, it was a public document from its early stages and most of the criticism had been met prior to publication. FM 100-5, released in June 1993, scrapped the designation AirLand Battle. Because Franks did not want to focus attention solely on Army–Air Force cooperation, he did not select a single term to replace AirLand Battle. However, in the introduction to the 1993 FM 100-5, Franks insisted that AirLand Battle had evolved into a variety of choices for a battlefield framework and a wider inter-Service arena that allowed for the increasing incidence of combined operations. On 1 August 1994, TRADOC promulgated TRADOC Pam 525-5, *Force XXI Operations: A Concept for the Evolution of Full-Dimensional Operations for the Strategic Army of the Early Twenty-First Century,* which replaced the earlier TRADOC Pam 525-5 mentioned above.

## Post-DESERT SHIELD/DESERT STORM

During DESERT SHIELD/DESERT STORM, the use of satellite technologies led to the idea that space was also a military domain, just like land, sea, and air. On 1 November 1994, TRADOC promulgated

TRADOC Pam 525-60, *Space Support to Land Force Operations.* On 20 July 1995, TRADOC released FM 100-8, *Space Support to Army Operations.* On 1 December 1995, TRADOC published TRADOC Pam 525-66, *Operational Capability Requirements,* which listed the various space applications. Besides space, the 1990's also saw the advent of the concept of *Information Operations,* with the eponymous TRADOC Pam 525-59. In August 1996, FM 100-6, *Information Operations,* was promulgated. This concept and doctrinal change also saw the deliberate inclusion of Civil Affairs and Psychological Operations (now called Military Information Support Operations) into planning. Due at least in part to peace keeping/peace enforcement efforts in the Balkans (including Task Force Able Sentry in Macedonia, Task Force Eagle in Bosnia, etc.), work began on non-lethal capabilities and concepts of employment as well.[31]

During his tenure as TRADOC commander, GEN Franks worked closely with CSA GEN Gordon R. Sullivan to change doctrine. In Exercise *Desert Hammer,* new versions of the M1 tank were tested at the National Training Center (NTC) in what would come to be considered the first advanced warfighting experiments (AWE). GEN Franks also looked for a way to test the concept of Army XXI. Use of the battle laboratories to explore the various aspects of the future battlefield also affected concept and doctrine development. Their focus included maneuver, maneuver support, fire support, combat service support, and the new electronics aspects that included computers as well as more traditional electronic equipment on the battlefield. All of these fell loosely under the auspices of GEN Sullivan's concept referred to as the modern Louisiana Maneuvers (LAM), a reference to the Army's famous training maneuvers in 1940 that led to significant reorganization. The modern LAM concept was a process that brainstormed new ideas. Although a DA initiative, the LAM task force was headquartered at Fort Monroe, VA, in part because of GEN Sullivan's heavy reliance on the TRADOC commander, GEN Franks.

For the next decade, the changing international situation demonstrated the need for another update of FM 100-5. The plan for a modified version of the manual tentatively scheduled for 1996, however, was put on hold. In 1999, CSA GEN Shinseki made the case for both doctrinal and materiel changes in the Army, initiatives known collectively as *Transformation.* A large portion of the challenges posed fell on TRADOC as the Army's architect of the future. At the same time, TRADOC was undergoing serious reductions in resources and personnel that affected both training and doctrinal development capabilities.

TRADOC also developed its own scenarios, separate from the Defense Planning Scenarios and related efforts. These were unrelated to ac-

quisition scenarios, and they were instead intended to validate concepts, doctrine, and materiel solutions, such as FCS. In a related effort, by 1999, TRADOC had a Concepts Branch under the Future Training Division, which fell under the DCS-Training. In addition to a formal concepts branch, on 5 April 2000, TRADOC promulgated TR 25-36, *The TRADOC Doctrinal Literature Program.* This document's purpose was to assign responsibility for TRADOC's Doctrine Literature Program (DLP) to both TRADOC proponents and non-TRADOC proponents that developed doctrine under a memorandum of agreement (MOA) or understanding (MOU) with TRADOC. This was the new mechanism for managing, developing, producing, and disseminating doctrine. It prescribed policy for TRADOC's development of Army, multiservice, and joint doctrine principles and/or tactics, techniques, and procedures (TTP), including management of the Army doctrine development process. Because doctrine development was decentralized across Army agencies, the DLP established standards, ensured consistency, and served to institutionalize the doctrine development and production process. By 2000, the Futures Directorate's LTC Antulio Echevarria II and BG(R) Huba Wass de Czege were publishing articles regarding power projection.[32] Other topics included urban warfare, Combat Service Support, Joint Robotics, and Global Engagement.[33] Also by 2000, Joint and Army Concepts Directorate was established.[34]

To further the understanding of future warfare as it was then envisioned, GEN Abrams instituted a series of Seminar War Games (SWG) in July 2001 and revitalized the organization and operations (O&O) class of planning documents. The SWG enabled the review process for O&O and simulated long-range planning for an interim and then an objective force. The initial purpose of the SWG was to help design a force projection army that was decisive across the range of military operations on the 21st century battlefield. The SWG particularly addressed the challenges raised by the revolution in computer and graphics technology. The TRADOC Brigade Coordination Cell (BCC) at Fort Lewis, WA, tracked and analyzed two Interim Brigade Combat Teams (IBCT) co-located there, and they tried new concepts for the future battlefield. Their work resulted in a complete revision of the 1993 FM 100-5. To emphasize the break with the past, the joint numbering system of FM 3-0 was adopted for the new manual, which was cognizant of the changes in the nation's geostrategic position. It clearly addressed the problems of deployment and asymmetric warfare and the need for joint operations in nearly every aspect of operations, from major theaters of war to humanitarian relief. The *Transformation* FM 3-0 was published in June 2001.

## 9/11 and Beyond

After the terrorist attacks of 11 September 2001, TRADOC also had to support the GWOT. The command produced an O&O for the Army on force protection and assessed the impact on the changed world situation on all other aspects of doctrine development. Especially critical was the development of joint doctrine that, in the past, had proceeded slowly and without the desired integration. As the Army became involved in Iraq and Afghanistan in both conventional and COIN warfare, the need for an improved FM 3-0 became evident. The new manual, published in February 2008, was a significant improvement over its predecessor. It addressed the current realities of an unstable world in which the threat was constantly changing. In addition to emphasizing information warfare in conjunction with conventional and counterinsurgency warfare, it gave full weight to stability or civil support operations as part of the spectrum of warfare.

Another important doctrinal publication was the update of FM 3-07, *Stability Operations,* in October 2008, which represented a milestone in Army doctrine. Unlike previous editions, it was designed as a roadmap from conflict to peace. It institutionalized the hard-won lessons of the past while charting a path for the future. The manual focused on achieving unity of effort through a comprehensive approach to stability operations and remained consistent with a broader whole of government approach to those same operations.

## Doctrine 2015

Doctrine 2015 was an initiative to provide clear, concise, current, and accessible doctrine to the field. Doctrine is important to the US Army, as it provides a body of knowledge that serves as the foundation for the profession or arms, and for the successful execution of Unified Land Operations (ULO). Doctrine 2015 accelerated the implementation of new doctrine across the force by providing the US Army with a completely revised structure of manuals. The top level of manuals were ADPs that are only 10-15 pages in length. Supporting references, Army Doctrine Reference Publications (ADRP), and FMs increase in length and depth of information. Doctrine 2015 made these references available at the point of need through interactive media such as mobile applications, as well as access via the worldwide web. Additionally, Army Techniques Publications (ATP) offers a *wiki* means of contributing to doctrine development. Doctrine 2015 captured the essential lessons learned from over 17 years of persistent conflict in Southwest Asia. It leveraged a broader range of available collaborative technologies including wiki, interactive media instruc-

tion, video books, blogs, and social media. Most importantly, it made doctrine more accessible to Soldiers. The first step in Doctrine 2015 was the publication of a series of ADPs. The first one was ADP 3-0, *Unified Land Operations,* which was published in 2011, and replaced the venerable FM 3-0, *Operations.* The final edition of the old-style FM 3-0 was published in 2008. It was the last of the printed doctrinal manuals that had begun as Field Service Regulations in 1905. The purpose of ADP 3-0 was to provide a common operational concept for a future in which Army forces would need to prepare to function across the range of military operations, integrating their actions with joint, interagency, and multinational partners in a larger effort. Not counting appendices, ADP 3-0 was only 14 pages long and available on the Internet.

> Note: Current Army ADPs, ADRPs, FMs, available at: http://www.apd.army.mil/.

## Multi-Domain Battle (MDB) and the Third Offset Strategy

MDB was part of Army doctrine, codified in FM 3-0, *Operations,* as of 2017. While all concept work rests upon (or is a deliberate reaction against) precedent, MDB in its modern form seems to have emerged from a speech given by Deputy Secretary of Defense Robert "Bob" O. Work at the US Army War College on 8 April 2015. In that speech, he called for an "AirLand Battle 2.0," a concept that would enable the US military to fight and win after solving the anti-access/area denial problem. In terms of development sequence, in 2012, the *Capstone Concept for Joint Operations: Joint Force 2020* was promulgated.[35] In 2014, the Army published *The US Army Operating Concept: Win in a Complex World 2020-2040.*[36] The USMC, as the other land component force, published its *Marine Corps Operating Concept* (MOC) in 2016.[37] These were the primary intellectual forebears of MDB. LTG H.R. McMaster, then Director, ARCIC, is generally credited as one of the *heavy lifters* of the MDB concept development, along with GEN Perkins, CG TRADOC. LTG McMaster went on to become the National Security Advisor for President Donald J. Trump, effective 20 February 2017. GEN Perkins, in addition to his other duties, has continued since then to advocate for MBD, to socialize the concept to such organizations as the Association of the US Army (AUSA), and to write articles, particularly for *Military Review.*[38]

American adversaries were not idle while US Forces were engaged in the longest wars in the nation's history in Iraq and Afghanistan; instead, both real and potential adversaries have studied how Americans have waged war. In the case of Russia, their T-90 Main Battle Tank was newer

and, with its upgrades, arguably more sophisticated.[39] Beyond that is the T-14 *Armata,* which began production in 2016.[40] To answer the *near peer* threat, as described above, TRADOC developed the concept of *Multi-Domain Battle* as part of the Third Offset Strategy.[41] Because MDB was still an emerging concept, despite being promulgated in FM 3-0, there were several ingredients being added to the mix, with various advocates for specific parts or ideas. This included at least the following:

- Extending and improving existing capabilities, focusing upon anti-access/area denial capabilities and how to defeat those (e.g., stealth aircraft, undersea warfare, etc.).
- Searching for a brand new capability (yet to be determined).
- Improving synchronized existing capabilities so that platforms (e.g., rocket launchers, aircraft carriers, etc.) and sensors in different domains could cross-cue one another. Domains included air, sea, land, space, and cyber, as well as arguments for a "cognitive" domain.
- A deliberately joint investment strategy to include air and missile defense, short range air defense (SHORAD), and electronic warfare (as distinct from cyber), plus reinvigorated combined arms training.

An obvious critique was that searching for a strategy, a technology, or set of technologies, is not of itself a *strategy.* TRADOC articulated the various parts of the puzzle that had be solved, or at least addressed, in multiple articles, videos, etc.[42] The main battle tank remained at the heart of fire and maneuver. The search for a viable replacement for the M1 Abrams was a driver for another TRADOC effort, the Ground Combat Vehicle (GCV), which was intended to be a replacement for the cancelled Future Combat Systems program. The GCV program began in 2009, but unfortunately was cancelled in February 2014. Given the time required for the acquisition program to work, the Army of 2020 would be fighting its wars with vehicles designed in the 1970s and fielded in the 1980s, with various upgrades.[43]

Figure 34. LTG H.R. McMaster, as Director, ARCIC, speaking about Multi-Domain Battle (MDB).

*Source:* Washington D.C. (Army News Service, 17 October 2014) https://www.army.mil/article/136453/army_operating_concept_expands_definition_of_combined_arms.

Some of the concept exploration was ironically dubbed "Back To The Future," per the movie series, to include the notion of dedicated Army coastal artillery units, as stated by former Secretary of Defense Charles Hagel.[44] This idea was taken by some to mean a constellation of forward-based missile forces. In short, it was American anti-access/area denial.[45] (In the US, the Coast Artillery Corps was disestablished in 1950.) Others indicated a need for a deliberate integration of cyber capabilities across all domains, to gain efficiencies, as well as investing in electro-magnetic pulse (EMP) non-nuclear capabilities.[46] These disparate ideas and theories all hinged upon radically different investment decisions. So while in times past, there was already a specific technology available around which to build a concept and a capability, for the second decade of the 21st century, there was an acknowledgement that a new capability was needed, and there was a new concept waiting for a silver bullet (or magazine of silver bullets) to actualize it. GEN Perkins has continued to be directly involved with concept development, as well as socializing MDB and explaining it to key leaders.


Figure 35. GEN Perkins speaking on MDB at LANPAC, 25 May 2016.

*Source:* Photo by Staff Sgt. Chris McCullough, U.S. Army Pacific Public Affairs Office, Honolulu, Hawaii. https://www.dvidshub.net/image/2616853/lanpac-2016.

Figure 36. GEN Perkins and Acting SECARMY Paul R. McCarthy, 10 August 2017.

*Source:* https://www.army.mil/article/192257/secretary_of_the_army_discusses_readiness_force_development_during_tradoc_visit, image 5.

# Chapter 5
# Training and Leader Development

By design, TRADOC's establishment in 1973 began a fundamental change in training. While many changes were evolutionary, they resulted in a revolutionary departure from the Vietnam era. The architects of this revolution were GEN DePuy and his DCS for Training, Major General (MG) Paul F. Gorman.[47] The latter was an advocate of performance-oriented training, which meant setting training objectives by carefully determining the actual tasks to be trained. After the objectives were set, the conditions under which the training was to take place were determined and the standards were established. Thus the paradigm still in use today of *task, condition, standard.* MG Gorman and his supporters also brought to training development an appreciation of rapidly advancing technology and an understanding of how it could be applied to training. In 1973, soldiers and officers were trained in accordance with the Army Training Program (ATP), which was in use since World War I. The ATP prescribed the hours devoted to each subject and task. It was based on a conscript Army that had sufficient time to raise, equip, and train a combat force prior to its commitment to combat. With the beginning of the all-volunteer force in 1973, planners could no longer depend on an influx of draftees to meet their manpower needs. Other factors TRADOC had to consider in building a new training system were the post-Vietnam downsizing of the Army and shrinking defense budgets. The Army needed better training that was somehow both more efficient and more cost effective.

The lethality and ranges of the weapons used in the 1973 Arab–Israeli War brought home to GEN DePuy and MG Gorman the tremendous importance of well-trained crews and tactical commanders. They agreed that the Army needed a *train-evaluate-train* program that required soldiers to perform to established standards. The program had to be progressive and sequential so that each level provided a foundation for the next higher one. They also believed that individual training in units was neglected and focused TRADOC's effort there. MG Gorman's idea was to reorient the TRADOC school system so it had a larger *training* intent, rather than an educational one. Finally, both men believed a solid link had to be established between doctrine and training. Thus, the 1976 revision of FM 100-5, *Operations,* recognized the Service schools as the *Army's source of combat developments and doctrine.*

The systems approach to training (SAT) was the basic vehicle for training change. The SAT model consisted of five interrelated phases: analysis,

in-systems training, unit training, individual training, and training support. Due to decreasing budgets, TRADOC's leaders recognized that much individual training would have to be conducted in units. As a result, training developers began to create and field several programs to bring the training to the soldier. The Army Training and Evaluation Program (ARTEP) was a new performance-oriented program for *collective training* that placed responsibility for training directly on the unit. New skill qualification tests (SQTs) were designed to provide an indicator of a soldier's MOS proficiency. The self-development test, a follow-on program to the SQT, was eliminated in 1995. An updated and revised training and doctrinal literature program included soldiers' manuals that set forth what the Army expected a soldier to know and be able to perform at each skill level. The new program also included commanders' manuals, field manuals, *how to fight* manuals, technical manuals, and training circulars. To meet increasing manpower shortages, GEN DePuy and MG Gorman greatly expanded a training extension course program, begun under CONARC, designed to export training to the field.

