FMI 3-09.42

HBCT FIRES AND EFFECTS OPERATIONS

APRIL 2005
EXPIRES April 2007

HEADQUARTERS DEPARTMENT OF THE ARMY

**This publication is available at
Army Knowledge Online (www.us.army.mil) and
General Dennis J. Reimer Training and Doctrine
Digital Library at (http://www.train.army.mil)**

FMI 3-09.42

Field Manual-Interim
No. 3-09.42

Headquarters
Department of the Army
Washington, DC, 15 April 2005
Expires 15 April 2007

HBCT Fires and Effects Operations

Contents

Figures

Tables

Preface

Field Manual-Interim (FMI) 3-09.42 provides tactics, techniques, and procedures (TTP) for the tactical employment of the the fires battalion and the fires and effects cell (FEC) for the heavy brigade combat team (HBCT). This publication—

- Provides the doctrinal guidance for commanders, staffs, and subordinate commanders and leaders of the currently transitioning organizations who are responsible for conducting (planning, preparing, executing, and assessing) fires and effects in the HBCT.

- Serves as an authoritative reference for personnel developing doctrine (fundamental principles and TTP) materiel and force structure, institution and unit training, and standing operating procedures (SOPs) for fires battalions and FEC operations in HBCTs.

The unique fires and effects innovations in the HBCT are the enhanced fires and effects cell (FEC) and a redesigned organic direct support fires battalion. The FEC is an expanded maneuver brigade fire support element (FSE) with greater functionality in targeting and nonlethal/information effects. Additionally, providing a target acquisition platoon (TAP) to the fires battalion provided an enhanced capability for targeting and battle damage assessment (BDA) within the HBCT.

FMI 3-09.42 is written for the commanders and staffs of the fires battalions and the FEC staffs. The manual reflects and supports the Army operations doctrine as stated in FM 3-0, Operations. This is not intended as a stand-alone reference for HBCT operations; rather, it is intended to be used in conjunction with existing doctrine.

This FMI is published to provide expedited delivery of doctrine urgently needed to execute transformation to modular organizations. It has not been placed through the standard development process but is authorized for implementation. FM 3-09.42 is under development and will supersede this FMI before its expiration date. Send comments on this FMI to the address below. The proponent will consider them for inclusion in FM 3-09.42.

The doctrine in this FMI is based on suggestions, insights, and observations developed from four separate 3d Infantry Division HBCT rotations at the Combat Training Centers (CTCs), conducted by Task Force Modularity Field Experimentation Project Team (FEPT), Joint and Army Experimentation Division (JAED), Futures Center (FC), TRADOC, during FY 2004. Each CTC rotation yielded valuable information concerning the new BTB operations.

This FMI was written in conjunction with five other FMI relating to HBCT operations, including the Heavy Brigade Combat Team; HBCT combined arms battalion operations; HBCT logistics; the HBCT brigade troops battalion operations; and the HBCT reconnaissance squadron operations. For the most part, these FMI include only TTP that have changed due to the new organization. TTP that have not changed as a result of implementing the new HBCT organization will not be addressed, with the exception of required contextual frameworks.

The proponent for this publication is the Commandant, US Army Field Artillery School. Submit comments and recommended changes and the rational for those changes on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to: Commandant, US Army Field Artillery School Deputy Chief of Staff, Operations & Plans G3, ATTN: ATSF-DD, Fort Sill, OK 73503-5600. E-mail:doctrine@sill.army.mil.

Unless otherwise stated in this publication, the masculine nouns and pronouns do not refer exclusively to men.

Introduction

A field manual-interim (FMI) is a Department of the Army publication that provides expedited delivery of urgently needed doctrine. This FMI is one of six being prepared to meet the doctrinal requirements of the heavy brigade combat team (HBCT). This FMI applies to the transformational force across the full spectrum of military operations: peacetime military engagement (PME), small scale contingencies (SSC), and major combat operations (MCO)

The doctrine contained in this FMI is approved for immediate use in training and operations. Operational concepts described in this manual are based on decisions by the Army Chief of Staff to reorganize the Army to a brigade-based force, and to quickly implement "good enough" designs that will be refined over time. The material provided in this FMI is considered "good enough" to satisfy the requirements of the Army's transforming organizations.

The intended audience for this publication is leaders and staff sections within transforming units. These leaders include those in combined arms chains of command, field and company grade officers, middle-grade and senior noncommissioned officers, and battalion and squadron command groups and staffs. This manual provides guidance for unit of employment (UEx) leaders and staffs for training and employment of the HBCT to conduct close combat in offensive and defensive operations. This publication may also be used by other Army organizations to assist in their planning for support to HBCTs.

This FMI applies to the active component (AC), reserve component (RC), and Army civilians. It builds on the collective knowledge and experience gained through recent operations, numerous exercises, and the deliberate process of informed reasoning. It is rooted in time-tested principles and fundamentals, while accommodating new technologies and diverse threats to national security.

This FMI will expire after 2 years from its approved publication date. Throughout its life, proponents should collect feedback to refine the emerging doctrine that will be incorporated into new or revised field manuals.

SECTION II – TRANSFORMING TO MEET OPERATIONAL REQUIREMENTS

WE ARE A NATION AT WAR

In the opening decade of the 21st Century, regional instability, proliferation of weapons of mass destruction (WMD), transnational threats from groups using terrorism to achieve political objectives, the spiraling information revolution and ongoing globalization have created a prolonged period of conflict for the United States with great uncertainty about the nature and location of that conflict. The multi-polar world created by the break up of the Soviet Union has presented the U.S. Army with both opportunities and challenges.

Current and future enemies may look different from the Soviet Union, but American interests remain the same. Today while peace exists between the great powers, a state of permanent white water can be found in much of the world.

In this environment, war is the norm, and peace is the exception. Our adversaries seek adaptive advantage through asymmetry. America has near peer competitors in niche areas, and conventional force on force conflicts are still possible. There is an enormous pool of potential combatants armed with irreconcilable ideas, and our homeland has become part of the battlespace.

Historically, conventional terrorism and threats directed at US citizens and property were conducted outside of US borders. The events of 9/11 demonstrated that the threat to the US homeland from transnational organizations and groups with regional agendas is very real.

The Army must be able to defuse crises and/or defeat aggression early to prevent escalation and limit damage. To meet the requirements of the current operational environment, we need flexible, rapidly deployable forces and sufficient depth and strength to sustain multiple, simultaneous operations.

The Army must adapt to these challenges NOW. We are generating more versatile combat power because:

- We have extended worldwide commitments.

- We will remain at war for the foreseeable future.

- We must be more responsive to regional combatant commanders (RCC) needs.

- We must execute offensive, defensive, stability, and support operations as part of an integrated joint force.

DELIVERING THE RIGHT ARMY FORCES

To better meet current and future operational requirements, the United States Army is undertaking a total organizational redesign of its combat and associated support units, while in the midst of the global war on terrorism (GWOT). In terms of scope, the efforts to transform the Army rival the changes wrought in the Army by Secretary of War, Elihu Root a century ago, in 1903. This effort involves changing how the Army conducts operations, and how it is organized to accomplish assigned missions. The organization and doctrine of the Army that appears as the result of transformation will not resemble that with which our nation fought the major conflicts of the last century. (See Figure Intro-1.)
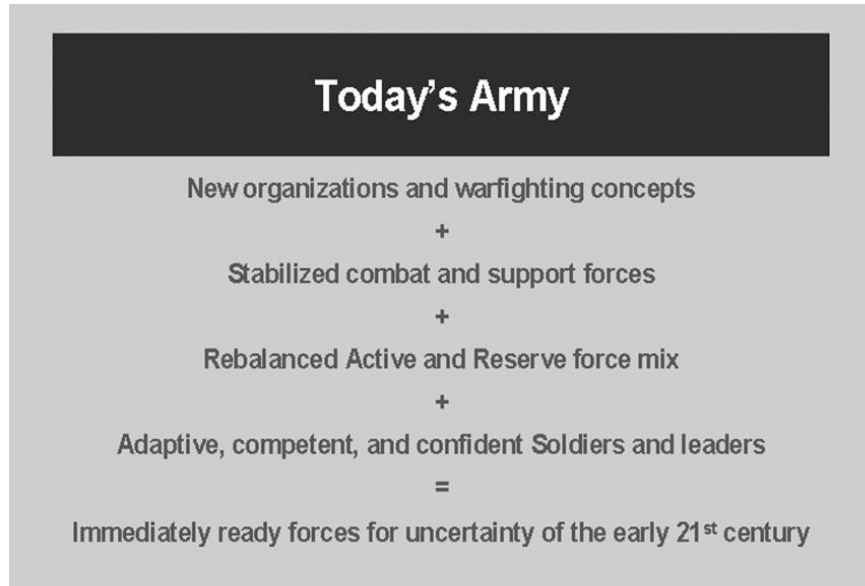
Figure Intro-1, Today's Army

We are seeking a campaign-quality Army with a joint and expeditionary mindset. This new expeditionary mindset recognizes we are an Army in contact, engaged in ongoing operations and ready to respond to the next crisis as it evolves. Transformation is an attitude and spirit—infused across the entire force—that embraces a forward-leaning, modular, joint interdependent and capabilities based Army led by aggressive, intelligent, and empowered Soldiers. This team of teams will transform to an Army that will ultimately win the war on terror and provide long-term security for the Nation.

Army transformation is a comprehensive effort intended to reinvent the Army at strategic, operational, and tactical levels. Formations will be redesigned to provide modular, capabilities-based organizations, increasing their relevance and responsiveness to regional combatant commanders (RCC).

Changing the organizational structure of units must be logically consistent with future force concepts but tempered by the technological and the current force capabilities that are reasonably available within the near term. This force will be strategically responsive, networked, and fight with a precision capabilities-based maneuver force that is dominant across the range of military operations envisioned for the future global security environment.

Delivering the right Army forces at the right place and time is vital to the joint force commander's ability to defeat any enemy. As the Army repositions and reconfigures its forces, the ability to rapidly deploy, employ, and sustain forces throughout the global battlespace will be expanded. Keeping the Army relevant and ready is about anticipation, and not about preparing for yesterday's challenges. The world is changing and the Army is responding to these changes and positioning itself for the challenges of the future strategic environment with forces that will be more effective in combat missions, more capable of stability operations and far better at interacting with other service tactical elements of the joint force.

SECTION III – A TOTAL ORGANIZATIONAL REDESIGN

MODULARITY

Modularity is the foundation for building a Campaign Quality Army with joint and expeditionary capabilities. Often times, commanders require a function to be performed that does not warrant the deployment of an entire unit. However, deploying portions of units can render the remaining elements of the parent organization incapable of performing their mission due to a lack of key personnel and equipment.

Modularity provides a force design methodology that aids in solving these dilemmas. It enhances the Army's ability to rapidly respond to a wide range of global contingencies with a force possessing needed functions and capabilities, while deploying a minimum of troops and equipment. It is a methodology that puts the right amount of the needed capabilities at the right place at the right time. At the same time, it also leaves behind the remainder of an organization which can be deployed later or can provide mission capable support elsewhere if needed.

Modularity is about packaging units into flexible configurations, creating more cohesive and capable units, and adjusting the types and mix of AC and RC units (See Figure Intro-2). Modular units are rapidly deployable, responsive, agile, tailorable and discrete packages of land force combat power.

Figure Intro-2, Restructuring Today's Army

The object of modularity is to provide superior tactical units that are more responsive and provide greater mission potency for the joint force commander.

Modularity provides the methodology for the Army to achieve a force structure that will optimize rapid assembly of mission-oriented contingency forces that are

effective and efficient; while providing a means of rapidly identifying, mobilizing, and deploying doctrinally sound, sustainable, and fully mission capable elements/organizations capable of operating in a joint and combined environment (See Figure Intro-3.)

Figure Intro-3, Modularity and the Army's Need to Change

Modularity will apply to force elements, to include command and control (C2) headquarters, performing missions across the range of military operations (peacetime, conflict, and war), and to force elements participating in joint, combined, multi-national, and interagency operations.

MODULAR HEADQUARTERS

Since 1999, the US military has undergone a sweeping evolution driven by operational experience and new capabilities. In the past, the conduct of operations was divided into loosely linked major land, sea, and air operations, often conducted with different objectives. Today, joint operations form an integrated joint fabric and increasingly, operations are integrated at the tactical level. The nature of modern land operations has changed in terms of geography and time. In general, operations have become more distributed in space and more simultaneous in time. At tactical and operational levels, subordinate units operate in noncontiguous areas of operations and conduct nonlinear operations as a matter of routine. This change is the result of smaller and more agile forces, significant improvements in C2, and continuing integration of joint capabilities at lower echelons. Army forces continue to increase their lethality. The integration of advanced information technologies multiplies the effectiveness of the individual weapons systems by many times. All these factors support Army forces executing offensive land operations early in the campaign, by introducing forces capable of maneuvering to operational depths as part of an integrated joint force.

The operational environment requires Army forces that are much more responsive and tailored to the needs of the combatant commanders. Army forces

must be capable of executing a full range of military operations from theater war through smaller contingencies to humanitarian assistance. To meet joint requirements, the Army is reorganizing its echelons above brigade.

Between now and 2010, two higher headquarters will replace the existing structure of divisions, corps, and echelons above corps. These new headquarters are currently designated Units of Employment (UE), specifically a UEx (primary warfighting), and a UEy (theater operational land force and joint support) echelon (See Figure Intro-4). While the tendency is to think of these echelons as linear improvements to the division and corps, they are not. Both higher echelons will be complementary, modular entities designed to employ tailored forces within integrated joint campaigns.
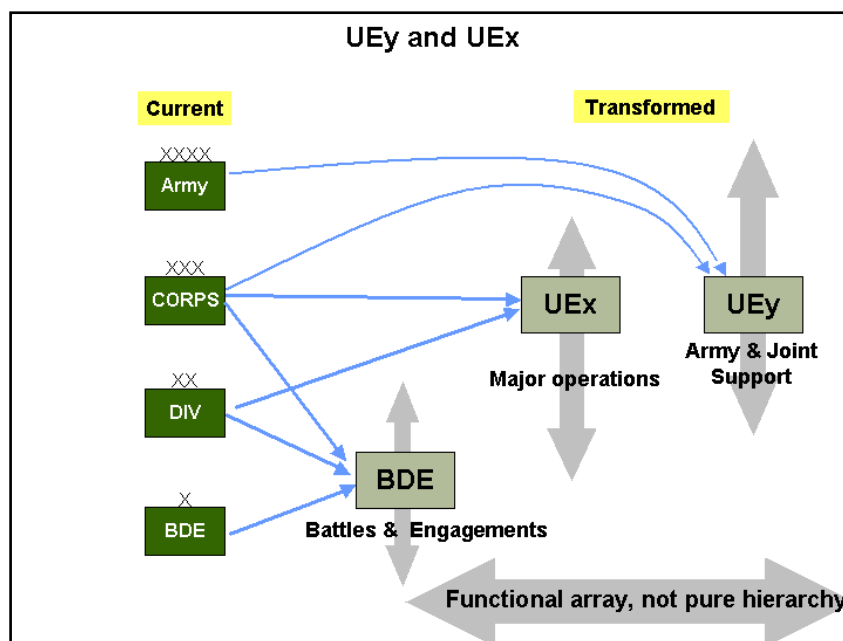
Figure Intro-4, UEy and UEx

Units of employment execute offensive, defensive, stability, and support operations on land as part of an integrated joint force. The UEx will become the principle war fighting headquarters of the Army, exercising operational control over brigades employed in tactical engagements. The UEy will focus primarily on the Army component responsibilities, supporting the entire theater and the operational forces (joint, interagency, and multinational) as required by the combatant commander.