GEN DePuy and MG Gorman also initiated changes in the Initial Entry Training (IET) program and the NCOES. In July 1974, a new basic combat training (BCT) program was implemented that stressed discipline, decentralization to the lowest possible level, and the teaching of basic combat skills. TRADOC also made a major change in the structure of BCT. A new one-station unit training (OSUT) plan integrated some BCT and advanced individual training (AIT) into cohesive programs. That action meant fewer soldiers undergoing IET would have to take the two phases at two different locations, which saved travel costs. TRADOC also established a progressive and sequential NCOES in line with the Officer Education System (OES). GEN DePuy and MG Gorman left TRADOC headquarters in June 1977, but their reforms provided the foundation for a continuing training revolution. Their programs were revised, increased, and in some cases deleted; nevertheless, the changes did not undo their work.

During TRADOC's first 45 years, it employed a number of school models and long-range training plans to fulfill its mission to train the Army's soldiers and officers. *School Model 76,* TRADOC's first, replaced the one operated by CONARC before OPERATION STEADFAST. It clearly demonstrated GEN DePuy's interest in training as opposed to education, and MG Gorman's interest in advanced technology. GEN DePuy directed his staff to develop new organizational concepts that would modernize and bring greater efficiency to the schools. *School Model 76* was based on the premise that the commandants were responsible for the interface between

combat developments and training developments. The combat developments function of the school created new weapons requirements, tactics, and tactical and support organizations, all based on approved doctrine. Training development personnel were responsible for resident training, extension training, simulation devices and simulators, and training literature to ensure the optimum employment of combat developers' products. GEN DePuy wanted the schools to be less instructor intensive and to take advantage of existing technologies.

Another initiative affecting TRADOC schools was the establishment, in 1982, of a military history education program, designed by the new Combat Studies Institute at Fort Leavenworth, KS. TRADOC Regulation 350-13, *Military History Education Program (MHEP),* first published in January 1982, formally vested proponency for MHEP with the TRADOC chief of staff, and established command policy for the study of military history in the TRADOC Service schools and in senior ROTC detachments. The TRADOC MHEP was intended to foster a sense of historical mindedness throughout the Army community, creating sensitivity to the intellectual and functional values of military history as a vital component of professional education and development.

By the summer of 1982, inherent problems were evident in *School Model 76.* The most notable problem barred instructors in the academic departments from participating in training developments and combat developments. Almost immediately after the model's adoption, the schools requested exceptions to that policy. A working group established by TRADOC Commander, GEN Otis, recommended the adoption of a new school model that integrated the future direction of the Army with the school model. By abandoning a reactive approach, TRADOC would be in a posture to participate actively in designing the way it operated in the future. The new model combined combat developments and training developments in the same directorate, thereby bringing training developments and evaluation into the system acquisition process earlier. Thus, evaluation could serve to provide information on the potential successes or failures associated with total system fielding. In 1983, TRADOC Commander GEN Richardson approved School Model 83, returning much of the responsibility for training developments to the schools' directors of training and the academic departments that they lost in *School Model 76.*

In 1983, proponency for MHEP management shifted to the Combined Arms Center (CAC) commander with executive agency given to the Director, Combat Studies Institute (CSI). Also in 1983, a revised TRADOC Regulation 350-13 placed the requirement for instruction in military history with uniformed officers outside the command history program and

made no provision for utilizing civilian branch historians in MHEP. However, as the TRADOC history program grew, Commandants at the various centers and schools used the branch historians to coordinate MHEP in their commands and to serve as adjunct instructors. By 2003, a majority of branch historians served frequently as adjunct instructors of military history. In August 1992, proponency for MHEP returned to TRADOC HQ. In 1999, TRADOC Regulation 350-13 encompassed heritage instruction in BCT as well, and was upgraded to reflect visions of a transforming Army. In 2010, MHEP was again revised to broaden heritage instruction for the junior enlisted in TRADOC museums, and indeed to conduct as much military history and heritage instruction as possible in the command's museums.

In conjunction with a continuing assessment of TRADOC school organization, TRADOC Commander GEN Vuono directed the development of a long-range plan to guide the command for the next 10 years; TRADOC published that long range plan in May 1987. TRADOC training planners began writing *Army Training 1997* to support the plan. Specific guidance included the integration of Reserve Component training throughout the document under a *Total Army* concept, rather than leaving the Active and Reserve training venues completely separate. Also, additional emphasis was given to developing joint and combined operations and to the distributed training system. TRADOC published Army Training 1997 in September 1987. Major changes included in the final version dealt with leader development, future technology strategy, the connection between training developments and combat developments within the Concepts-Based Requirements System (CBRS), combat training centers, embedded training, and small group instruction. The long-range strategy provided for a new training system for warrant officers and a strong emphasis on civilian leadership training. The plan also included the results of an important study undertaken to draft a set of standards to improve training effectiveness and guide the evolution of IET.

In the fall of 1988, TRADOC Commander GEN Thurman called for a reassessment of TRADOC's status and the command's short-term priorities. In a concept termed *Vision 91,* he outlined how the command should fulfill its mission through 1991 with regard to doctrine, force design, equipment requirements, leader development, training, and mission support. Training had to be consistent with doctrine, embedded into the development of new equipment, and made an integral part of force modernization. Institutional, unit, and individual training had to focus on teaching warfighting skills in a tactical field environment to produce soldiers who understood the specific tasks of their jobs and could perform them to es-

tablished standards. According to *Vision 91,* training plans had to make use of technological advances, especially computer-based teaching and testing, and even the simulation of force-on-force maneuvers.

Concurrently, an *Army Training 21* (not to be confused with Army Training XXI) concept was being developed. That plan laid down the specifics for developing a long-range *umbrella* training strategy for the late 1990s and the first 20 years of the 21st century. It included such training strategies as distributed training, based upon the technical requirements of each MOS, civilian vocational and technical training for appropriate MOSs, training in colleges and universities, recruiting by proven ability instead of measured aptitude, and reconfiguring the TRADOC school system to be more responsive to projected training requirements in the year 2020. For several years, suggested solutions to problems were tried, studied, and revised. In the end, the demands first of Army XXI and then of the various transformation efforts changed many of the parameters of the earlier initiatives.

As GEN Thurman looked at how the command could best meet its responsibilities to 1991, TRADOC's training managers were examining *School Model 83* for needed changes. *School Model 89* eliminated the *School Secretary* organizations at TRADOC schools, aligned the threat support office under the assistant commandant, and limited the number of training departments to four. Because of numerous requests for exemptions, which were considered on a case-by-case basis, *School Model 89* was not implemented until 1990.

Meanwhile, it was clear that the Army needed a new capstone training manual to keep pace with evolving training plans and doctrine. TRADOC's new training philosophy was contained in FM 25-100, *Training the Force,* published in 1988 to take its place alongside FM 100-5, *Operations,* and FM 22-100, *Military Leadership,* as part of a trilogy of *train, fight, lead* manuals. But FM 25-100 focused primarily on senior Active and Reserve commanders above battalion level. This created a need for additional guidance to better apply the concepts of FM 25-100 at battalion and company level. Thus in 1990, FM 25-101, *Battle Focused Training,* filled the void for those echelons. In October 2002, the Army distributed FM 7-0, *Training the Force,* as an update to FM 25-100. This was in line with the adoption of the joint numbering system. Likewise in 2003, FM 7-1, *Battle Focused Training,* superseded the 1990 FM 25-101. The new manual was designed to bring training doctrine more in line with the emerging operational environment.

Significantly, TRADOC leadership endeavored to take advantage of ever more sophisticated technology that could be applied to training. This was increasingly evident in the transformation efforts of the late 20th and early 21st centuries. During the GEN DePuy–MG Gorman years, several tactical engagement simulation systems were used to support unit field training. One of these was known as Squad Combat Operations Exercise, Simulated (SCOPES). SCOPES was designed to eliminate the subjective judgment of umpires, and featured a 6-power telescope mounted on a rifle with numbers affixed to each individual soldier for casualty identification. A similar system for training tank crews called REALTRAIN had a 10-power scope. In the early-to-mid-1970s, TRADOC began developing an even more sophisticated tactical engagement simulator for use in force-on-force field training exercises, the Multiple Integrated Laser Engagement System (MILES). MILES revolutionized collective training in the Army; an upgraded version continued in use as an effective Army field training device well into the second decade of the 21st century.

From its inception, TRADOC was responsible for the development of dozens of system and non-system training aids and devices. Most were computer-based and designed to allow training when space, safety, cost, or environmental considerations might have prevented it. Simulators and simulations such as the Simulation Network (SIMNET), which joined more than 200 simulators, allowed units to participate in simulated battles without leaving home station. In the early years of the 21st century, SIMNET technology was applied to the development of a family of Combined Arms Tactical Trainers (CATT). A family of simulations (FAMSIM) allowed for training in command and control from platoon level to echelons above corps. GEN DePuy's and MG Gorman's faith in the value of advanced technology applied to training and the imagination and support of their successors placed the Army high among the Services in the field of training technology.

In 1976, MG Gorman began developing a concept for a National Training Center (NTC) where heavy armored and mechanized infantry units could train in force-on-force and live-fire exercises and where data could be collected to support doctrine development, combat development, and a lessons-learned system. In January 1982, the NTC, Fort Irwin, CA, hosted its first force-on-force maneuvers. NTC was a bi-lateral TRADOC–FORSCOM project. The major features of the training center were the employment of MILES for casualty assessment and a sophisticated data collection system for exercise control, a TRADOC Operations Group, a superbly trained opposing force (OPFOR), expert exercise observer-controllers, after action reviews of unit performance, and take-

home packages designed to aid units in correcting deficiencies while training at home station. NTC's success in training heavy mechanized forces led the Army to establish the Joint Readiness Training Center (JRTC) for the training of light forces at Fort Chaffee, AR.

In early 1987, the CSA approved the concept of the Battle Command Training Program (BCTP) to train Active and Reserve division and corps commanders, their staffs, and major subordinate commanders in warfighting skills. In May 1987, NTC, BCTP, and later JRTC and CMTC, were all brought under the training *umbrella* of the Combat Training Center (CTC). Collectively, the CTC projects focused on integrating all elements of combat power and were designed to provide tough, realistic combined arms and services training per *AirLand Battle* doctrine for units from squad through corps. The CTC provided the Army the capability to train heavy, light, and special operations forces across the spectrum of conflict. In October 1987, the JRTC opened at Fort Chaffee, AR. Like the NTC, it featured a TRADOC Operations Group and an OPFOR. Unlike the NTC, the JRTC was a TRADOC-only endeavor until it moved to a permanent home at Fort Polk, LA, in 1993. At that time, the JRTC also became a TRADOC–FORSCOM effort.

In 1988, the Army planned to establish a Combat Maneuver Training Center (CMTC) at Hohenfels, West Germany, to provide the same realistic combined arms training exercises for troops in Europe as those at the NTC. In the summer of 2002, the NTC became the focus of the US Army's participation in Millennium Challenge, the first major joint experiment ever conducted. The Army conducted exercises with the new Stryker interim armored vehicle to test its deployability, especially when airlifted by a C-130 aircraft. The TRADOC battle labs also conducted experiments in satellite communications, intelligence, C2, and terrain mapping. Lessons learned from Millennium Challenge helped develop a new joint training transformation project known as Joint National Training Capability (JNTC) that focused on the upgrading and certification of training ranges for joint training.

As regards enlisted (non-NCO) training, the Army's IET program included BCT; AIT, which trained soldiers in their MOSs; and OSUT, which combined BCT and AIT for some career fields. On 1 October 1998, Army BCT was expanded from 8 weeks to 9 weeks so that new soldiers could be immersed in the Army's heritage and its seven core values: loyalty, duty, respect, selfless service, honor, integrity, and personal courage. The directive for the additional week of BCT had come from the CSA in the wake of the occurrences of sexual assault during IET at several Army installations, most notably Aberdeen Proving Ground, MD. The revamped

program also included human relations, rape prevention, and financial management. In addition, a 3-day field training exercise (FTX) reinforced training given during BCT. Values-based training—values, heritage, and tradition—would not end when soldiers graduated from BCT, but would continue into AIT to reinforce the instruction given in BCT and to keep those principles fresh. In 2003, CSA GEN Peter J. Schoomaker created Task Force *Soldier.* One of its tasks was to examine all forms of Initial Military Training (IMT) to ensure it was preparing soldiers for combat. The results were 32 Warrior Tasks and 12 Battle Drills that made training more relevant. The tasks fell into areas such as shooting, moving, communicating, urban operations, and fighting. The drills included reactions to combat situations and casualty evacuation. The tasks and drills were implemented throughout IET in 2004, and some drills were included in AIT. In 2007, GEN Wallace expanded BCT from 9 to 10 weeks without adding additional tasks, and instead reinforcing what was taught.

The Systems Approach to Training (SAT) received a boost with new publications in 2004, for Evaluation, Testing, and Analysis.[48] On 1 April 2008, TRADOC's Joint and Army Concepts Division published TRADOC Pamphlet 525-3-7-01, *The US Army Study of the Human Dimension in the Future 2015-2024.* That two-year study was the precursor to *The US Army Concept of the Human Dimension in the Future 2015-2024;* the latter document, published 11 June 2008, was revised and the update published on 21 May 2014. These publications influenced the development of the Army Learning Model, and led specifically to Army Learning Model 2015. The significance here is that concepts were not only to precede doctrine, but also training and the evaluation of training.

## Gender Integration

From the beginning of the all-volunteer force in 1973 and into the 21st century, there were important developments and much controversy concerning the training of men and women recruits together in BCT. In the absence of a pool of draftees, women enlistees were necessary to meet manpower requirements. As a result, the numbers and percentages of women in the enlisted ranks increased dramatically from the late 1970s through the beginning of the 21st century. That situation, combined with the efforts of official bodies such as the Defense Advisory Committee on Women in the Services (established in 1951), eventually caused the army to integrate the sexes during BCT. From 1978 to late 1981, men and women were trained together in BCT at company level (for example, a company of three all-male platoons and one all-female platoon). That experiment

encountered numerous difficulties, especially with physical training, and was terminated in 1981.

From 1982 to 1994, men and women were trained at separate locations. The Persian Gulf War of 1990–91 changed that arrangement when 41,000 women deployed, some serving on the front lines. As a result, the Secretary of Defense (SECDEF) declared that women could fly combat aircraft and serve on combat ships. With the idea of *train as you fight,* the Army once again established a gender-integrated BCT program. This time the training companies were totally integrated. Overall, the new program had fewer problems and opened more specialties to women; however, criticism remained and increased in 1996, after the scandal of widespread sexual harassment and rape during training at Aberdeen Proving Ground and other sites. The integrated training program remained but was the object of numerous studies and investigations by Congress, and by various agencies and organizations.

## Occupational Physical Assessment Test (OPAT) and Related Matters

The standard Army Physical Fitness Test (APFT) was deemed inadequate for a specific MOS suitability assessment. The science and study of what to measure and how took a few years and several studies, as well as some careful planning based upon average levels of improvement. Those studies verified that a trainee could average an improvement in running of 15 seconds per week from the beginning of BCT through graduation; push-ups could increase an average of one per week, while sit-ups could improve up to three per week. The physical fitness training concepts by type were predicated upon the works of Dr. Tudor Bompa, a Canadian academic and the developer of sports periodization training. He divided fitness into five categories: muscular strength, muscular endurance, explosive power, speed, agility, and cardio endurance. Dr. Bompa's works greatly influenced CIMT training efforts, the OPAT, and even the development of the Combat Readiness Test.[49]

To facilitate gender-neutral training, assessment, assignment, and related functions, TRADOC needed a new tool. Since the gateway into the Army was BCT for enlisted, Warrant Officer Candidate School (WOCS) for warrants, or Officer Candidate School (OCS) or ROTC for traditional branch officers, the lead was the DCG for Initial Military Training (IMT). The idea of a test that measured for each individual MOS was initiated by MG Ross E. Ridge (now retired), and implemented by MG Anthony C. Funkhouser, during their respective tenures as DCG, IMT. Nutrition and

other matters were also examined in detail. As a result, there were changes to the dietary offerings in the Dining Facilities, as well as examination of the idea of a *fourth meal.* The idea behind a *fourth meal* was that a typical recruit did not eat anything from dinner at 1700-1800 hours the night before all the way until after PT the next morning—a period of more than 12 hours. Thus, before they went to bed, they got a nutrition bar. As of late 2017, this effort was still experimental. Due to the sedentary nature of modern life for the typical recruit, Vitamin D was provided as well as calcium to help with bone growth, especially in chocolate milk, giving rise to the somewhat derogatory term of *the chocolate milk army.*

The *Soldier for Life* certificate was also conceived during MG Ridge's tenure, but enacted under MG Funkhouser. Additionally, the title *Soldier* was determined to be earned after completion of BCT, while the Army Service Ribbon continued to be earned upon completing AIT. Another purpose for a more rigorous suitability assessment was cost, specifically the cost of personnel who attrited out of training. By having soldier candidates work up to a specific fitness level before even officially joining the Army, not less than 500-600 more personnel per year were projected to successfully complete BCT. The average cost per recruit was estimated between $50,000—$70,000, depending upon MOS. Thus by reducing attrition, between $25,000,000—$42,000,000 annually was saved.

Figure 37. Basic Training, Fort Benning, Georgia.

*Source:* Photo by Patrick A. Albright, MCoE/PAO Photographer, Fort Benning Public Affairs Office, Fort Benning, Georgia, 3 March 2017, image 2. https://www.dvidshub.net/image/3275607/basic-training-graduation-unique-perspective.

## Female Rangers and Proof of Gender Integration Success

In 2015, 20 female Soldiers qualified for the US Army Ranger course. One opted not to attend before training started; after an initial four-day assessment only eight were left; two ultimately completed the course. On average among male Soldiers, only 40% of those who attempted the course actually graduated.[50] When compared to the earlier blanket policy of prohibiting women from even applying to the course, this success was deemed the fruit of efforts regarding the OPAT, gender integration, and gender-neutral standards. Following the decision to open all Army schools to women in January 2013, there was no request for exception to policy by the Ranger School, so it was also open to females for the first time. As of late 2017, female Soldiers had a 10% completion rate—but they did complete it. Also noteworthy was that both female Soldiers who first completed the course were US Military Academy graduates.

## Leader Development

Leader development has always been an Army concern. TRADOC institutionalized leader development programs on several levels. Since 1973, many studies inquired of the ways and means of Army leader development. In Fall 1987, CSA GEN Vuono tasked MG Sullivan to conduct such a study and to build an action plan with specific recommendations concerning changes needed in the Army leader development process. The action plan, submitted in April 1988, envisioned a program that rested on three doctrinal pillars—institutional training, operational assignments, and self-development.

One of GEN DePuy's requirements for an Army integrated training system was that training programs were to be progressive and sequential. He also required that objective standards of performance be set and met at each level. By 2003, both the OES and the NCOES met those criteria. After completing the officer basic and advanced courses, captains were required to attend the Combined Arms and Services Staff School (CAS3) course that trained them to function as staff officers with the Army in the field. Because its curriculum overlapped that of the advanced course, kept soldiers away from their assignments, and increased travel costs, CAS3 was discontinued in 2004. After attending the Command and General Staff Officer Course, majors and lieutenant colonels could be selected to attend the School of Advanced Military Studies (SAMS) for an additional academic year of instruction.

In the first decade of the 21st century, TRADOC considered transforming (a favorite word of the era) the OES structure to train the leaders

who would command the objective force of the future. Many initiatives resulted from the Army Training and Leader Development Panel (ATLDP), which revealed perceived weaknesses in the pre-commissioning through majors' training programs. Changes were also designed to address transformation issues, a doubling in the number of deployments, and a smaller Army. Under consideration was a more integrated, three-level Basic Officer Leader Course (BOLC) for lieutenants, a two-part course for captains that included both staff training and company command. Finally, an Intermediate Level Education (ILE) model prescribed both a core curriculum and electives. All courses would be timed to officer assignments. BOLC was first implemented in fiscal year 2006.

NCOES served as the cornerstone of the *train-the-trainer* emphasis that guided TRADOC's approach to its overall training responsibilities. GEN DePuy's and MG Gorman's initial efforts to establish a sequential, progressive educational program for NCOs evolved over the years in the TRADOC schools. NCOES featured four vertically integrated levels of training: primary, basic, advanced, and senior. Over time, those training levels were deliberately tied to promotions.

Similar to training for NCOs and branch officers was training for warrant officers. The February 1992 Warrant Officer Leader Development Action Plan established a six-level program beginning with the Warrant Officer Candidate Course (WOCC). In 2002, the ATLDP released a study focused on training and leader development requirements for warrant officers as the Army began to transform to what was then called t*he objective force.* The study was part of the largest self-assessment ever done by the Army and affected warrant officer training from the WOCC to the Warrant Officer Advanced Course (WOAC), and brought it more in line with commissioned officer training. In 2004, GEN Byrnes, CG TRADOC, approved development of a single, two-phased Active Component and Reserve Component WOCC that recognized the education, training, and experience of the majority of warrant officer candidates.

Another major initiative of the 1990s was the Future Army Schools Twenty-One (FAST) effort. The mission of a FAST task force was to establish an effective and efficient Total Army School System (TASS) of fully accredited and integrated Active Component/National Guard/Reserve Component schools that provided standard individual training and education for the Total Army. One of the task force's recommendations was the establishment of TRADOC as the sole accrediting authority for the schools, effective in January 1993. The major thrust of FAST was the establishment of a regionally-based Reserve Component school system under the auspices of TRADOC headquarters.

Looking to the Army of the 21st century, TRADOC trainers considered their challenge to be maintaining the essence of the Army's education and training system and the utilization of the best combinations of live, virtual, and constructive simulations and simulators. That strategy was designed to unite the many ongoing training efforts into a clear, coherent vision to produce trained and ready units on into the new century. To achieve the Army's objectives in Force XXI to transform from an Industrial Age Army into a knowledge-and-capabilities-based expeditionary Army, TRADOC needed to concurrently develop the means and methods to train and sustain the force. The TRADOC training community developed Army Training XXI (AT XXI). TRADOC's AT XXI concept incorporated strategic plans for unit training and an integrated plan for the training of battle staff and collective tasks.

In late 1999, the AT XXI concepts were absorbed into a body of initiatives known as Transformation. While the new effort built on many of the ongoing AT XXI concepts and projects, some Transformation training initiatives were new. TRADOC developed both Senior and Tactical Leadership Courses to address the transition from a Cold War focus to a full-spectrum focus for the new IBCT at Fort Lewis, WA. The Senior Course, for key leaders, was built on an *adaptive thinking methodology* and included a constructive simulation exercise. The Senior Course was held at: Fort Lee, VA; Fort Huachuca, AZ; Fort Knox, KY; Fort Benning, GA; and Fort Leavenworth, KS. The Tactical Leaders Course, at Fort Lewis, featured training relative to the IBCT organization and operational concept which was based on the unique differences of how the IBCT would fight.

In 2008, the command's training community remained dedicated to the development of competent soldiers, capable leaders, relevant products, and the shaping of future Army training in units and institutions utilizing information-based technology to support the objective force. It also demonstrated its flexibility by providing specialty training for soldiers deployed in the GWOT effort.

## Basic Officer Leader Course (BOLC)

BOLC was created to develop leaders who were more competent, confident, and adaptable, as well as more effective at solving problems, making rapid decisions, and leading Soldiers across the range of military operations. Thus, each leader was to be ready to train and lead small units in combat immediately upon arrival at his or her first unit of assignment. BOLC at first was a three-phase training program designed to provide initial military training for junior commissioned and warrant officers in both active and reserve components. BOLC I, II, and III created

officers grounded in the core leader competencies (leading, developing, and achieving) and capable of serving the modular force in full spectrum operations. All three phases were designed to be attended sequentially. BOLC I encompassed all military training conducted by the traditional pre-commissioning sources (US Military Academy, ROTC, OCS, and WOCS), and provided the foundation of common skills, knowledge, and attributes desired of all officers. In February 2007, the Army implemented a four-week Direct Commissioned Officers Course to prepare directly commissioned officers, such as Judge Advocate General and select Army Medical Corps officers, for the rigors of BOLC. BOLC II was a six-week common block of instruction conducted eventually at two TRADOC schools (Infantry School, Fort Benning, GA, and Field Artillery School, Fort Sill, OK). It was an operationally relevant program that produced more capable, confident, mentally agile, and adaptable leaders through an emphasis on field craft, small unit leadership, and the Warrior Ethos. It also developed leaders who shared a common bond with their combined arms peers and were ready to lead small units in tactical environments upon arrival at their first unit of assignment. Chaplains, Medical Specialists, Medical Doctors, Dentists, and Nurses were excluded from attending based on proponent decision. BOLC III ranged from six weeks to 15 weeks and four days and consisted of branch-specific functional training conducted at existing TRADOC branch school locations.

For BOLC II, the Army created a common core, tactical leadership phase of training. The methods of training in BOLC III were modified to make greater use of experiential training models to increase learning and to enhance the quality and effectiveness of training. This approach supported Officer Education System transformation and the goals of increased readiness, greater relevance to the force, and a more joint and expeditionary Army. The Army continued to identify capability gaps in the context of full spectrum operations and to adjust training curricula to address those gaps. Beginning in fiscal year 2009, newly appointed warrant officers were integrated into BOLC II to provide the training necessary to prepare them to meet the Army's expectations of future warrant officers as leaders and technical experts within their respective fields. During GEN Dempsey's tenure as TRADOC Commander, BOLC I became BOLC A, and BOLC II and BOLC III were combined to become BOLC B, all of which amounted to something of a return to the old two-part training scheme of a pre-commissioning phase followed by a basic course.

Figure 38. Fort Rucker Aviation Basic Officer Leadership Course (BOLC).

*Source:* U.S. Army photo by Sgt. 1st Class Andrew Kosterman/Released, Fort Rucker Public Affairs Office, Fort Rucker, Alabama, 16 May 2013, image 8. https://www.dvidshub.net/image/941293/aviation-basic-officer-leadership-course.

# Chapter 6
# TRADOC in the Joint Service Area

From its beginning, TRADOC was a participant in the joint service arena. Through the years, it has cooperated in wartime operations and peacetime planning among US ground, air, and sea services. As the successor to CONARC, TRADOC worked closely with the US Air Force (USAF) Tactical Air Command (TAC) at Langley Air Force Base, VA. This was a continuation of efforts begun shortly after World War II. When TAC was disestablished in 1992, TRADOC continued its joint work with Headquarters, Air Combat Command (also at Langley AFB), which was responsible for all Air Force combat forces, both tactical and strategic. During the 1970s, cooperation developed steadily so that the 1980s yielded important procedural and doctrinal results. The command's cooperative work with the USMC Combat Development Command, begun in the early 1980s, found points of common interest and agreement. In the post-DESERT STORM period, cooperative ventures began with US Navy (USN) agencies.

CSA GEN Creighton W. Abrams Jr., and GEN George S. Brown, Chief of Staff of the Air Force (CSAF), promoted the inter-Service cooperation at the operational level that had developed during the Vietnam War. Post-Vietnam force reductions and the need to concentrate on warfighting in central Europe also played a role. GEN DePuy, at Abrams' request, worked to further Air Force–Army dialogue at his own level. A concurrent TAC initiative helped set up the first meeting of the *TAC–TRADOC dialogue* between GEN DePuy and the TAC commander, GEN Robert J. Dixon, in October 1973.

Early discussions involved joint working groups centered on airspace management, reconnaissance and surveillance, and electronic warfare. Talks centered upon procedures to improve joint combat capabilities and to implement existing doctrine, rather than creating new doctrine. The 1973 Middle East War encouraged greater cooperation, because of increased lethality in the air as well as on the ground. In July 1975, TRADOC and TAC established an Air-Land Forces Application Agency (ALFA) dedicated to managing the working groups and mutual projects. In November 1976, a TAC–TRADOC working group produced a joint manual on airspace management, which provided guidance to develop appropriate air control procedures on battlefields that promised to be more lethal and complex in the future. TAC–TRADOC projects expanded in the late 1970s to joint tactical training projects, tests, and evaluations, and led to joint doctrine endeavors invaluable to the development of Army doctrine.

Joint suppression of enemy air defenses (J-SEAD), another significant project in cooperation with US Readiness Command, resulted in a joint concept published in April 1981 that outlined both Army and Air Force responsibilities. In December 1982, the three headquarters published the *Joint Attack of the Second Echelon (J-SAK),* which delineated attack procedures by level of command for the identification of an attack on the enemy follow-on echelons. The project lay at the heart of TAC contributions to the deep attack aspect of the Army's AirLand Battle doctrine published in August 1982. The NATO doctrine of battlefield air interdiction incorporated the ALFA work. TAC–TRADOC work resulted in a November 1984 agreement on joint procedures for offensive air support.

Although these joint agreements were useful, they were not doctrine. Close air support issues were complex, and other Air Force missions competed with the Army for air resources. In addition, theater needs and concerns were paramount in any resource decision, and took precedence over these agreements. The requirement for a better way to ensure cooperation was demonstrated in 1982 during OPERATION URGENT FURY when US forces prevented a Communist takeover of Grenada. The various branches observed different priorities and inter-Service communications were inadequate.

In April 1983, GEN Charles A. Gabriel, CSAF, and GEN Edward C. Meyer, CSA, signed a memorandum of understanding in which both Services agreed to engage in joint training and exercises based on AirLand Battle doctrine, and to continue other inter-Service efforts. This led to the inauguration of a major force development process by GEN Gabriel and CSA GEN John A. Wickham Jr. (GEN Meyer's successor). That program, *The 31 Initiatives,* was heralded as a means to design and field the best affordable AirLand combat force.

The 31 Initiatives program, which addressed seven basic areas of AirLand combat, included a number of joint projects already underway. Extending to 1988, the program furnished a high-level forum and focus for the solution of difficult inter-Service issues. An initiative on intratheater airlift led to the 1984 establishment of the Airlift, Concepts, and Requirements Agency (ACRA) at Scott Air Force Base, IL. In January 1986, the two Services established the Army–Air Force Center for Low Intensity Conflict (CLIC), at Langley Air Force Base, VA. The numbered initiatives included a variety of issues, including air defense, rear area operations, and JSEAD. Some initiatives dealt with special operations forces and search & rescue, while others addressed joint munitions development, combat techniques, and procedures for the combined arms battlefield. Other issues included air interdiction, joint target assessment, close air support,

and the link between air liaison officers and forward air controllers. A final group of original initiatives focused on the acquisition of aircraft to meet joint targeting and reconnaissance needs. Among these, JSTARS figured significantly in the Gulf War. There was also an affirmation of Army primacy for rotary-wing combat support, and USAF primacy for fixed-wing support. An important program element was the uniformed Service chiefs' agreement to a combined budgetary submission package for priority programs and establishment of a Joint Assessments and Initiatives Office to institutionalize the joint force development process. In June 1986, USN representation was added to that office. Ultimately numbering 38, the initiatives were substantially completed by 1987.