THE BRIGADE BASED FORCE

The Army will transform to a brigade-based modular Army to achieve more balance in the force, with the ability to operate decisively in an uncertain environment against an unpredictable threat that will make every attempt to avoid our strengths (See Figure Intro-5). This redesign effort, as well as associated restructuring and stabilization initiatives, are important as they are intended to sustain both the active and reserve component Army through a potentially long term, manpower and resource intensive war on terrorism.
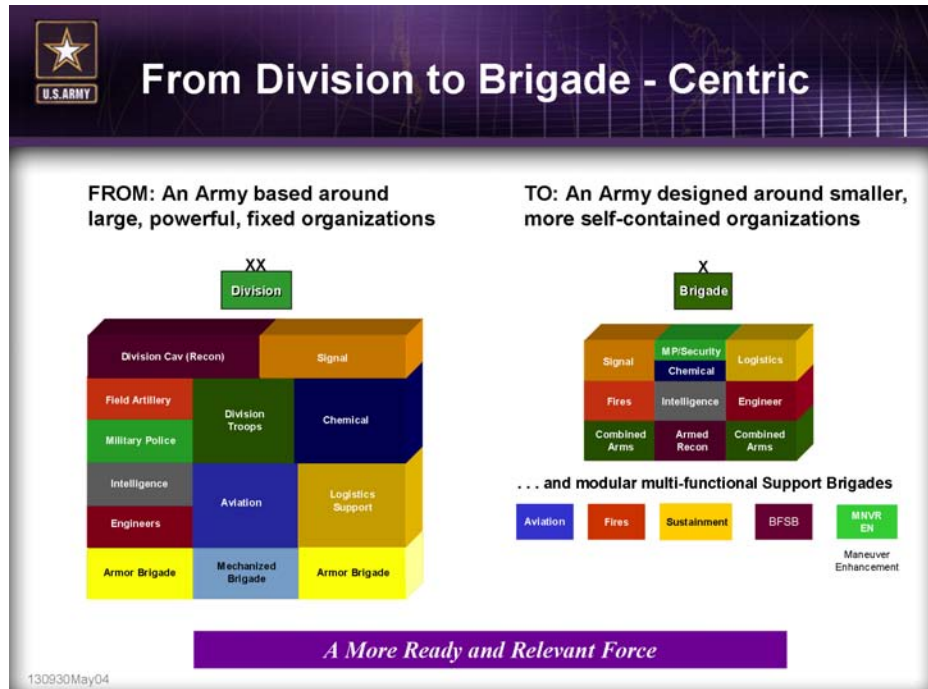
Figure Intro-5, From Divisions to Brigades

The new brigade designs achieve three goals set by the Army's Chief of Staff. This new design will:

- Increase the number of combat brigades available to the Army while maintaining combat effectiveness that is equal to or better than that of current divisional brigade combat teams.

- Create smaller standardized modules to meet the varied demands of RCCs (Regional Combatant Commanders) and reduce joint planning and execution complexities.

- Redesign brigades to perform as an integral part of the joint team. This makes them more capable in their basic ground close combat role, able to benefit from other service support and to contribute more to other service partners.

The fundamental transforming idea behind the Army's reorganization is to organize Soldiers into powerful and modular brigade combat beams (BCTs) with dramatically improved C2 systems. This pairing of better combat potential with superior C2 will give the brigades the ability to gather more information faster and more reliably and to fight as a networked team of teams internally and with teammates in the other services. This will give the new maneuver brigades significantly greater combat power than that of contemporary ones.

The principal tactical unit of the modular Army will be the BCTs, which will be made up of battalion-sized and company sized subunits. Brigade based, modular units are rapidly deployable, lethal, responsive, agile, tailorable and discrete packages of land force combat power.

Today's varying types of divisional and non-divisional BCTs will be reduced to three variants. Two standard BCT designs will replace the task-organized

combinations formed inside today's divisions. One variant is a heavy brigade combat team (HBCT), and the other is an infantry BCT. Selected infantry BCTs will be organized along the standard design, but retain the ability to conduct forced entry operations by vertical envelopment (air assault and airborne). Stryker brigade combat teams (SBCT) are the third type of maneuver brigade combat team available to the UEx commander.

These BCTs will be standing combined arms formations, and will include organic battalion-sized maneuver, fires, reconnaissance, and logistics subunits. In contrast to current divisional brigades, the modular force BCTs will be fixed base table of organization and equipment (TOE) units.

With the fielding of BCTs, the Army will shift from a division-based stance to a brigade-based posture. The Army shifts from generating and employing divisions in decisive land operations to providing the joint commander the right mix of BCTs and appropriate C2 as part of an integrated joint operation. Rather than providing some derivative of a division, as the Army does now, the Army will provide a mix of capabilities, controlling headquarters, and an appropriate commander to meet the requirements of the joint force commander, which will be driven by the threat and mission requirements.

Despite their organizational similarity to present maneuver brigades, the transformed modular BCTs are organized to maintain combined arms teamwork more effectively under intense stress. Advanced C2 tools, increased reconnaissance capabilities with improved sensors, and better precision weapons add significantly to the effectiveness of the new brigade combat teams.

These BCTs will magnify the effects of all the elements of combat power—maneuver, firepower, protection, leadership, and information—in new ways. As their fighting systems improve over the next decade, combat units will generate significant increases in combat power and significant advances in the focus, discrimination, and precision of combat effects.

Lethality in combat is determined less by the total number of shooters in an organization than by the number it can bring to bear and the accuracy with which they fire. While the shooters in the brigades' direct and indirect fire systems are familiar (120mm and 25mm cannons; small arms, machine guns, grenade launchers, and anti-tank/anti-material/anti-air missiles; 60mm, 81mm, and 120mm mortars; and 105mm or 155mm howitzers), their effectiveness has been substantially improved through better situational understanding and fire control tools.

To support the new heavy, infantry, and Stryker BCTs, five types of supporting brigades will be organized to provide supporting aviation, artillery fires, sustainment, intelligence, surveillance, and reconnaissance (ISR) and protection. These supporting brigades are organized to perform specific combined arms support functions.

The supporting brigades are flexibly organized to meet mission demands. Each brigade includes a mix of organic and assigned battalions. Each can be tailored for the specific set of mission, enemy, terrain and weather, troops and support available, time available, and civil considerations (METT-TC) conditions of a major operation or contingency, and can be task organized in size from a brigade-sized element down to platoon-sized or section-sized elements. These supporting brigades provide the means to weight the decisive operation or to tailor BCTs for specific missions.

The Army National Guard will have the same common brigade combat team design as the active Army but will retain a separate Scout group in addition to its heavy, infantry, and Stryker BCTs. The Army Reserve will provide an array of supporting units.