In 1984, TRADOC undertook important joint work through the ACRA covering multi-Service employment of the C-17 aircraft and its related activities, which were subjects of cooperative doctrinal and procedural effort between TRADOC, USAF's Military Airlift Command, and the Marine Corps Combat Development Command. By the late 1990s, doctrine was increasingly joint, and Army doctrine manuals reflected that reality. Force projection from CONUS, which constituted the prime deployment trend of the post-Cold War, was innately joint. Such operations were indeed the purview of the regional commanders of joint forces.

TRADOC's work in joint doctrine proceeded along two tracks. The first was the multi-Service doctrinal literature published as field manuals together with one or more of the other Services. The second was publication of multi-Service doctrine. The Goldwater-Nichols Defense Reorganization Act of 1986 assigned to the Chairman of the Joint Chiefs of Staff (JCS) the responsibility to develop doctrine for joint employment of the Armed Forces. The newly established Operational Plans and Interoperability Directorate (J7) was responsible to the chairman of the JCS for the management of the joint doctrine development process. Along with the regional commanders and the Services, the J7 developed a Joint Doctrine Master Plan. TRADOC was a key player in the Army's contribution to the whole JCS development effort.

In 1988, the JCS issued JCS Pub 1-01, *Joint Publication System, Joint Doctrine and Joint Tactics, Techniques, and Procedures Development Program.* This master regulation specified publications in the major categories of reference; intelligence; operations; logistics; plans; and command, control, and communications (C3) systems. Each had a capstone manual that brought together all joint doctrine approved by the three Services.

TRADOC reviewed Joint Publication (JP) 1, *Joint Warfare of the US Armed Forces,* for the Army, and it was published in November 1990 to aid

ongoing operations in the Persian Gulf. This significant manual proceeded from the belief that warfare in the modern era was, in fact, joint warfare. The manual provided the basis for the future joint strategic view in discussions of American military power. For the warfighting level, TRADOC completed JCS Pub 3-0, *Doctrine for Unified and Joint Operations,* a capstone operational manual issued by the Joint Staff in 1990.

Figure 39. GEN Cone and LTG David D. Halverson discuss joint observation with Lt. Col. (USAF) Rustan S. Swichtenberg, at Fort Sill, OK.

Cooperative work by TAC and TRADOC during 1989–90 produced a White Paper titled "Air Attack on the Modern Battlefield." Approved by the two uniformed Service chiefs, the paper led to a five-part Air Attack Action Plan, which the CSA and CSAF signed to synchronize joint air attack combat planning and procedures. This led to a modernized USAF tactical air control system–Army air-ground system (TACS– AAGS), which was tested and validated in exercises during 1990.

## Low Intensity Conflict (LIC)

Low intensity conflict (LIC) was a doctrinal category of thinking about military engagement short of total war, and consisted of diverse and unconventional military operations. The 1993 edition of FM 100-5, *Operations,* characterized LIC as operations other than war (OOTW). For most of the 1970s and 1980s, LIC defined the realm of operations below high- and mid-intensity conflict. It received considerable attention by TRADOC doctrine developers from the early 1980s on, because defense policy became increasingly concerned with that type of military operation. Throughout the decade, LIC emerged as a major concern. In July 1985, TRADOC joined the Air Force and other agencies in the major Joint Low Intensity Conflict Study that was released in 1986. It summarized previous efforts and became a springboard for subsequent Army and joint doctrinal formulation and further work. The study revealed that the definition of LIC was too broad to accurately quantify the problem.

Planners recognized the major categories of insurgency-counterinsurgency, combating terrorism, peacekeeping operations, and peacetime contingency operations, as well as a host of subcategories, such as counterdrug efforts and disaster relief. The crucial question was when the use of force was appropriate and under what circumstances. In 1986, the Office of the Joint Chiefs of Staff promulgated an official definition of LIC, recognizing its diversity in general terms. But, general definitions were only useful in a limited way for the formulation of such multifaceted doctrine. A bi-Service LIC manual, FM 100-20/AF Pamphlet (Pam) 3-20, *Military Operations in Low Intensity Conflict,* was published in December 1990. The manual opened the way for effort on the JCS equivalent, JCS Pub 3-07, Doctrine for Joint Operations in LIC, which was retitled *Military Operations Short of War.*

Army oversight of the CLIC resided with Headquarters, TRADOC until 1990, when it was transferred to the DA DCS for Operations and Plans (DA G-3). TRADOC, however, retained a close relationship with the CLIC for assistance in LIC concepts, doctrine, and training matters. The 1990 LIC doctrine spelled out critical differences between LIC and other conventional operations in activities such as foreign assistance and also provided an analysis of insurgencies. In the ambiguous environment of LIC, the contribution of military force to achieving the strategic aim was supportive and indirect. Political, economic, and psychological objectives shaped the way such operations were executed. What was important was understanding that military force had to be closely coordinated with other responses. One of the most perplexing issues was joint counterdrug opera-

tions. Doctrine, procedures, and training to assist the interdiction of the illegal drug flow into the United States were some of the many challenges and projects in which TRADOC, the joint agencies, and subordinate elements of the command were active. In 1996, the CLIC was inactivated and its missions dispersed. USAF and Army planners believed that since LIC was a predominant form of engagement for US forces since World War II, that trend was likely to continue.

## The Rise and Fall of US Joint Forces Command (JFCOM)

The Commander in Chiefs (CINCs) Support Program, dating from August 1991, was a tool by which TRADOC-led teams annually visited the headquarters of the regional CINCs to determine their pressing developmental demands. The program responded comprehensively to the CINCs in all military development areas. In January 1996, the CINC, US Central Command (CENTCOM), requested that TRADOC shift the program's emphasis from specifically Army areas of interest to one more joint in nature. Other unified headquarters concurred. Consequently, TRADOC restructured the program, redesignating it the CINC Joint Warfighting Support Program. On 1 October 1996, the program was transferred to the Joint Warfighting Center at Fort Monroe, VA.

The Mobility Concepts Agency (MCA), located at Fort Monroe, VA, since 1994, drew together doctrine and other developments for airlift and joint mobility for all the Services, including a C-17 multi-Service employment concept, a study of (Joint) (forced) early-entry deployability, and a study of joint theater airlift capabilities. Other studies of the period dealt with mobile offshore basing and the deployment sequence of joint reception, staging, onward movement, and integration.

Atlantic Command, established in 1993 as a regional command with joint authority, was re-designated Joint Forces Command (JFCOM) in October 1999. In addition to its other responsibilities, JFCOM was given the mission of joint training and transformation as outlined in the DoD Unified Command Plan. As the Army's trainer, TRADOC coordinated closely with JFCOM. In 1999, JFCOM absorbed the Joint Warfighting Center mentioned above into its Joint Training Center at Suffolk, VA. In 2002, TRADOC participated in Millennium Challenge, the US military's largest joint peacetime exercise to date, which JFCOM controlled. TRADOC had the Army lead for Millennium Challenge 02, and coordinated with JFCOM to provide management oversight for the overall experiment and to achieve both joint and Army objectives. TRADOC was also the lead for Army Transformation Experiment 02 in which the Stryker armored vehicle was tested at the National Training Center (NTC).

Figure 40. BG Richard W. Haldenby, Deputy Director of Joint Warfare for the British Armed Forces Command, talks with David G. Paschal, Deputy Director of HQs TRADOC G-2's TBOC, Newport News, VA.

The emphasis on joint operations called for a substantial revision of US Army doctrine in the form of FM 100-5, *Operations.* In 2001, in a clear break with the past, the Army manual numbering system was dropped and the joint numbering system was adopted when the manual became FM 3-0. The new manual recognized the changes in the nation's geostrategic position since the end of the Cold War. It clearly addressed the problems of deployment and *asymmetric warfare,* as well as the need for joint cooperation in nearly every aspect of operations, from major theaters of war to humanitarian relief. FM 3-0 was further revised in 2008 and placed even greater emphasis on joint interdependence.

In 2003, TRADOC Commander GEN Byrnes established a special relationship with the JFCOM, because he believed the Army was built to support a joint forces commander. TRADOC should instead operate as the Army's component command with JFCOM. In addition, JFCOM would be a cosponsor of the annual transformation war game to be held at the Army War College in April 2003. That war game was followed by JFCOM's war game Pinnacle Impact and by joint exercise Unified Quest. GEN Byrnes emphasized that TRADOC had to increase the command's insistence upon joint exercises in the future and, in October 2003, established the TRADOC Futures Center, which became the core for devel-

opment of joint doctrine in TRADOC. In 2006, the Futures Center was redesignated the ARCIC, which continued as the center of joint doctrine development. Five divisions in the Concept Development and Experiment Directorate (CDED) were supposed to address both Army and joint issues. These were: Joint and Army Concepts Division (JACD), Joint and Allied Doctrine Division (JADD), Joint and Army Experimentation Division (JAED), Joint and Army Modeling and Simulation Division (JAMSD), and the Joint Interdependency Coordination Division (JICD).

Unlike previous decades when *joint* meant agreements with other Services on practices and procedures, the new joint environment focuses on multi-Service cooperation from inception. For example, Army FM 3-24, *Counterinsurgency,* published in 2006, was also USMC Warfighting Publication 3-33.5, *Counterinsurgency.* The joint publications to which TRADOC contributed in 2007 included topics as varied as joint terminology, joint intelligence, joint operations, joint amphibious operations, and space operations and logistics. In the area of materiel development, TRADOC contributed to weapons developments, joint heavy lift, aerial sensors, and improvised explosive device (IED) detectors.

In May 2010, TRADOC participated in the Comprehensive Approach to Building Partnerships (CABP) Stakeholders' Conference in Arlington, VA. Participants included the Office of the Secretary of Defense, JFCOM J9, Joint Staff J5, Combatant Commands (COCOMs), the Department of State, US Agency for International Development (USAID), the Commerce Department, several non-governmental organizations, and other multinational partners. There were two facilitated discussions and two CABP Baseline Assessments. One key gap identified was the lack of situational awareness of interagency capabilities and limitations, and the same regarding interagency priorities and goals within the COCOM areas of responsibility by the COCOM planners and decision makers. The Armed Forces Staff College had changed its curriculum to provide more awareness of interagency matters, and this was brought up during the conference. This lack of awareness of the interagency aspect was a recurring theme also brought out at the 2011 Haiti Lessons Learned Conference by the XVIII Airborne Corps.

TRADOC participated in the periodic US Army and USMC Counterinsurgency Center Webcast which covered a diverse range of topics. Some of the webcast subjects:

- Utility of Academic Partnerships in Counter-insurgency Training
- Radicalization Awareness
- Leader-Centric Warfare
- Irregular Warfare Update, Afghanistan
- Victory Has A Thousand Fathers, Sources of Success in Counter-insurgencies
- My Cousin's Enemy is My Friend: A Study of Pashtun 'Tribes' in Afghanistan

On 4 August 2011, JFCOM, TRADOC's longstanding partner in the joint field, was disestablished because of growing financial constraints in the defense community. The relationship with JFCOM had been both beneficial and convenient because of JFCOM's close proximity in Suffolk, VA.

# Chapter 7
# Organizational Structure

In 1973, TRADOC consisted of a headquarters, 3 major subordinate commands, 16 branch schools, 8 military schools and colleges, 4 specialist schools, and a variety of special activities. Support agreements (intra-Army, inter-Service, and interagency), together with memorandums of understanding internal and external to TRADOC, helped smooth the complex administrative, logistical, and funding relationships. On its activation, TRADOC headquarters commanded, separately, its own installations, certain TRADOC tenants on those installations, and TRADOC tenants on non-TRADOC installations. Initially it directly commanded 20 major installations through the commanders of the centers resident on 18 of the installations and through the post commanders of Fort Monroe and Carlisle Barracks, which were not centers. In 2003, the Installation Management Agency (IMA) (later raised to a command) assumed direction of all Army installations. TRADOC Organization chart 1973, figure 40.

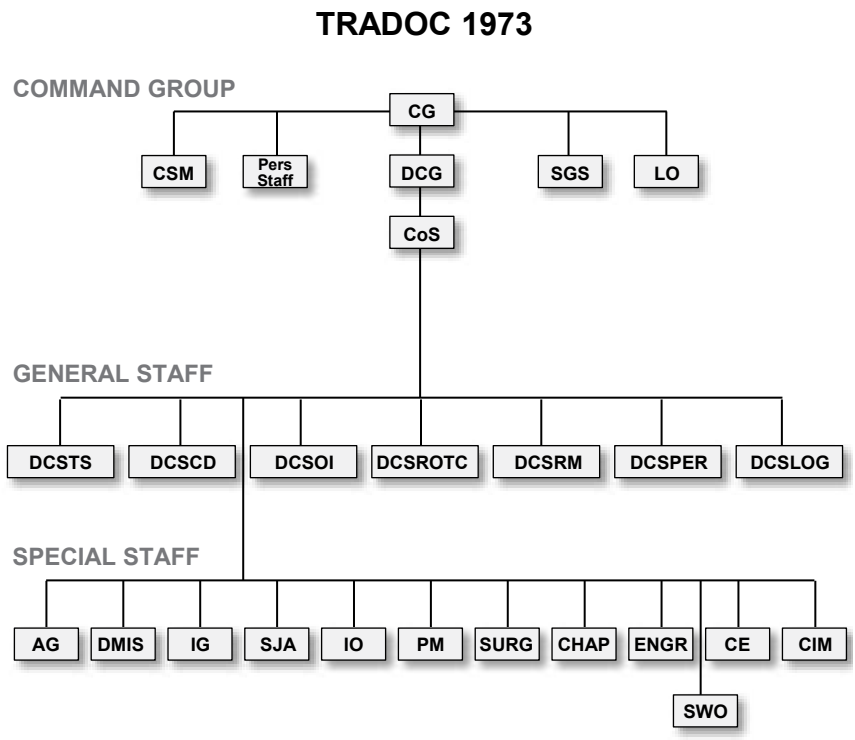


Figure 41. TRADOC Organization 1973.

## Initial Subordinate Organization

Initially organized on OPERATION STEADFAST principles of centralized management and decentralized operations, TRADOC executed its individual training mission through its Army training centers; service schools; ROTC regions and subordinate detachments; and US Army Reserve schools, training divisions, and brigades under its operational control. The STEADFAST reorganization had divided and assigned the parts of the Army field establishment in the United States not by geography, but by function. In 1973, TRADOC also monitored individual training in Army-operated DoD schools, the Army War College, logistics-related schools operated by the AMC, and other non-TRADOC schools and training centers. The headquarters accomplished its combat developments mission in 1973 through three mid-level functional centers, later designated integrating centers, as well as through the Service schools and other combat developments activities.

The 18 installations with centers were actually of three different types. Three functional centers—the Combined Arms Center and Fort Leavenworth, the Administration Center and Fort Benjamin Harrison, and the Logistics Center at Fort Lee—drew together the training and combat developments tasks in their respective functional areas of combat and combat support, personnel administration, and logistics or combat service support. Two of the three functional center headquarters oversaw separate school and combat developments activities. The Combined Arms Center commanded the Command and General Staff College, the Combined Arms Combat Developments Activity, and the installation garrison. The Administration Center commanded the Institute of Administration, the Personnel and Administration Combat Developments Activity, and the garrison. The third functional center, the Logistics Center, was initially a combat developments-oriented organization, operating as a tenant on Fort Lee. The naming conventions then were different from what they became over time.

Ten more of the initial 18 center-type installations of TRADOC were Army branch or specialist school centers: the Engineer Center and Fort Belvoir, the Infantry Center and Fort Benning, the Air Defense Center and Fort Bliss, the Transportation Center and Fort Eustis, the Signal Center and Fort Gordon, the Armor Center and Fort Knox, the Quartermaster Center and Fort Lee, the Aviation Center and Fort Rucker, the Field Artillery Center and Fort Sill, and the Primary Helicopter Center and School and Fort Wolters.

The six remaining TRADOC center installations were training centers devoted primarily to BCT and AIT or, at Fort McClellan, to Women's

Army Corps basic training. These were the Training Center and Fort Dix; the Training Center and Fort Jackson; the Training Center and Fort Ord; the Training Center, Engineer and Fort Leonard Wood; the School/Training Center and Fort McClellan; and the Training Center, Infantry and Fort Polk. The commander of the Armor Center and Fort Knox also administered basic combat training.

Eight schools—the Air Defense, Armor, Engineer, Field Artillery, Infantry, Quartermaster, Southeast Signal, and Transportation Schools—were components of their respective branch centers, at which they were located. Three other branch schools were situated on TRADOC installations. The Institute of Administration was subordinate to the Administration Center and Fort Benjamin Harrison, and commanded the resident Army Finance School and Army Adjutant General School; the Women's Army Corps Center and School was subordinate to the School/Training Center and Fort McClellan; and the Military Police School was subordinate to the Signal Center and Fort Gordon. The five remaining TRADOC branch schools were tenants on non-TRADOC posts—the Chaplain Center and School at Fort Hamilton, New York; the Intelligence Center and School at Fort Huachuca, Arizona; the Missile and Munitions Center and School at Redstone Arsenal, Alabama; the Ordnance Center and School at Aberdeen Proving Ground, Maryland; and the Signal School at Fort Monmouth, New Jersey.

In addition to the 16 branch schools, in 1973 TRADOC commanded four specialist schools: the Aviation School, part of the Aviation Center and Fort Rucker; the Primary Helicopter School and Fort Wolters, TX; the US Army Element, School of Music, Norfolk, VA; and the US Army Institute for Military Assistance at Fort Bragg, NC. TRADOC also commanded, through the installations involved, the Command and General Staff College at Fort Leavenworth, KS, and the US Army Sergeants Major Academy at Fort Bliss, TX. DoD schools operated by TRADOC were the Defense Information School at Fort Benjamin Harrison, IN, and the Defense Language Institute at the Presidio of Monterey, CA. Initially, TRADOC administered the Army ROTC program through four ROTC regions established under the STEADFAST reorganization.

## Headquarters Organization and Major Reorganizations

Command of TRADOC resided with the commanding general, assisted at his headquarters at Fort Monroe, VA, initially by a single deputy commander, a chief of staff, a general staff, and special staff. The general staff consisted of seven DCSs who managed the major elements of the headquarters and exercised staff responsibility for the commanding general

to the installations, centers, schools, and other subordinate elements. The seven DCSs established in Headquarters, TRADOC in 1973 were responsible for Training and Schools, ROTC, Combat Developments, Resource Management, Personnel, Logistics, and Operations and Intelligence. In January 1974, the last named general staff agency was restructured as DCS for Operations, Readiness, and Intelligence. In 1974, *schools* was dropped from the title, but not from the purview of the DCS for Training.

There were four major reorganizations of TRADOC headquarters since 1973. These occurred in 1979, 1990, 2002–03 and 2007. The 1979 reorganization, implemented provisionally in April and formally on 1 October of that year, was prompted by the decision of TRADOC CG GEN Starry to shift resources to the main mission components—the deputies for Training, Combat Developments, and ROTC. Another impelling cause was GEN Starry's decision to involve TRADOC more emphatically in doctrine development. The new structure retained the DCSs for Training, Combat Developments, ROTC, and Resource Management. It disestablished the DCSs for Personnel; Logistics; and Operations, Readiness, and Intelligence. The 1979 action established new DCSs for Doctrine, Personnel and Logistics, and Engineer.

In 1990, the headquarters downsized with the rest of the Army. The offices of the DCSs for Personnel, Administration, and Logistics; Contracting; and Engineer; together with Surgeon, Chaplain, and other selected staff offices were merged into the DCS for Base Operations Support. The DCSs for Doctrine, Intelligence, and Combat Developments were merged into the DCS for Concepts, Doctrine, and Developments, with transfer of some functions to Headquarters, Combined Arms Center, which became Combined Arms Command in October 1990. A third major change was the establishment of the TRADOC Analysis Command (TRAC) at Fort Leavenworth, Kansas, as DCS for Analysis on the headquarters staff, albeit with a local staff representative. This reorganization left the offices of the DCSs for Information Management, Resource Management, and Training substantially unchanged; the office of the DCS for Training was reorganized internally. The 1990 merger of the doctrine office with combat developments did not work well and on 1 October 1992 became the office of the DCS for Doctrine and the office of the DCS for Combat Developments.

The effort to transform TRADOC in line with changes to the entire Army began to bear fruit in 2002. Although the command did not expect all of the changes to be complete until 2006, after Congress initiated a new round of Base Realignment and Closure (BRAC) actions. TRADOC lead-

ers anticipated that the command would look significantly different by the end of 2011.

Effective 20 July 2007, the TRADOC staff reorganized to improve alignment of TRADOC responsibilities with the operational Army, staff titles were changed to reflect the new G-Staff organization, figure 42.

**G-Staff Organization**

| Previous Title | G-Staff Title |
|---|---|
| DCS, Personnel, Infrastructure & Logistics | G-1/4 |
| DCS, Intelligence | G-2 |
| DCS, Operations and Training | G-3/5/7 |
| Chief Information Officer | G-6 |
| DCS, Resource Management | G-8 |
| Director, ARCIC Forward | G-9 |

Figure 42. New G-Staff Organization.

## Installations and Changes, 1973–2003

TRADOC commanded 20 major installations on the day it was established. Fort Wolters closed in 1974, and Forts Ord and Polk were transferred to Forces Command (FORSCOM) when their missions changed from training to unit stationing. In 1992, training at Fort Dix, NJ, was phased out and it, too, was transferred to FORSCOM. Thereafter, TRADOC operated 16 installations until 1 October 2003, when the Army's Installation Management Agency (IMA) assumed control of all Army installations. However, TRADOC mission commanders remained in the rating chains of the installation commanders to provide input on how the installations were run. IMA became Installation Management Command (IMCOM) in October 2006.

## Intermediate Level Changes, 1973–2003

In September 1977, TRADOC's intermediate-level structure was strengthened to give the three functional centers a stronger integrating role vis-à-vis their associated TRADOC schools. The three-star TRADOC DCG position moved from Fort Monroe, VA, to Fort Leavenworth, KS, making the commander of the Combined Arms Center (CAC) dual-hatted. Beyond his local duties as CAC Commander, as Deputy Commander, TRADOC he was to execute specific TRADOC missions. He was to di-

rect, coordinate, and integrate combined arms doctrine, organization, and combat and training development programs for the Army.

In 1980, TRADOC reorganized and redesignated the Fort Benjamin Harrison agency as the US Army Soldier Support Center with much stronger doctrinal and training responsibilities in the personnel, administration, finance, and automatic data processing areas. The action also included replacement of the center's Institute of Administration by a newly renamed US Army Institute of Personnel and Resource Management. Two branch schools, the Finance and Adjutant General Schools, along with two new specialist-type schools, the Computer Science School and the Personnel Management School, were aligned under the new institute. In 1984, the institute was subsequently redesignated the Soldier Support Institute (SSI).

In April 1983, the Logistics Center commander, Fort Lee, VA, was redesignated the TRADOC DCG for Logistics, and the position was upgraded to a three-star billet. The Logistics Center remained in tenant status on the installation, which was commanded by one of its subordinate organizations, the US Army Quartermaster Center and Fort Lee. On 3 January 1989, that anomaly was rectified when the TRADOC commander brought the Fort Lee structure in line with that existing at Fort Leavenworth and Fort Benjamin Harrison by establishing the US Army Logistics Center and Fort Lee, with the US Army Quartermaster Center and School becoming the tenant.

The integrating center structure remained in place until the end of the Cold War, which began a period of hasty, ill-conceived Army drawdowns and consolidations. On 1 October 1990, TRADOC replaced the integrating center structure with two major subordinate commands. As mentioned above, the Combined Arms Command replaced the Combined Arms Center. Internal reductions and realignments recast the commanders of the Combined Arms Combat Developments Activity and the Combined Arms Training Activity as deputy CAC commanders for combat developments and for training. The second major action merged the Soldier Support Center with the Logistics Center creating the Combined Arms Support Command (CASCOM) headquartered at Fort Lee, VA. At that time, the Soldier Support Center's SSI was eliminated as an administrative organization layered between the center and the resident schools.

In 1993, because of budget reductions and a changed world situation, TRADOC launched a *reengineering* initiative. TRADOC headquarters assumed the integration function traditionally held by CAC and CASCOM. That action necessitated several organizational and functional changes in both CAC and CASCOM, most of which were completed by the end of

1994. In July of that year, CAC once again became a center. The reorganization shifted some functions and personnel from Fort Leavenworth, KS, to other TRADOC installations. In addition, CAC's combat development, doctrinal concepts, and integration functions moved to HQ, TRADOC. The CASCOM reorganization included the centralization of combat developments, training developments, proponency and evaluation, and standardization at HQ, CASCOM

## Schools

Under the STEADFAST reorganization, TRADOC commanded 16 branch schools, 8 military schools and colleges, and 4 specialist schools. As previously noted, the Primary Helicopter School at Fort Wolters, TX, was discontinued on 30 June 1974. TRADOC inherited two Signal schools from CONARC, the Signal School at Fort Monmouth, NJ, and the Southeastern Signal School at Fort Gordon, GA. On 1 July 1974, the Monmouth organization became the Communications-Electronics School, and the Gordon organization was redesignated the Signal School, a step in the consolidation of all Signal training at the southern post. That occurred two years later when the Communications-Electronics School was discontinued on 31 October 1976. The Chaplain School, located at Fort Hamilton, moved to larger facilities at Fort Wadsworth, NY, a sub-post of Fort Dix, on 15 August 1974. It remained there until Fort Wadsworth was closed on 1 August 1979 and was relocated to Fort Monmouth, NJ. On 1 July 1975, the Military Police School moved from Fort Gordon, GA, to Fort McClellan, AL, to make room for the consolidation of Signal training.

On 1 July 1975, the Organizational Effectiveness Training Center was established at Fort Ord, CA, to inculcate and teach organizational skills. On 2 April 1979, it was redesignated the Organizational Effectiveness Center and School. On 1 October 1985, it was closed.

On 1 October 1976, the US Army Security Agency Training Center and School at Fort Devens, MA, was transferred into the TRADOC school system. Fort Devens had been used for intelligence training since April 1951. The new TRADOC school was renamed the Intelligence School, Fort Devens, and was subordinate to the commandant of the Intelligence Center and School at Fort Huachuca, AZ. The BRAC Act of 1988 directed Fort Devens to close and consolidate with Fort Huachuca, which was completed in 1994.[51]

Beginning in the 1970s, female soldiers were integrated into the main branches of the Army. As a result, the Women's Army Corps Center and School at Fort McClellan was discontinued in 1978. On 30 November

1976, the first post-Vietnam move in the direction of a larger chemical training program occurred with the redesignation of the Ordnance Center and School at Aberdeen Proving Ground, MD, as the Ordnance and Chemical Center and School. As plans unfolded, the Chemical School was moved and established as a separate school at Fort McClellan, AL, on 14 September 1979.

On 12 April 1983, the Aviation School, historically a specialist school, became a branch school following designation of Army aviation as a branch by order of the SECARMY. On 1 October 1983, simultaneous expansion of the aviation logistics mission prompted TRADOC to establish an Aviation Logistics School, collocated with the Transportation School, at Fort Eustis, VA. On 10 January 1984, those two schools were merged as the Transportation and Aviation Logistics Schools. On 1 October 1988, TRADOC brought the Aviation Logistics School under the direct authority of the Commander, US Army Aviation Center, while leaving it at Fort Eustis. A similar realignment occurred with placement of the Missile and Munitions Center and School at Redstone Arsenal, AL, under the commander of the Ordnance Center and School at Aberdeen Proving Ground, MD. On 3 August 1984, the Redstone facility was realigned and retitled the Ordnance Missile and Munitions Center and School.

On 1 October 1983, the Institute for Military Assistance at Fort Bragg, NC, was redesignated the JFK Special Warfare Center, because of a special operations forces (SOF) realignment that year. The JFK Special Warfare Center was in essence a branch school but was categorized as a TRADOC special activity. Further SOF realignments transferred the TRADOC school to the US Army Special Operations Command at Fort Bragg on 20 June 1990. TRADOC gained the US Army School of the Americas (SOA) when provisions of the Panama Canal Treaty of 1977 necessitated the transfer of that US Army Security Assistance Agency component, located at Fort Gulick, Panama, to CONUS. The school was relocated to Fort Benning and transferred provisionally to TRADOC on 16 December 1985, and formally on 16 April 1986. On 17 January 2001, the SOA was inactivated and became the Western Hemisphere Institute for Security Cooperation (WHINSEC), aligned directly under the SECDEF with TRADOC as its executive agent. In 1988, following earlier designation of the Signal Center as proponent for the information mission area, the Computer Science School, a component of the Soldier Support Institute at Fort Benjamin Harrison, was transferred to Fort Gordon.

When DA decided to develop advanced training for Army civilians in the form of the Army Management Staff College (AMSC), TRADOC assumed proponency for it in August 1987. AMSC initially opened in Balti-

more, MD, in July 1986, and in August 1987, Fort Belvoir was selected as the new site for the school. Following assignment of a full-time commandant, classes were convened at the Fort Belvoir location in 1990. On 1 October 1991, TRADOC acquired the Army Logistics Management College (ALMC) at Fort Lee from AMC. In July 2002, the two schools subordinate to the Ordnance Center and Schools, one at Redstone Arsenal, Alabama, and the other at Aberdeen Proving Ground, Maryland, were renamed, respectively, the Ordnance Munitions and Electronics Maintenance School (OMEMS) and the Ordnance Mechanical Maintenance School (OMMS).

## Training Organizations

Throughout TRADOC's history, training organizations continued to evolve. A large portion of basic combat and advanced individual training was conducted by the Army Training Centers (ATCs) at Forts Dix, Jackson, and Leonard Wood, which were devoted specifically to that mission. Initial entry training was also conducted at the ATCs at Forts Knox, Benning, Gordon, Sill, and Bliss. Women's Army Corps (WAC) training was conducted at Fort McClellan. In 1973, TRADOC commanded seven ATCs. In 1976, that rose to 11 when one-station unit training (OSUT) was phased in at several posts. OSUT enabled trainees to pass directly from basic to branch-related advanced individual training, saving both time and travel. The number of ATCs dropped to 8 in the early 1980s and was maintained at that level until the closeout of training at Fort Dix in 1992. TRADOC also commanded NCO academies and drill sergeant schools through several of its installations, as well as an Active Component OCS at Fort Benning, GA.

On 1 August 1974, the two specialized training agencies under TRADOC jurisdiction, the Combat Arms Training Board at Fort Benning, and the Training Aids Management Agency at Fort Eustis, were joined by a new Training Devices Requirements Office at Fort Benning, responsible for Army-wide training device requirements. On 1 July 1975, the Fort Eustis agency was redesignated the Army Training Support Activity. On 1 July 1976, the training support program at Fort Eustis was expanded, consolidated, and retitled Army Training Support Center.

The Training Management Institute, established at Fort Eustis on 16 July 1975 to further training improvements through workshops and special projects, was redesignated the Training Developments Institute on 2 May 1977. A further change was the combination of the Logistics Training Board at Fort Lee and the Combat Arms Training Board at Fort Benning into a redesignated Army Training Board on 1 October 1977, also located at Fort Eustis. Both the Training Developments Institute, which was re-

named the Training Technology Agency, and the Army Training Board eventually moved to Fort Monroe. The former was inactivated in 1988 and the latter in 1989.

## Test Organizations

In August 1974, the major test facility at Fort Hood, TX, known as the Modern Army Selected Systems Test Evaluation and Review (MASSTER) was transferred to TRADOC from FORSCOM. AMC's subordinate Test and Evaluation Command (TECOM) also transferred five test boards to TRADOC. The test boards gave TRADOC, as the user representative, control over the means for early-stage conceptual and experimental work in the fields of airborne, communications, electronics, field artillery, infantry, armor, engineer, and air defense. These boards were subsequently joined by an aviation board and an intelligence and security board. In December 1980, as the testing mission grew, TRADOC established a headquarters, DCS for Test and Evaluation. In March 1985, that position was eliminated and the function returned to the DCS for Combat Developments.