SECTION IV – THE NEW ARMY FORCES

UEʏ

The UEy is the Army theater-level headquarters that directly supports the RCC. The UEy consolidates most of the supporting functions currently executed by Army corps and Army service component commands (theater Army) into a single operational command echelon. The UEy will be the primary vehicle for support to the entire region as well as Army, joint, and multinational forces deployed to a joint operational area (JOA). There will be one UEy for each RCC, and any sub-unified command designated by the Secretary of Defense.

The UEy commander performs the service unique functions and tasks of the Army service component commander (ASCC) for that RCC. In major combat operations, the UEy may become the joint force land component commander (JFLCC) and exercise operational control over tactical forces. It can also provide the headquarters for a joint task force in smaller scale contingencies. The UEy requires some joint augmentation to function as the JFLCC or joint task force (JTF). The specific organization of each UEy will be based on the unique requirements of the joint force commander/RCC and the conditions of the theater. Figure Intro-6 shows a general regionally focused UEy command and control headquarters.
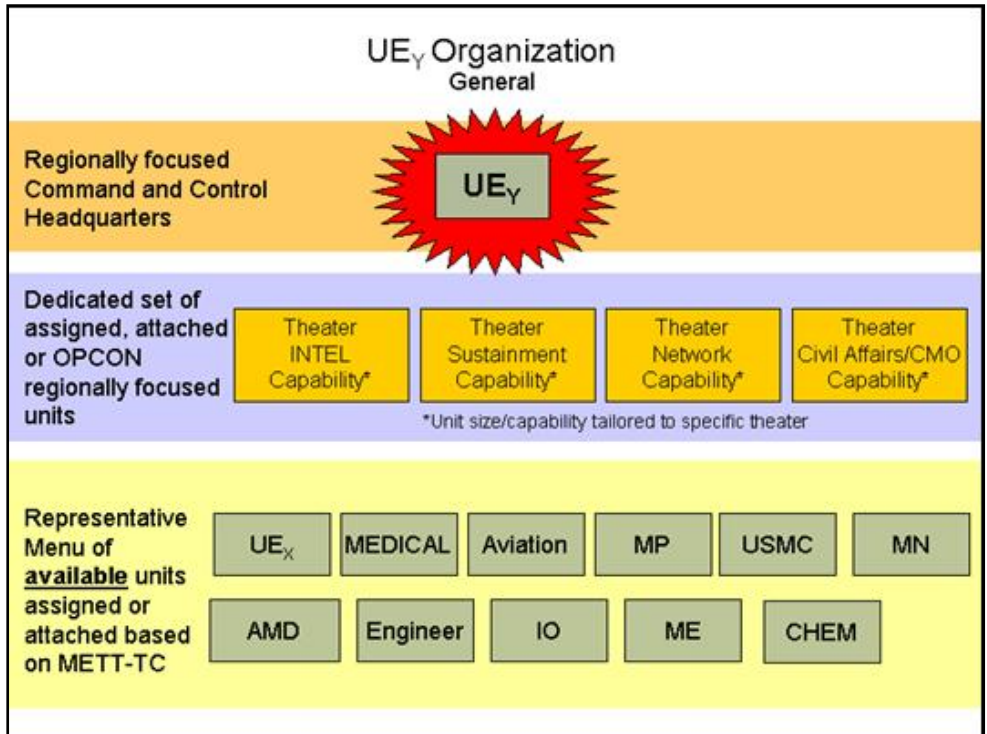
Figure Intro-6, UEy Organization, General

Four regionally focused commands or brigades will provide a theater base to each UEy and allow it to support the operations of the UEx and other joint and multinational forces in the combatant command. These supporting commands and brigades supporting each theater include a theater sustainment command (TSC), a theater network command (TNC), a theater intelligence brigade (TIB) and a civil affairs brigade. The situation in each theater will dictate the size of the commands, and theater-level brigades that support Army forces in theater.

The UEy receives other commands and brigades as required for execution of campaigns. Typically, these include a medical command, air and missile defense command, theater aviation brigade, engineer brigade(s), military police brigade(s), and one or more tailored UEx. From these forces and based on the assigned mission, the UEy may allocate additional maneuver; fires; aviation; reconnaissance, surveillance and target acquisition (RSTA); maneuver enhancement; sustainment and other functional brigades to the UEx during the conduct of operations.

UEx

The primary tactical war fighting headquarters will be the UEx. The UEx will combine the functions of today's division with the tactical responsibilities of the corps. The primary task of the UEx will be to direct the operations of the subordinate brigades and battalions. In marked contrast to the division, the UEx will not be a fixed formation. The UEx will not have any organic forces beyond the elements that make up the headquarters and its special troop battalion that includes life support and maintenance, a security company, a signal company, and a mobile command group section. Figure Intro-7 depicts a UEx organization.
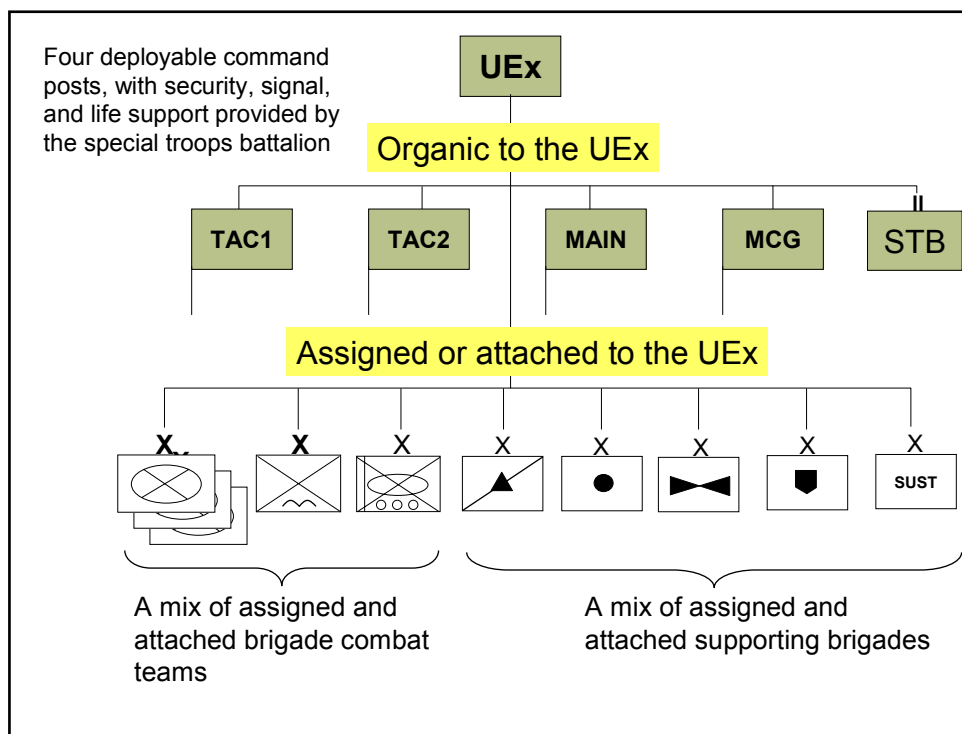
Figure Intro-7, UEx Organization

The UEx will be a completely modular C2 entity designed to exercise C2 over assigned brigades. Fully modular, the UEx headquarters is self-contained and built for today's expeditionary warfare. This contrasts sharply with the current division, which is the largest fixed organization in the Army.

The modular design envisions that the UEx can control a mix of the six basic types of brigade formations—the BCT, the aviation brigade, the battlefield surveillance brigade (BFSB), the maneuver enhancement brigade (ME), the fires brigade, and the sustainment brigade. Since the UEx has no fixed structure beyond the UEx headquarters, not all of these brigades may be present in an operation. In some operations, the UEx may control more than one of a particular type of brigade. The UEx may also control functional groups, battalions, or even companies, but normally these will be task organized to one of the brigades.

The UEx conducts decisive, shaping, and sustaining operations that translate operational directives into tactical action. The UEx is organized, manned, trained, and equipped to accomplish the following:

• Controls up to six BCTs in major combat operations, but may control more in prolonged stability operations. However, the span of command may decrease to one or two BCTs during forcible entry operations.

• Controls a tailored mix of other warfighting capabilities organized under the five multi-functional supporting brigades. The UEy may also attach or operational control (OPCON) functional brigades to the control of the UEx commander.

• Organizes and distributes C2 assets based on METT-TC. The UEx commander may alternate command posts (CP) between planning and execution, assign them to geographically dispersed operations, or allocate them to divergent types of operations occurring simultaneously (for example offensive and stability operations). The commander may also organize C2 according to major functions such as, Army forces (ARFOR), land component, tactical controlling headquarters, etc., or purpose (decisive, sustaining, and shaping).

• Functions as an ARFOR or JTF/JFLCC headquarters for smaller scale contingencies without additional Army augmentation. The UEx may serve as both the ARFOR and JFLCC simultaneously, although augmentation may be required for extended operations.

• Directs mobile strike and precision strike operations through mission orders to the aviation and fires brigades, respectively.

• Normally operates independently along a line of operation or in an AO during offensive operations.

Each UEx is unique not only for a particular campaign, but for different phases of the campaign. The higher headquarters continually tailors the UEx according to the factors of METT-TC.

While current divisions are concerned solely with tactics, the UEx can function at the operational level of war with little or no augmentation. It can perform as the Army force headquarters (ARFOR) for a small joint task force (JTF) and can function as the combined or joint force land component command (C/JFLCC) with USMC or multinational augmentation. With other service augmentation and special training the UEx may even serve as a joint task force (JTF) headquarters.

In garrison, the UEx coordinating staff is organized into a general staff that includes G1, personnel; G2, intelligence; G3, operations; G4 logistics; G5, plans; G6, command, control, communications and computer operations (C4OPS); and G7, information operations. The UEx headquarters also includes special staff and personal staff for the commander. In contrast to current division/corps headquarters organization, all of the special staff is organic to the UEx headquarters. The headquarters has organic liaison teams. The UEx does not depend on any subordinate brigade to provide elements of the special staff, and it has a security company that can provide security platoons to its mobile elements.

HEAVY BRIGADE COMBAT TEAM DESCRIPTION

The following paragraphs provide a general description of the HBCT's capabilities, organization and C2 relationship to the UEx. The HBCT is more deployable, more versatile and contributes more to the joint team than the previous heavy organizations they replace. Figure Intro-8 shows how the HBCT is organized with its organic battalions.
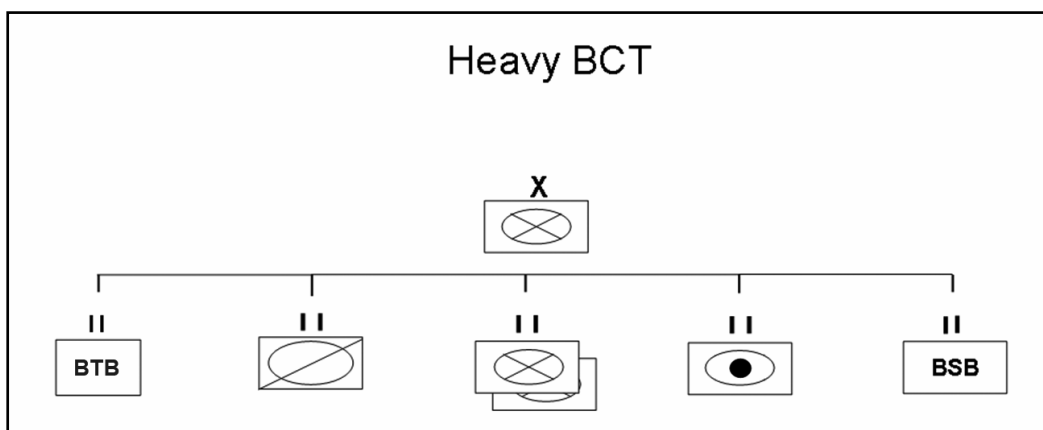
Figure Intro-8, Heavy BCT

The HBCT reduces the complexity of deployment planning and replaces the many variations of the divisional armored and mechanized brigades. It contains the combined arms components normally required to rapidly achieve tactical overmatch in a single formation. Robust enough to fight with or without external support for limited periods, the HBCT can fight "off the ramp" across the full spectrum of operations when tactically loaded.

Compared to prior divisional heavy brigade organizations, the HBCT provides more mission potency for the cargo weight and space. Making use of higher leader to led ratios, a more stable (and thus experienced) staff, and enhanced C2 systems the HBCT command teams employ the brigade's potential more effectively. Enhanced and expanded fire and air support elements distributed throughout the organization and greater network connectivity allows maximum use of lethal and suppressive air support.

The HBCT is versatile. While the HBCT is optimized for high tempo offensive operations against conventional and unconventional forces in mixed or open terrain, it is also adept in mixed terrain defense, urban combat, and mobile security operations (screen, guard, and cover). In addition to offensive and

defensive operations, the HBCT can conduct stability operations, support operations and support and stability operations.

The new modular HBCTs contribute more to the joint team. They are more effective in their unique role of forcing a decision on enemy leaders in a broader variety of missions and environments, and at a lower cost in supporting resources to the joint force as a whole.

The HBCT's versatility and ability to make rapid transitions derives from its organic combined arms composition. The HBCT's balanced combined arms battalions (CAB) need minimal reconfiguration from mission to mission. Engineers and fire support elements are organic to the CABs. The HBCT makes better use of non-organic lethal and suppressive fire support. HBCT organizations are sufficiently robust to maintain full-time all-around security for all organic and attached elements. Additionally, there is sufficient organic support to fight and win assigned engagements before external support is required.

To further enhance versatility, the next higher headquarters can modify the mission capabilities of the HBCT, or weight them when they are designated as the main effort by attaching combat support mission modules to the maneuver, reconnaissance, fires or brigade troops battalion (BTB). Because of similarities in the structure of the functions of the infantry, Stryker and heavy BCTs, and because the battalions are combined arms modules, the higher commander can also tailor brigades for specific missions by exchanging battalions. However, the UEx normally avoids detaching organic forces from the BCT, instead varying the size of the AO assigned to the brigade or the distribution of tactical tasks between brigades. Circumstances may compel the UEx to task organize the subordinate battalions between BCTs, but this is the exception, and not the rule.

THE SUPPORTING BRIGADES

There are five new brigades that support the BCTs and execute shaping and sustaining operations throughout the UEx AO. These brigades include aviation, fires, RSTA, maneuver enhancement, and sustainment.

These five brigades perform the following supporting functions across the UEx AO.

- Each brigade can be tailored for the specific set of METT-TC conditions of a major operation or contingency.

- Each can join or detach themselves from any higher headquarters easily and effectively.

- Each is self-contained and does not provide staff augmentation to the supported headquarters.

- Each has substantial network connectivity and liaison officer (LNO) capability to support another headquarters whether it is army, joint or multinational.

- Each can access and use joint enablers to accomplish its functions.