Late in 2002, the position of DCG -IET, created in 1997, became dual-hatted with the new Army Accessions Command (AAC). The mission for the DCG-IET was to ensure that initial entry training remained challenging, safe, relevant, realistic, and executed to Army standards. Originally, DCG-IET had oversight for IET policies and programs encompassing the entire process of bringing soldiers into the force from recruitment to the completion of AIT. With the establishment of the Accessions Command, the recruitment function became the responsibility of the new command. Another major change was the establishment of a TRADOC DCG, Transformation at Fort Lewis to command the Brigade Coordination Cell of the Interim Brigade Combat Teams (IBCTs) that were established as a test bed for transformation initiatives.

The DCG, Combined Arms, physically located at Fort Leavenworth, KS, and the DCG, Combat Service Support, located at Fort Lee, VA, had oversight for near-term and mid-term training in their respective realms. The DCGs for the Army National Guard and for the Army Reserve, both headquartered at Fort Monroe, VA, were responsible for integrating doctrine, training, and combat development throughout the Reserve Components.

Also in 2002, the DCSs for Doctrine, Combat Developments, Training, and Intelligence received new titles. The DCS for Doctrine became the DCS for Doctrine, Concepts, and Strategy. Training now fell under the DCS for Operations and Training. The DCS for Combat Developments

became the DCS for Developments to bring the title more in line with transformation efforts. The Directorate of Information Management came under the purview of the DCS for Command, Control, Communications, and Computers (DCSC4). In 2010, the TRADOC Systems Managers (TSMs) became TRADOC Capabilities Managers (TCMs).

## TRADOC Organization

TRADOC continued as a major command (MACOM) until the Army was reorganized in September 2006. At that time, it became one of three Army Commands (ACOM) along with FORSCOM and AMC. Headquarters, TRADOC consisted of a command group; the commanding general's personal and special staffs; five DCGs—Initial Military Training (IMT), Combined Arms (CA), Army Capabilities Integration Center (ARCIC), Army National Guard (ARNG), and US Army Reserve (USAR); and the G-Staff consisting of the G1/4, G2, G3/5/7, G6, G8, and G9.

Several unique organizations evolved within TRADOC. Three of these were the Brigade Modernization Command (BMC) (now the Joint Modernization Command), the Training Brain Operations Center (TBOC), and the TRADOC Intelligence Support Activity (TRISA).

## Joint Modernization Command (formerly Brigade Modernization Command)

In 2005, the BMC was initially organized as the Future Force Integration Directorate (FFID) of the Army Futures Center. In 2006, the Futures Center became the Army Capabilities Integration Center (ARCIC). FFID's initial mission was to establish an on-site integration organization to facilitate development, testing, and evaluation of the Future Combat System (FCS). In March 2007, ARCIC approved additional personnel for a general officer staff organization, which replicated a division headquarters. In August of that same year, the FFID mission was modified to integrate modernization efforts in support of Army transformation in order to provide joint force commanders with FCS-enabled modular brigades beginning in fiscal year 2011 and an FCS Brigade Combat Team (BCT) at full operational capability in 2017. On 1 October 2007, FFID attained initial operational capability and assumed responsibility for FCS from the Unit of Action Maneuver Battle Laboratory (UAMBL) at Fort Knox, KY. In late 2010, the Vice Chief of Staff, Army (VCSA), directed that FFID, along with Fort Bliss, TX, and White Sands Missile Range, NM, together become the Army's centerpiece for network integration. Since this would require a full BCT to load and test the network, the CSA directed that

the 2d Brigade Combat Team, 1st Armored Division, take over the Army Evaluation Task Force (AETF) mission from the division's 5th Brigade, which would be deactivated in March 2011.[52] On 7 February 2011, the CSA directed that FFID be re-designated the Brigade Modernization Command with a mission to conduct physical integration and evaluations of the network, capability packages, and other capabilities in order to provide DOTMLPF-P recommendations to the Army.

On 7 February 2017, BMC changed its name to the US Army Joint Modernization Command (JMC), and the Army Warfighting Assessment (AWA) series of experiments became the US Army Joint Warfighting Assessment (JWA).[53] Additionally, 2d BCT/1AD was removed from dedicated testing and put back into the readiness pool due to the needs of the Army. The first rotating replacement was the 2d BCT, 101st Airborne Division, which participated in Network Integration Evaluation (NIE) 17.2 beginning in July 2017.[54]

## The Training Brain Operations Center (TBOC)

Founded in April 2009, the TBOC has served as the operations center for the US Army's Training Brain under the direction of TRADOC's G-2, all as part of the Army G-2 Operational Environment (OE) Enterprise, which assesses, defines, and integrates OE context for the Army. TBOC leverages the Army's ability to access real-world data, information, and knowledge to create and enhance complex and dynamic environments for use by all TRADOC lines of operation: training, leader development and education, and concept and capabilities development. The TBOC has delivered OE context across live, virtual, constructive, and gaming environments for use in individual, collective, and self-development training at all echelons. It has supported: deploying expeditionary forces; contingency expeditionary forces; Active Duty, Reserve Component, and National Guard elements; Home Station Training; CTCs; and the Army's CoEs (i.e., schoolhouses).

TBOC also has provided scalable exercise design and transformed OE data tailored to a commander's mission and training objectives. Thousands of real-world reports and intelligence products were integrated through the TBOC-developed Traffic Integration Messaging System (TiMS) into training exercise scenarios. Hand scripting this amount and type of material traditionally would have taken hundreds of hours, but by automating these efforts, the TBOC has significantly reduced development requirements. Also in development has been the Training Brain Repository, which was designed to revolutionize the way units apply the rigors of the OE to their Home Station Training. In addition to transforming data, TOBC

has provided units with geo-specific training products to increase exercise realism, including real-world enemy networks, threat overviews, village atmospherics, and opposing force/role player character sheets. Its nationally recognized Systems Integration, Modeling, and Simulations (SIMS) team re-created significant combat events or enemy tactics in the form of visualizations and gaming scenarios and has developed the Army's first-ever multiplayer online training capability.

## The TRADOC G-2 Intelligence Support Activity (TRISA)

In December 2006, TRISA was established at Fort Leavenworth, KS. Its mission was to provide enterprise OE support to TRADOC, the Army, and the nation. It fostered collaboration to improve productivity through synthesis of TRADOC G-2 capabilities resident at Fort Leavenworth and selected elements at Fort Monroe, VA. TRISA consisted of six directorates/offices: Wargaming, Experimentation, Test, and Evaluation Directorate; Models and Simulations Operational Environment Directorate; Foreign Military Studies Office (FMSO); Threats Directorate; University of Foreign Military and Cultural Studies; and Human Terrain System Directorate. It provided personnel and financial management and prioritized the work for the TRADOC DCS, G-2 directorates assigned to TRISA. It also provided advice and assistance to TRADOC senior leaders on the application of the OE and other intelligence policies and procedures. By 2012, TRISA and the TRADOC G-2 had developed and implemented the Decisive Action Training Environment (DATE) scenarios, intended to use *current intelligence to create intense, authentic training environments for Soldiers, leaders and units.*[55]

## US Army Accessions Command (AAC)

Established 15 February 2002, at Fort Monroe, VA, as a subordinate command of TRADOC, AAC was responsible for providing integrated command and control from recruiting through initial military training, including enlisted, warrant officer, and officer personnel. After moving to Fort Knox, KY, as a result of BRAC 2005, AAC was inactivated on 18 January 2012. This inactivation resulted from efficiency reviews conducted by the Army and DoD. AAC's inactivation was expected to create economic savings through manpower reductions, including the elimination of two general officer and 65 other military positions, about 130 civilian positions, and 290 contractor man-years.

Many still perceive this initiative as false economy. There was a significant amount of friction created as the organizations previously run by AAC, notably the US Army Recruiting Command (USAREC) and the US

Army Cadet Command (USACC), which were both Commands in their own right, were subordinated to the US Army Center for Initial Military Training (CIMT). However, the CIMT was not a *command,* and it was downgraded from a three-star to a two-star organization. Name changes were also confusing. On 13 March 2014, the Initial Military Training Center of Excellence was redesignated the US Army Initial Military Training Center.[56] The general officer in charge was dual-hatted as the Deputy Commanding General-Initial Military Training. Under MG Ross E. Ridge, fourth Commanding General of CIMT, the CIMT Commander also gained responsibility as the *Senior Commander, Army Element for Joint-Basing* and housekeeping concerns in liaison with the USAF on Joint Base Langley-Eustis, VA.[57]

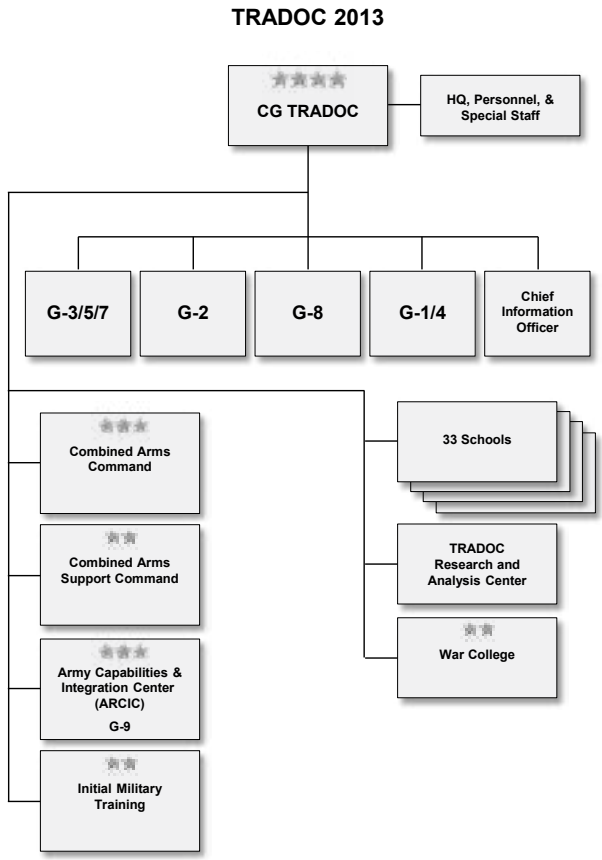


Figure 43. TRADOC Organization in Early 2013.

## Deputy Commanding Generals (DCGs)

### DCG-Combined Arms/CAC Commanding General

In 1977, TRADOC's DCG-Combined Arms was dual-hatted as the commanding general of the Combined Arms Center (CAC), Fort Leavenworth, KS. CAC's commander has served as the TRADOC proponent for leader development; professional military education (officer, warrant officer, NCO, and civilian); mission command (formerly battle command); and command, control, communications, computers, intelligence, surveillance, and reconnaissance (more commonly known as C4ISR–and though the terms *ISR* and *C2* were discontinued by the Army, they have remained in Joint usage); collective training; Army doctrine; and dissemination of observations/lessons learned.[58] The CAC Commander was responsible for providing guidance, leadership, and command supervision to the branch centers/schools to ensure that training remained safe, relevant, and realistic and executed to Army standards. CAC's commander was also responsible for the Army's Combat Training Center Program.

### DCG-Futures/ARCIC Director

The DCG-Futures was dual-hatted as the Army Capabilities Integration Center's (ARCIC) director. ARCIC has developed and integrated into a joint warfighting environment, from concept to capability, all aspects of the future force. This DCG and his staff developed and integrated Joint and Army concepts, architectures, and DOTMLPF-P capabilities; validated science and technology priorities; and led future-force experimentation. The DCG-Futures synchronized and integrated Army capabilities with Joint, interagency, and multinational capabilities. ARCIC has emerged as a highly complex organization, as depicted in figure 44.

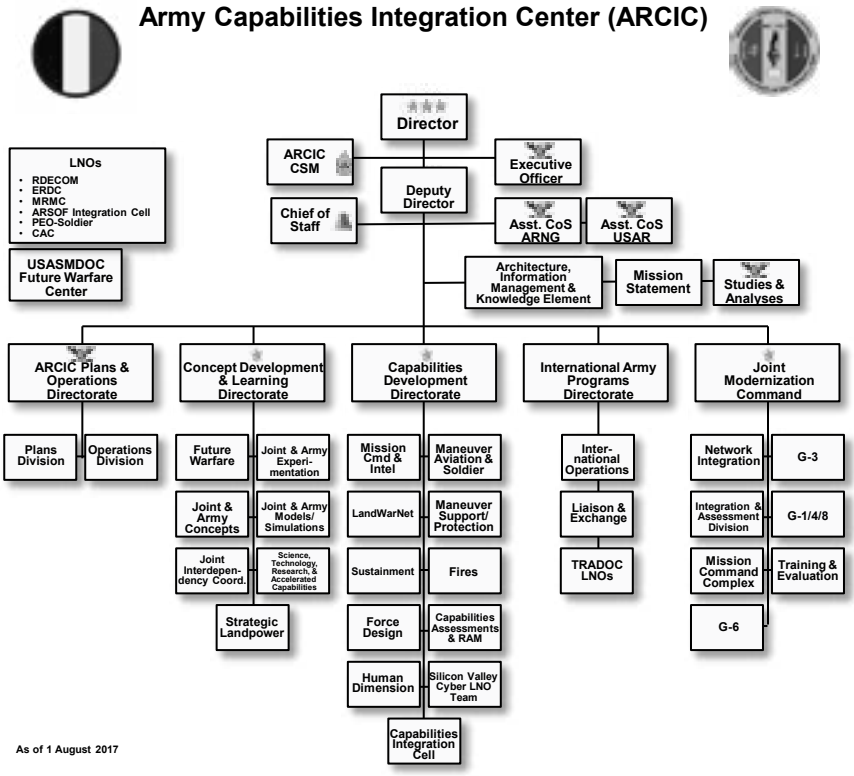


Figure 44. Army Capabilities Integration Center (ARCIC) Organization 2017, simplified.

## DCG-Initial Military Training (IMT)

The DCG-IMT was the TRADOC executive responsible for the Army's officer, warrant officer, and enlisted training processes. The DCG-IMT was also responsible for providing IMT policy and execution guidance to TRADOC commanders and staff outside the IMT chain of command. IMT encompassed reception-battalion operations that support IMT; basic combat training; advanced individual training; one-station unit training; Reserve Officer Training Corps; Officer Candidate School; Warrant Officer Candidate School; Basic Officer Leader Course Phases A and B; and recruiter, drill sergeant, and other IMT cadre training. See slide from late 2017, figure 45.

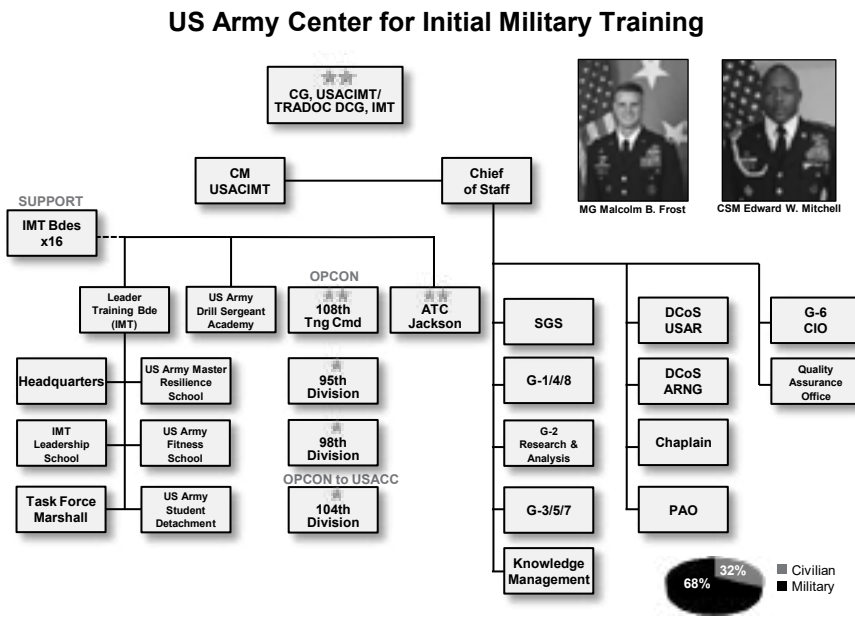


Figure 45. US Army Center for Initial Military Training (CIMT).