- Each has the means to reinforce the BCTs for specific missions.

The UEx commander may also determine that a ground maneuver unit or other Joint capabilities should be placed under the operational control of supporting brigade units of action. This decision would be based on the type of operation (offense, defense, stability, or support) as well as METT-TC considerations.

Fires Brigade

The organization of the fires brigade differs from currently fielded corps and division field artillery brigades in its staff design, capacity to employ electronic warfare (EW) units and unmanned aerial vehicles (UAV). The brigade commander performs the duties of the force field artillery commander for the unit to which the fires brigade is assigned (UEy or UEx), providing advice on all aspects of fires and effects employment.

Each fires brigade has an organic rocket/missile battalion. Depending on METT-TC, fires brigades are task organized with additional long-range precision rocket/missiles, advanced cannon artillery battalions, and additional counter fire radars. Figure Intro -9 provides the fires brigade mission, shows how it is organized with organic forces, and how it could be task organized with other assigned forces. The fires brigade may receive OPCON of EW assets selected for their ability to engage enemy C2 systems. The fires brigade provides fires on a planned or emergency basis at the direction of the UEx.
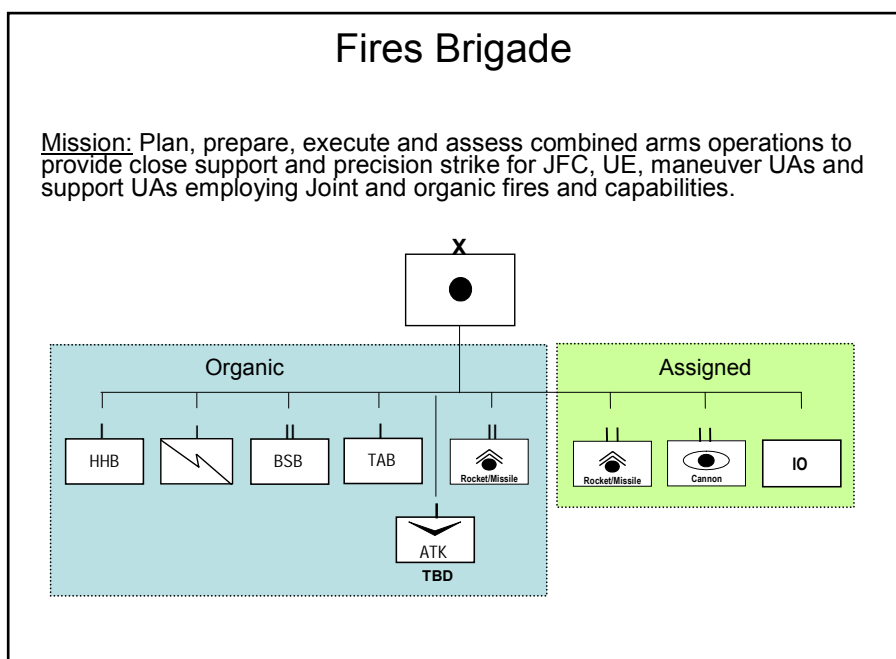
Figure Intro-9, Fires Brigade

The primary task of the fires brigade is to plan, coordinate, and execute precision strike operations within the UEx AO. The conduct of strike operations is predicated on the ability of the strike headquarters to control and synchronize all elements of the strike operation with all available lethal and non-lethal fires to deliver concentrated effects on the target. The C2 capabilities of the fires brigade allow it to plan, prepare, execute, and assess precision strike with operational control of additional ISR and EW capabilities from the other brigades. The UEx sends mission orders to the fires brigade specifying intended effects, additional capabilities under the operational control of the fires brigade, and joint capabilities available for the mission.

The secondary task for the fires brigade is to provide reinforcing fires within the brigade AO. When directed by the UEx, the fires brigade provides additional

cannon or missile artillery to support the brigade combat team, or delivers precision fires into the BCT AO as requested by the supported BCT commander.

The fires brigade also provides reactive and proactive counter- strike operations in support of the UEx and BCTs. The fires brigade may receive control of ground maneuver and joint assets and capabilities to carry out missions as determined by the UEx commander.

Aviation Brigade

The aviation brigade supports the operations of the entire UEx with task organized aviation capabilities. The bulk of Army aviation combat power resides in the multi-functional aviation brigade organized to support the UEx and the combined arms maneuver brigade combat teams. The organization of the aviation brigade combines a variety of battalions—attack, assault, lift, and support—under one command.

The UEx aviation brigade is expansible and tailorable to the mission, and can support multiple brigade combat teams (See Figure Intro-10). Based on METT-TC, the aviation brigade commander task organizes available aviation resources into mission packages that are either controlled by a supported brigade combat team or the aviation brigade.
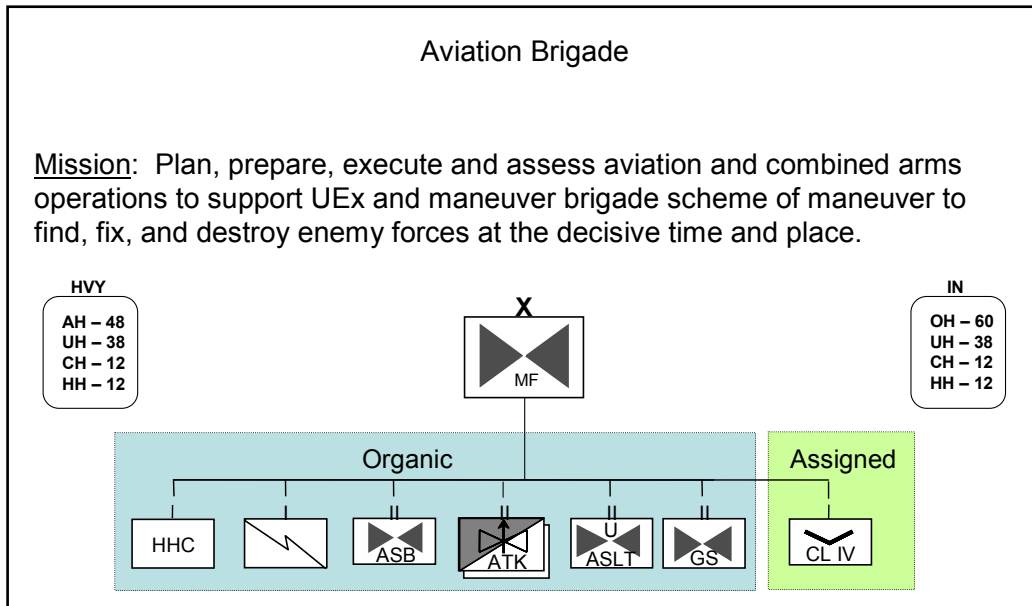
Figure Intro-10, UEx Aviation Brigade

The aviation brigade receives priorities and mission orders from the UEx, to conduct and support reconnaissance, security, mobile strike, vertical maneuver, attack aviation support to close combat, aerial sustainment, and C2 operations.

The aviation brigade plans and conducts mobile strike operations. Mobile strike operations are extended combat operations that capitalize on the ability of attack aviation to maneuver to the full depth of the UEx AO, deliver massed direct fire, and employ precision munitions in support. The UEx executes mobile strikes

outside of the BCT areas against targets that are capable of maneuvering to avoid precision strikes.

The aviation brigade executes screening missions for the UEx. The aviation brigade may receive the OPCON of ground maneuver and joint assets and capabilities to carry out these missions. It supports other security operations; including BCTs assigned a screen, guard or cover mission with aviation forces. For guard and cover missions, the aviation brigade provides reconnaissance, attack, and lift assets under the OPCON of BCTs. The aviation brigade also supports area and route security operations conducted by the maneuver enhancement brigade.