## DCG-Army Reserve

The DCG-Army Reserve assisted the TRADOC Commander in executing missions that require integration of Reserve Soldiers.

## DCG-National Guard

The DCG-Army National Guard (ARNG) assisted TRADOC's commander in DOTMLPF-P matters affecting the training and readiness of Army National Guard Soldiers and championed TRADOC programs and future initiatives through existing senior-level forums.

## Deputy Chiefs of Staff (DCS)

- DCS, G-1/4 (Personnel and Logistics)
- DCS, G-2 (Intelligence)
- DCS, G-3/5/7 (Operations, Plans, and Training)

- DCS, G-6 (Command, Control, Communications, and Computers)
- DCS, G-8 (Resource Management)
- DCS, G-9*

*Note: Located in Arlington, VA, at one time called *AR-CIC Forward,* in 2014 it was renamed the Information Integration Directorate (I2D); in 2015 renamed as G-9.[59]

## Personal and Special Staff

- Chaplain
- Secretary of the General Staff (SGS); formerly Command Group Actions Office (CGAO)
- Command Diversity Office
- Executive Services Office
- Inspector General
- Internal Review and Audit Compliance
- Military History and Heritage
- Public Affairs
- Quality Assurance Office
- Safety Office
- Surgeon

(As mentioned elsewhere, the Institute for Noncommissioned Officer Professional Development was subordinated to Leadership Development Directorate, G-3/5/7, and so is no longer on this list. The CGAO was renamed the SGS effective 22 January 2014.)

## Schools

As of 2017, TRADOC operated 36 centers and schools on 12 installations:

1. Adjutant General School, Fort Jackson, SC
2. Airborne School, Fort Benning, GA

3. Air Defense Artillery Center/School, Fort Sill, OK
4. Armor Center/School, Fort Benning, GA
5. Army Logistics University, Fort Lee, VA
6. Army Management Staff College, Fort Leavenworth, KS
7. Aviation Center/School, Fort Rucker, AL
8. Aviation Logistics School (128th Aviation Brigade), Fort Eustis, VA
9. Basic Combat Training Center, Fort Jackson, SC
10. Chaplain School, Fort Jackson, SC
11. Chemical, Biological, Radiological, and Nuclear (CBRN) School, Maneuver Support Center,
12. Fort Leonard Wood, MO*
13. Command and General Staff College, Fort Leavenworth, KS
14. Cyber Center/School, Fort Gordon, GA
15. Defense Language Institute/Foreign Language Center, Presidio of Monterey, CA
16. Drill Sergeant School, Fort Jackson, SC
17. Engineer School, Maneuver Support Center, Fort Leonard Wood, MO
18. Field Artillery Center/School, Fort Sill, Oklahoma
19. Finance School, Fort Jackson, SC
20. Infantry Center/School, Fort Benning, GA
21. Intelligence Center/School, Fort Huachuca, AZ
22. Military Police School, Maneuver Support Center, Fort Leonard Wood, MO
23. Officer Candidate School, Fort Benning, GA
24. Ordnance Center/School, Fort Lee, VA
25. Physical Fitness School, Fort Jackson, SC

26. Quartermaster Center/School, Fort Lee, VA
27. Ranger School, Fort Benning, GA
28. Recruiting and Retention School, Fort Jackson, SC
29. School of Advanced Military Studies, Fort Leavenworth, KS
30. School of Information Technology, Signal Center, Fort Gordon, GA
31. Sergeants Major Academy, Fort Bliss, TX
32. Signal School, Fort Gordon, GA
33. Transportation Center/School, Fort Lee, VA
34. University of Foreign Military and Cultural Studies (UFMCS), Fort Leavenworth, KS
35. Warrant Officer Career College, Fort Rucker, AL
36. Western Hemisphere Institute for Security Cooperation (WHINSEC), Fort Benning, Georgia

Note: On 13 December 2013, the Army War College, Carlisle Barracks, PA, was designated a Direct Reporting Unit of the CSA, per General Order 2013-90, and no longer reported to TRADOC.

*The US Army Chemical School became the US Army CBRN School in 2008.

## Centers and Centers of Excellence (CoE)

In conjunction with the BRAC 2005 process, TRADOC made the transition to six CoEs centered largely on the same number of warfighting functions. A CoE was defined as a designated command or organization within an assigned area of expertise that delivered current warfighting requirements; identified future capabilities; integrated assigned DOTMLPF-P dimensions; and presented resource-informed, outcomes-based recommendations to the TRADOC Commanding General:

- The Field Artillery Center/School and Air Defense Artillery Center/School combined to form the Fires CoE at Fort Sill, OK.
- The Armor Center/School and Infantry Center/School combined to form the Maneuver CoE at Fort Benning, GA, which developed a close coordinating relationship with the Aviation CoE at Fort Rucker, AL.
- The Maneuver Support CoE, Fort Leonard Wood, MO, since the mid-1990s has consisted of the CBRN, Engineer, and Military Police Schools.
- The Ordnance Center/School, Transportation Center/School, and Quartermaster Center/School combined to form the Combined Arms Support Command (CASCOM)/Sustainment CoE (SCoE) at Fort Lee, VA. Associated with the SCoE were the Ordnance Munitions and Electronics Maintenance School (OMEMS), Redstone Arsenal, AL, which moved to Fort Lee, and the Soldier Support Institute (Adjutant General and Finance Schools), Fort Jackson, SC, which remained in place but developed a close coordinating relationship with CASCOM/SCoE.
- The Mission Command CoE was established as part of CAC at Fort Leavenworth, KS, and formed a close working relationship with the Intelligence CoE at Fort Huachuca, AZ, and the Cyber CoE (formerly Signal CoE) at Fort Gordon, GA. Intelligence has retained its identity as the sixth warfighting function.
- The Center for Initial Military Training (IMT), Fort Eustis, VA, was no longer designated a CoE.

**Other TRADOC major subordinate organizations:**

- Combined Arms Support Command (CASCOM), Fort Lee, VA.
- The TRADOC Analysis Centers (TRACs), located at Fort Leavenworth, KS; White Sands Missile Range,

NM; and Fort Lee, VA.

- Center for the Army Profession and Ethic (CAPE), United States Military Academy at West Point, NY.

## Direct Reporting Units

### Asymmetric Warfare Group (AWG)


Figure 46. AWG logo.

On 11 November 2011, the Asymmetric Warfare Group was assigned as a Direct Reporting Unit (DRU) to TRADOC. It traced its lineage/existence to 2003, with the Army Improvised Explosive Device (IED) Task Force. The Task Force proved its relevance; thus, in June 2004, the name changed to the Asymmetric Warfare Regiment (AWR). On 12 June 2004, due to the initial successes achieved as well as the overriding need for a coordinated, department-wide effort, the Deputy Secretary of Defense established the Army-led Joint IED Defeat Integrated Process Team (IPT). The original Army task force, augmented by joint service staff officers and NCOs, continued to work the counter-IED mission as the Joint IED Defeat Task Force. In January 2006, the Asymmetric Warfare Group was established as a Field Operating Agency under the Operational Control (OPCON) of the HQ DA G-3/5/7. On 8 March 2006, the AWG was activated at Fort Meade, MD.[60] The documents establishing AWG included:

- The DoD Appropriations Act, Public Law 109-148.
- Memorandum, dated 11 August 2005, DAMO-FM (BG Formica) signature, Subject: Concept Plan for Asymmetric Warfare Group (AWG), which approved the TDA.
- General Order #2, Establishing the US Army Asymmetric Warfare Group, 31 January 2006, signed by the Secretary of the Army.

**Rapid Equipping Force (REF)**


Figure 47. REF logo.

The REF provided the materiel solutions to the needs discovered by the AWG and others. As an example of their work quantity and quality, in 2d Quarter Fiscal Year 2016 alone, they received 127 distinct requirements, and provided support to Army Service Component Commands (ASCCs), Army Commands (ACOMs), and Combatant Commands (COCOMs). A small unclassified sample of solutions-to-requirements included: a Subterranean Company Kit, the capability to conduct Electronic Surveillance and Attack, Persistent Elevated ISR for Small Units, Tactical Combat Casualty Care Exportable Medical Simulation Kit, and the Patriot Cooling System.

# Chapter 8
# International Activites

Since its establishment in 1973, TRADOC managed an expanding program of bilateral staff talks and exchanges with allied armies. Included in the command's responsibilities were the coordination of a quadripartite, or America, Britain, Canada, and Australia (ABCA) forum, and NATO standardization and interoperability programs.

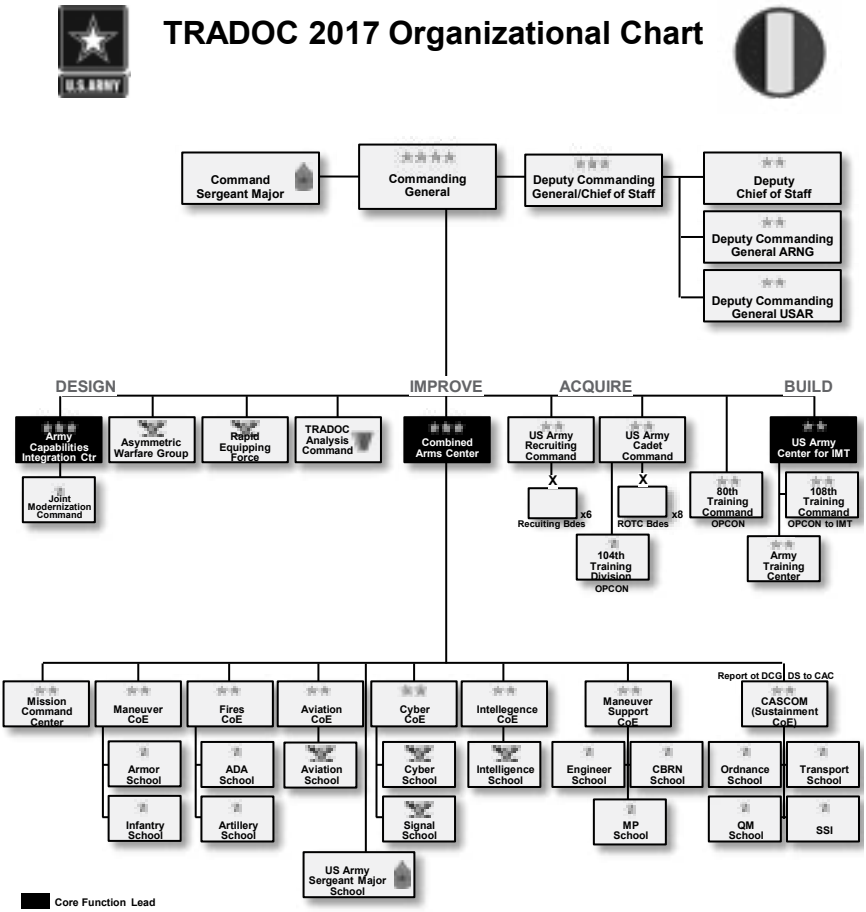


Figure 48. TRADOC Organization 2017.

Beginning in 1975 with the German Army, TRADOC began a series of bilateral army-to-army staff talks with other countries. By 2008, there

were staff talks with 11 nations on a regular basis. In addition, TRADOC represented the US Army in more informal discussions with the Israeli Defense Force. International activities, including work with selected armies of Latin American nations, increased greatly. As part of the TRADOC liaison network, TRADOC officers served abroad in Germany, the United Kingdom, France, Spain, Italy, Turkey, Israel, Republic of Korea, Japan, and Canada. At least 15 nations sent liaison officers to TRADOC headquarters. Liaison arrangements with Australia, Brazil, Canada, France, Germany, Israel, Italy, Japan, Korea, the Netherlands, Spain, Turkey, and the United Kingdom, were all of long standing; later came more recent additions with representatives from the Czech Republic and Greece. By 2008, the number had grown to 17 with the addition of Singapore and Norway. By 2016, a reciprocal arrangement was reached with Italy. The Maneuver CoE, Airborne and Ranger Training Brigade, made a separate but coordinated reciprocal exchange with the Colombian Lancero School.[61] That brought the number to 19.

The International Army Programs Directorate (IAPD), ARCIC, was responsible for the administration and logistical support of Foreign Liaison Officers assigned to Headquarters, TRADOC; the administrative support to TRADOC liaison officers assigned overseas; the implementation and day-to-day management of the TRADOC International Engagement Activities; and TRADOC support to Army-level bilateral staff talks. The Joint and Allied Doctrine Division (JADD) of ARCIC provided staff management for the integration of Army doctrine into joint, multinational, and multi-Service doctrinal publications. JADD wrote selected joint and multinational doctrine and coordinated and reviewed selected joint Army doctrine. It focused primarily on strategic and operational level doctrine.

Counterpart Visits were even more extensive, and included not only the above listed nations but also: Chile, Denmark, El Salvador, India, Indonesia, Mali, New Zealand, Republic of the Philippines, Poland, Thailand, Tunisia, and the United Arab Emirates.[62] Note: in 2015, IAPD was also involved with the Army-to-Army Dialogue Mechanism, held in Beijing, China.

## Standardization and Interoperability

On its establishment, TRADOC continued CONARC's coordination of the Service schools' participation in international standardization programs held under the auspices of NATO and ABCA. NATO meetings included separate panel and working party conferences relating to a wide variety of military topics including weapons; inter-Service tactical air operations; mobility; nuclear, biological, and chemical (NBC) defense; and

intelligence. ABCA meetings—more doctrinally oriented than the NATO meetings—related, among other things, to standardization in the fields of command and control, aviation, air defense, communications, and quality assurance.

In 1976, TRADOC assumed DA planning and coordination responsibilities for four NATO and four ABCA working parties. The new ABCA responsibilities included the air defense, armor, infantry, and surface-to-surface working groups. The NATO responsibilities were for the movement (including rail movement) and transport working parties; the land-based air defense weapons panel; and the NATO helicopter inter-Service working party. TRADOC provided delegates and data to the subgroups of both those forums. Actions in TRADOC's purview that were agreed to by the national parties and cleared by the review bodies were implemented by TRADOC on DA approval.

During fiscal year 1977, a new Defense Department emphasis on developing standardized equipment with NATO allies was felt at TRADOC. Related to that defense policy was the concept of seeking "interoperability" between like weapons or pieces of equipment that were being developed separately by the United States and an allied nation. The issue of a bi- or multi-lateral agreement in weapons development was sensitive, and usually meant that the United States would have to adopt more allied-built weapons into its own arsenal if the principles of standardization and interoperability were to have any meaning. The Nunn-Culver Amendment to the 1977 DoD Appropriation Act formally committed the United States to standardization, or at least interoperability, with its allies.

During the 1980s, it became evident that doctrine to guide US Army operations with allied forces was needed. Though writing up-to-date Army and joint doctrine were already priority efforts, it was clear that future wars of any large dimension would likely be allied enterprises. Some alliance-specific doctrine existed, such as Allied Tactical Publication (ATP)-35A, *Land Force Tactical Doctrine,* which was the NATO manual published by the Military Agency for Standardization in 1995. ATP-35A was contemporary with the 1993 edition of FM 100-5, which had several chapters devoted to combined arms operations. Also already published in a test version was JCS Publication 3-0, *Doctrine for Joint Operations.* But there was no formal and general combined operations field manual in the US Army inventory. Beginning in early 1989, TRADOC undertook the development of FM 100-8, *Combined Army Operations.* Doctrine writers completed the preliminary draft of FM 100-8 in September 1992 and sent it to the TRADOC DCS for Doctrine for approval. After some revision, it was resubmitted in December. Over the next 5 years, the draft manual

underwent significant revision, and its name was changed to *The Army in Multinational Operations*. FM 100-8 was finally published on 24 November 1997.

## Bilateral Staff Talks

By virtue of its Army-wide doctrinal, combat developments, and training missions, TRADOC acted as the US Army's executive agent for bilateral staff talks and exercised multilateral contacts with allied and friendly armies around the world. Those significant activities were carried out from the command's headquarters at Fort Monroe. Beginning in 1975 with the first formal staff talks with the army of the Federal Republic of Germany, the level of activity in bilateral army-to-army dialogue increased to include staff talks with armies of the United Kingdom, France, Italy, Spain, Canada, Brazil, Korea, Australia, Israel, and Japan. The primary objective for talks among formally allied armies was the enhancement of the ability to operate together with common understanding of the battlefield and interoperable equipment with which to fight. Further, in discussions with friendly countries, TRADOC aimed to develop instructive exchange on broader areas of interest. In addition, over its 45-year history, TRADOC increasingly carried out cooperative activities with the armies of several Latin American countries. In the absence of formal talks, informal bilateral exchanges were common, as were visits by senior officers of allied and some non-allied armies to TRADOC headquarters, centers, and schools, and numerous visits by senior TRADOC officials to other armies.

With the apparent end of the Cold War in the early 1990s, bilateral talks routinely continued but without the urgency of a looming Soviet threat. New dialogues opened with former East Bloc countries and even with China. However, with the beginning of the Global War on Terrorism in 2001, bilateral talks, as well as issues of interoperability, regained urgency. Operations in Iraq and Afghanistan included several allied nations. Once the conventional aspects of the war ended, COIN warfare dominated discussions. Allies with experience in the COIN environment were asked for their views. TRADOC coordinated the reviewing, editing, and staffing of Allied Joint Publications (AJP), which included the subjects of allied military police operations, joint airspace control, personnel recovery, targeting, information operations, humanitarian assistance, and other efforts. Like joint operations with other Services, the Army and TRADOC became directly involved with allies in developing doctrine and procedures from inception rather than merely reactively adjusting to already established procedures.

Figure 49. Lieutenant General Bruno Kasdorf, German Army Chief of Staff, meets with LTG David Halverson, TRADOC DCG/Chief of Staff, Fort Eustis, VA.

On 5 August 2011, the Director of ARCIC approved the Building Partner Capacity (BPC) Individual Training (IT) Action Plan. TRADOC served as the Army lead for the IT Line of Effort (LOE). This action plan, based on BPC IT LOE Working Group (WG) analysis, provided an initial review of the foundation knowledge and skills needed, and at what levels of the Professional Military Education (PME) continuum they should be taught, to further advance BPC competency and understanding. This intent was to best enable the Army's general purpose forces to collectively train and execute missions supporting BPC. The WG's initial recommendations were further analyzed by training developers in various proponent agencies and CoEs to determine the exact course content, hours of instruction, and best ways to integrate the training and education of these knowledge types and skills at various PME levels. The BPC IT LOE Workshop identified 21 foundational knowledge and skills needed by Soldiers at various points in their career. On 22 November 2011, TRADOC published TRADOC Pam 525-8-4, *The US Army Concept for Building Partner Capacity.* The BPC concept included nine future force required capabilities that were to improve the Army's ability to prevent and deter conflict and prevail in a wide range of contingencies. The concept underpinned the BPC capabilities-based assessment (CBA) that was already well underway.

Figure 50. LTG David Halverson, TRADOC DCG/CoS, visits with MG Farah Mohamed, Tanzania People's Defense Force Chief of Operations and Training, at HQ TRADOC, Fort Eustis, VA.

## Glossary

| | |
|---|---|
| AAC; USAAC | (US) Army Accessions Command |
| ABCA | America, Britain, Canada, and Australia |
| ACA | Army Contracting Agency |
| ACOM | Army Command |
| ACRA | Airlift, Concepts, and Requirements Agency |
| ADA | Air Defense Artillery |
| ADP | Army Doctrinal Publications |
| ADRP | Army Doctrine Reference Publications |
| AETF | Army Evaluation Task Force |
| AGF | Army Ground Forces |
| AHIP | Army Helicopter Improvement Program |
| AIT | advanced individual training |
| AJP | Allied Joint Publication |
| ALFA | Air-Land Forces Application Agency |
| ALMC | Army Logistics Management College |
| AMC | Army Materiel Command |
| AMSC | Army Management Staff College |
| ANCOC | Advanced Noncommissioned Officer Course |
| AoA | Analysis of Alternatives |
| AOE | Army of Excellence |
| APFT | Army Physical Fitness Test |
| ARCIC | Army Capabilities Integration Center |
| ARFORGEN | Army Force Generation |
| ARNG | Army National Guard |
| ARRTC | Army Reserve Regional Training Center |

| | |
|---|---|
| ARTEP | Army Training and Evaluation Program |
| AT XXI | Army Training XXI |
| ATACMS | Army Tactical Missile System |
| ATC | Army Training Center |
| ATLDP | Army Training and Leader Development Panel |
| ATP (context driven) | Army Techniques Publications; Army Training Program; Allied Tactical Publication |
| AUSA | Association of the US Army |
| AWA | Army Warfighting Assessment; obsolete term, see JWA |
| AWE | advanced warfighting experiments |
| AWG | Asymmetric Warfare Group |
| BCC | Brigade Coordination Cell |
| BCT | basic combat training |
| BCT | Brigade Combat Team |
| BCTP | Battle Command Training Program |
| BMC | Brigade Modernization Command; obsolete term, see JMC |
| BNCOC | Basic Noncommissioned Officer Course |
| BOLC | Basic Officer Leader Course |
| BPC | Building Partner Capability |
| BRAC | Base Realignment and Closure |
| BTID | Battlefield Target Identification Device |
| C2 | command and control; obsolete term for Army |
| C3 | command, control, and communications |
| C4I | command, control, communications, computers, and intelligence |

| | |
|---|---|
| CABP | Comprehensive Approach to Building Partnerships |
| CAC | Combined Arms Center |
| CADD | Combined Arms Doctrine Directorate |
| CALL | Center for Army Lessons Learned |
| CAPE | Center for the Army Profession and Ethic |
| CAS3 | Combined Arms and Services Staff School |
| CASCOM | Combined Arms Support Command |
| CATT | Combined Arms Tactical Trainer |
| CBA | capabilities-based assessment |
| CBRS | Concepts-Based Requirements System |
| CDC | Combat Developments Command |
| CDEC | Combat Developments Experimentation Command |
| CDED | Concept Development and Experiment Directorate |
| CENTCOM | Also depicted as US CENTCOM; US Central Command |
| CGSC | Command and General Staff College |
| CID | Combat Identification |
| CINC | commander in chief |
| CLIC | Center for Low Intensity Conflict |
| CMTC | Combat Maneuver Training Center |
| COCOM | Combatant Command |
| CoE | Center of Excellence |
| COE | Contemporary Operating Environment |
| COIN | Counter-Insurgency Operations |
| CONARC | Continental Army Command |

| | |
|---|---|
| CONUS | continental United States |
| CREW | Counter Radio-Controlled IED Electronic War fare |
| CSA | Chief of Staff, Army |
| CSAF | Chief of Staff, Air Force |
| CSI | Combat Studies Institute |
| CSS | Combat Service Support; obsolete term |
| CTC | Combat Training Center |
| DA | Department of the Army |
| DARPA | Defense Advanced Research Projects Agency |
| DCG | Deputy Commanding General |
| DCS | Deputy Chief of Staff |
| DCSC4 | Deputy Chief of Staff for Command, Control, Communications, and Computers |
| DCSTE | Deputy Chief of Staff for Test and Evaluation |
| DIME | diplomatic, informational, military, and economic |
| DLP | Doctrine Literature Program |
| DoD | Department of Defense |
| DOTLMS | doctrine, organization, training, leader development, materiel, and soldiers (an earlier model that evolved into DOTMLPF-P) |
| DOTMLPF-P | doctrine, organizations, training, materiel, leadership and education, personnel, facilities, and policy considerations |
| DRS | Division Restructuring Study |
| DRU | Direct Reporting Unit |
| ELSORV | Enhanced Logistic Off-Road Vehicle |
| EOD | Explosive Ordnance Disposal |

| | |
|---|---|
| EXFOR | Experimental Force |
| F2025B | Force 2025 and Beyond |
| FAMSIM | family of simulations |
| FAST | Future Army Schools Twenty-One |
| FCS | Future Combat System |
| FFID | Future Force Integration Directorate |
| FM | field manual |
| FMSO | Foreign Military Studies Office |
| FORSCOM | (US) Forces Command; sometimes shown as US FORSCOM |
| FTX | Field Training Exercise |
| G1/4 | (Personnel and Logistics) |
| G2 | (Intelligence) |
| G3/5/7 | (Operations, Plans, and Training) |
| G6 | (Command, Control, Communications, and Computers) |
| G8 | (Resource Management) |
| G9 | (Concept Development, Experimentation, & Requirements Determination) |
| GHQ | General Headquarters |
| GPS | Global Positioning System |
| GWOT | Global War on Terrorism |
| HDTE | historical decision training exercise |
| HIMARS | High Mobility Artillery Rocket System |
| HMMWV | High Mobility Multi-Purpose Wheeled Vehicle |
| HRC | Human Resources Command |
| HTTB | High Technology Test Bed |
| IAPD | International Army Programs Directorate |

| | |
|---|---|
| IBCT | Interim Brigade Combat Team; later Infantry Bri gade Combat Team |
| IDF | Israel Defense Forces |
| IED | improvised explosive device |
| IET | initial entry training |
| IFF | Identify Friend or Foe |
| IFOR | (Peace) Implementation Force; replaced by SFOR |
| IGPBS | Integrated Global Presence and Basing Strategy |
| ILE | Intermediate Level Education |
| IMA | Installation Management Agency |
| IMCOM | US Army Installation Management Command |
| IMT | Initial Military Training |
| INCOPD | Institute for Noncommissioned Officer Profes- sional Development |
| IPT | Integrated Process Team |
| ISR | intelligence, surveillance, and reconnaissance |
| IT | Individual Training |
| IT-COP | Institutional Training-Common Operational Pic ture |
| JAAD | Joint and Allied Doctrine Division |
| JACD | Joint and Army Concepts Division |
| JAED | Joint and Army Experimentation Division |
| JAMSD | Joint and Army Modeling and Simulation Divi sion |
| JCS | Joint Chiefs of Staff |
| JCTI-G | Joint Cooperative Target Identification-Ground |
| JICD | Joint Interdependency Coordination Division |

| | |
|---|---|
| JMC | US Army Joint Modernization Command |
| JNTC | Joint National Training Capability |
| JP | joint publication |
| JRTC | Joint Readiness Training Center |
| J-SAK | Joint Attack of the Second Echelon |
| J-SEAD | joint suppression of enemy air defense |
| JSTARS | Joint Surveillance and Target Acquisition Radar System |
| JWA | Joint Warfighting Assessment |
| LAM | Louisiana Maneuvers |
| LAV | light armored vehicle |
| LIC | low intensity conflict |
| LOE | Line of Effort |
| MACOM | major command |
| MANSCEN | Maneuver Support Center |
| MASSTER | Modern Army Selected Systems Test Evaluation and Review |
| MCA | Mobility Concepts Agency |
| MDB | Multi-Domain Battle |
| MHEP | Military History Education Program |
| MILES | Multiple Integrated Laser Engagement System |
| MLRS | Multiple Launch Rocket System |
| MOA | Memorandum of Agreement |
| MOS | military occupational specialty |
| MOU | Memorandum of Understanding |
| MOUT | military operations in urban terrain |
| MRAP | Mine-Resistant Ambush Protected |

| | |
|---|---|
| MTOE | Modification Table of Organization and Equipment |
| NATO | North Atlantic Treaty Organization |
| NBC | nuclear, biological, and chemical |
| NCO | Noncommissioned Officer |
| NCOES | Noncommissioned Officer Education System |
| NDAA | National Defense Authorization Act |
| NETCOM | Network Enterprise Technology Command |
| NIE | Network Integration Evaluation |
| NTC | National Training Center |
| O&O | organization and operations |
| OASS | One Army School System |
| OCAFF | Office of the Chief of Army Field Forces |
| OCS | Officer Candidate School |
| OE | Operational Environment |
| OES | Officer Education System |
| OLC | Oak Leaf Cluster |
| OMEMS | Ordnance Munitions and Electronics Maintenance School |
| OMMS | Ordnance Mechanical Maintenance School |
| OOTW | operations other than war |
| OPCON | Operational Control |
| OPFOR | opposing force |
| OSUT | one-station unit training |
| PLDC | Primary Leadership Development Course |
| PME | Professional Military Education |
| POM | program objective memorandum |

| | |
|---|---|
| RBCI | radio based combat identification |
| RDT&E | research, development, test and evaluation |
| RETO | Review of Education and Training for Officers |
| RNGW | Russian New Generation Warfare |
| ROAD | Reorganization Objective, Army Divisions |
| ROMO | Range of Military Operations |
| ROTC | Reserve Officers' Training Corps |
| SAMS | School of Advanced Military Studies |
| SAT | Systems Approach to Training |
| SCOPES | Squad Combat Operations Exercise, Simulated |
| SECARMY | Secretary of the Army |
| SECDEF | Secretary of Defense |
| SFOR | Stability Force; replaced IFOR |
| SIMNET | Simulation Network |
| SIMS | Systems Integration, Modeling, and Simulations |
| SOA | School of the Americas |
| SOF | special operations forces |
| SQT | skill qualification test |
| SSI | Soldier Support Institute |
| STEP | Select, Train, Educate, Promote |
| SWG | Seminar War Games |
| TAC | Tactical Air Command |
| TACS-AAGS | tactical air control system–Army air-ground system |
| TASS | Total Army School System |
| TBOC | Training Brain Operations Center |
| TCM | TRADOC Capability Manager |

| | |
|---|---|
| TDA | Table of Distribution and Allowances |
| TECOM | Test and Evaluation Command |
| TiMS | Traffic Integration Messaging System |
| TOE | table of organization and equipment |
| TRAC | TRADOC Analysis Center |
| TRADOC | US Army Training and Doctrine Command |
| TRISA | TRADOC Intelligence Support Activity |
| TSM | TRADOC System Managers (obsolete; now TCM) |
| TTP | tactics, techniques, and procedures |
| TUAV | tactical unmanned aerial vehicle |
| UA | Unit of Action |
| UAMBL | Unit of Action Maneuver Battle Lab |
| UAV | unmanned aerial vehicle |
| UE | Unit of Employment |
| UFMCS | University of Foreign Military and Cultural Studies |
| ULO | Unified Land Operations |
| USJFCOM | US Joint Forces Command; sometimes abbreviated JFCOM |
| USACC | US Army Cadet Command |
| USAF | US Air Force |
| USAID | US Agency for International Development |
| USAREC | US Army Recruiting Command |
| USAREUR | US Army, Europe |
| USATC | US Army Training Command |
| US | United States |
| USMC | US Marine Corps |

| | |
|---|---|
| USN | US Navy |
| USSR | Union of Soviet Socialist Republics |
| VCSA | Vice Chief of Staff, Army |
| WAC | Women's Army Corps |
| WG | Working Group |
| WHINSEC | Western Hemisphere Institute for Security Cooperation |
| WOAC | Warrant Officer Advanced Course |
| WOCC | Warrant Officer Candidate Course |
| WOCS | Warrant Officer Candidate School |

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## Photo Notes

All General Officer and Command Sergeant Major photos are official DA photos.

## Appendix
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