Battlefield Surveillance Brigade (BFSB)

The organization of the BFSB brigade consists of an organic military intelligence battalion, brigade troops battalion, and a long range surveillance detachment (See Figure Intro-11). Other surveillance and reconnaissance units are attached to the BFSB, tailored to specific operations. The tactical function of the BFSB brigade is to develop situational understanding (SU) over unassigned portions of the UEx area of operations and support UEx-level decision processes. The BFSB brigade directs its capabilities to the areas external to the brigade areas. Since the BFSB brigade will inevitably lack sufficient assets to maintain visibility over the entire AO, the brigade commander will develop an BFSB plan for organic and attached assets based on the ISR plan developed by the G3 and G2 of the UEx.
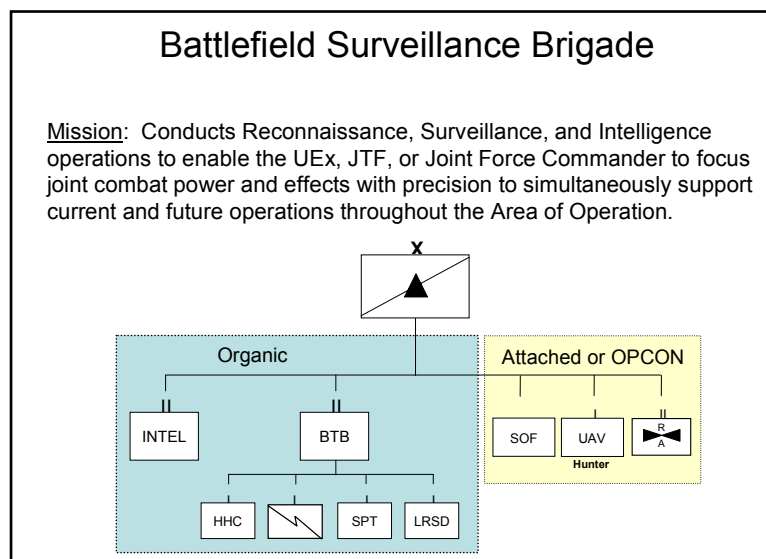
Figure Intro-11, BFSB Brigade

The BFSB brigade is organized to assist the G2 in satisfying the commander's critical information requirements (CCIR), which include priority intelligence requirements (PIR). It becomes the eyes and ears of the UEx within its AO. The UEx commander describes the operation and identifies the PIR. The commander's intent and PIR become mission orders for the BFSB brigade commander. The BFSB commander controls all UEx level surveillance and reconnaissance assets not task organized or organic to another brigade.

The BFSB brigade commander needs wide latitude in order to develop the situation across the UEx AO. The size and scope of the operation will often require the UEx to complement and reinforce the BFSB brigade with additional assets. The UEx also focuses the BFSB brigade through the allocation of brigade AOs. The BFSB brigade has the capability to reinforce the BCTs collection capabilities. When circumstances and orders from the UEx dictate, the BFSB brigade will reinforce brigade intelligence capabilities with additional assets.

Maneuver Enhancement Brigade

The maneuver enhancement brigade (See Figure Intro-12) is designed as a multi-functional headquarters only—it has no organic units beyond a brigade base of headquarters and support units. However, the brigade headquarters includes air and missile defense (AMD), military police (MP), engineer, and chemical, biological, radiological and nuclear (CBRN) functional operations/planning cells. One of its uses is to create a modular, tailorable, scalable protection force for the UEx commander.

Each maneuver enhancement brigade is uniquely tailored for its mission. Typically, the maneuver enhancement brigade includes a mix of construction engineer, CBRN defense, civil affairs, AMD, and MP together with a tactical combat force (TCF).
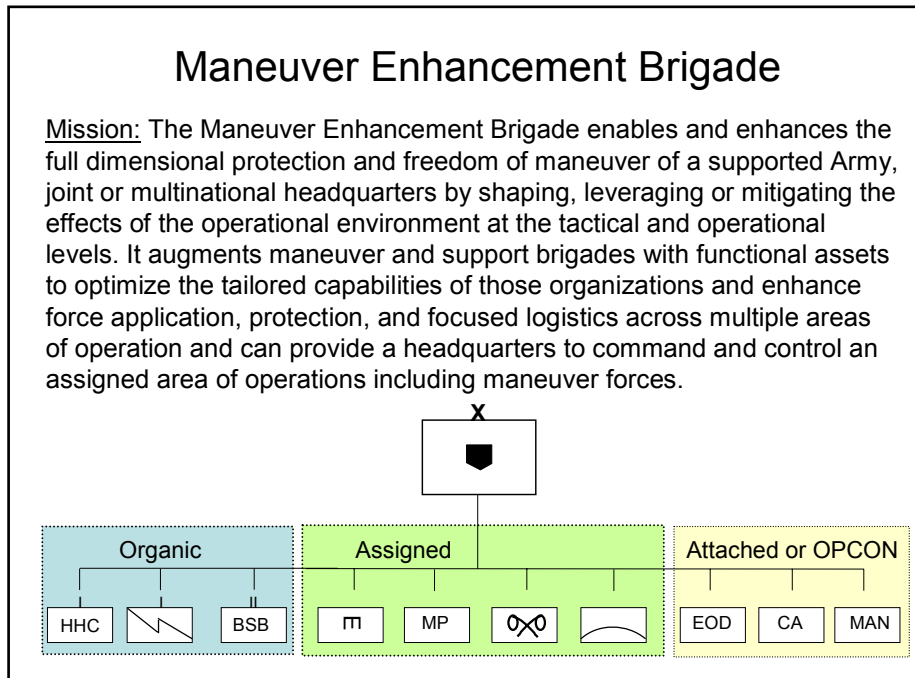
Figure Intro-12, Maneuver Enhancement Brigade

The maneuver enhancement brigade is responsible for protection outside of maneuver brigade combat team AOs. Tailored with MP, ADA, combat engineer and combined arms battalions, it preserves tactical or operational freedom of action within the UEx area of operations by performing limited offensive, defensive, and stability missions on assigned routes or in a designated rear area. It also plans, prepares, executes and assesses protection missions for other joint, service, and functional and multinational headquarters when required.

The maneuver enhancement brigade does not supplant unit self defense responsibilities. Units are still responsible for self-protection against Level I and some Level II threats. The maneuver enhancement brigade complements self defense by focusing on protection across the UEx as a war fighting function, not a piecemeal activity.

The maneuver enhancement brigade may provide tactical combat response forces within an AO, improve and secure lines of communications (LOC), and it may be tasked to organize base security and defense for several base clusters. It is organized and trained to execute selected security missions including route security and key asset or point security. It normally requires augmentation to perform area security operations. It is not organized, trained, or equipped to do screen, guard and cover operations.

Sustainment Brigade

The organization of the sustainment brigade is tailored with multi-functional support battalions, each of which includes a mix of logistical capabilities (See Figure Intro-13). Specialized support units of varying size are task organized based on METT-TC.
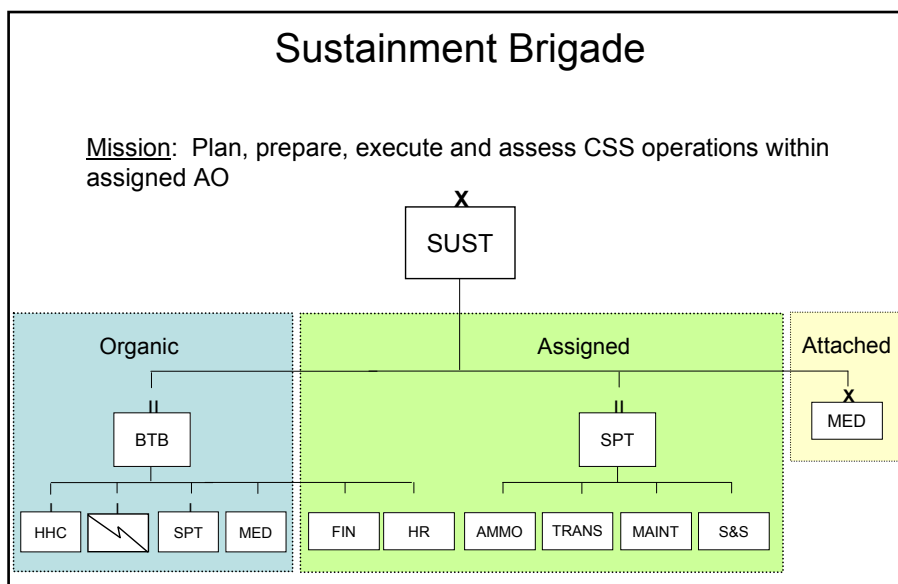
Figure Intro-13, Sustainment Brigade

One or more tactical sustainment brigades move with and support the UEx. If more than one sustainment brigade supports the UEx, the UEx staff coordinates their operations.

The sustainment brigade of the UEx provides distribution-based replenishment to the BCTs task organized under the UEx, and area support to any other unit located within the UEx AO. The sustainment brigade establishes temporary bases within the UEx AO to conduct mission-staging operations (MSO) and to provide replenishment to the BCTs of the UEx.

THE FOCUS OF THIS MANUAL IS THE FIRES BATTALION AND FIRES AND EFFECTS ORGANIZATIONS WITHIN THE HBCT

This FMI describes how the fires battalion is organized and equipped to provide close, shaping and counterstrike fires for the HBCT. This manual provides suggested tactics and techniques to exploit the fires battalion's enhanced range of capabilities. The fire support and fires and effects organizations within the HBCT are unique in that they are organic to the brigade staff and subordinate unit staffs, not the fires battalion. This FMI provides the procedures for these fires and effects organizations to provide coordinated and synchronized fires and effects for the HBCT. Part II or the manual is focused on the fires battalion and Part III on fires and effects planning and execution.

Chapter 1

Mission/Organizations and Key Personnel Responsibilities

This chapter provides an overview of the Heavy Brigade Combat Team's (HBCT) organic fires battalion, equipped with the M109A6, howitzer (Paladin), mission and organization and key personnel responsibilities. The organization of the battalion and the tactics employed reinforce the principles of war and the tenants of Army operations as set forth in FM 3-0, *Operations*. Compared to earlier equipped M109 battalions, the fires battalion in the HBCT is organized with two firing batteries (16 guns, 8 per battery with 2 platoons per battery). All fire support cells and teams (FECs, COLTs and FIST) are organic to maneuver units and not organic to the fires battalion. The battalion has a forward support company (FSC) that replaces service battery and performs all logistics support functions for the battalion. The battalion operates over widely dispersed areas, processes on board technical firing data, and demonstrates the ability to shoot and scoot without relying on aiming circles and wire lines. The HBCT's organic fires battalion operates within an enhanced targeting organization with airborne sensors. This capability makes it possible to adjust fires against enemy formations beyond the line of sight observers on the ground.

SECTION I – MISSION

1-1. The fires battalion strikes throughout the depth of enemy formations with precise lethal and area effects to suppress, neutralize, and destroy ground forces, direct fire weapons, indirect fires systems, and air defense systems. The battalion attacks enemy force elements to the depth of brigade objectives when reinforced by additional Army and other services support. The fires battalion establishes and executes a brigade level counterstrike (reactive and proactive) network against enemy mortar, cannon, and rocket units in the brigade's area of operation. The battalion is responsible for lethal and suppressive fire support to maneuver battalions in priority and for shaping missions assigned by the brigade commander. The battalion is required to plan and execute three very demanding missions: close support, brigade shaping operations, and brigade counterstrike. The battalion is organized and equipped to perform any of the four standard tactical missions; direct support (DS), general support (GS), general support reinforcing (GSR), and reinforcing (R) or any nonstandard missions as described in FM 3-09.21.

BASIC TASKS

1-2. The fires battalion performs tasks under the Army universal task list (AUTL) for the tactical level of war as defined for field artillery battalions in FM 3-09.21. The six major task areas for the tactical level AUTL are:

- Deploy/conduct maneuver.
- Develop intelligence.
- Employ fires: close support, shaping, and counterstrike

- Perform CSS and sustainment.
- Exercise C2.
- Protect the force.

FIRES BATTALION ORGANIZATION

1-3. The fires battalion is organized with a headquarters and headquarters battery (HHB), two firing batteries each with eight howitzer sections (2 X 8), and a FSC (Figure 1-1). The HHB and FSC provide command, control, administrative, and service support for organic and attached elements. See Chapter 2 and Chapter 6 for further details on HHB and FSC configurations and functions. The battalion has 4 platoon operations centers (POCs) versus the traditional 6 POCs, which reduces command and control and fire distribution across the battalion by one-third.
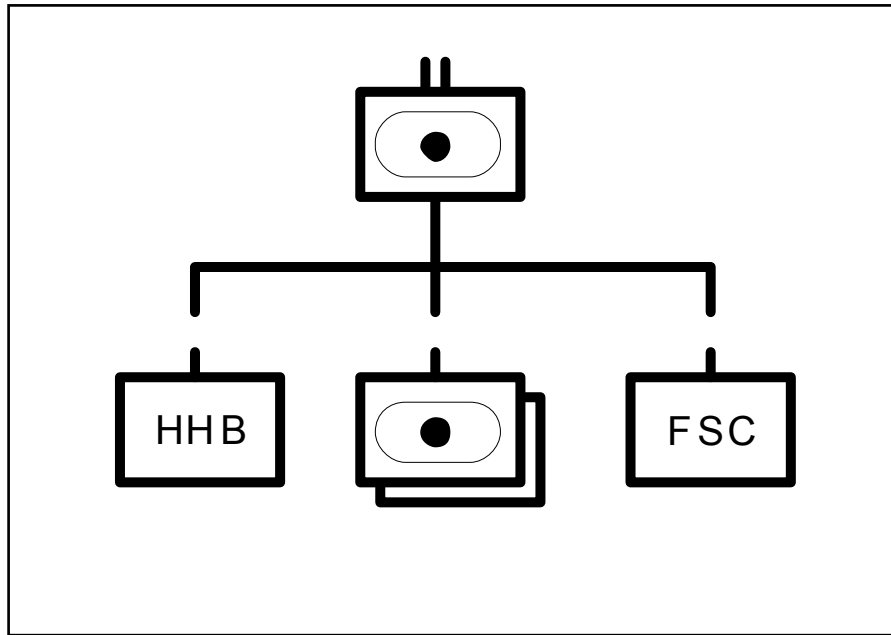
Figure 1-1, Fires Battalion Organization

Firing Battery

1-4. The firing battery (Figure 1-2) consists of a battery headquarters, two firing platoons, a supply section, and two ammunition sections. Each firing platoon consists of a platoon headquarters section, a POC comprised of fire direction center (FDC) section personnel and four firing sections.
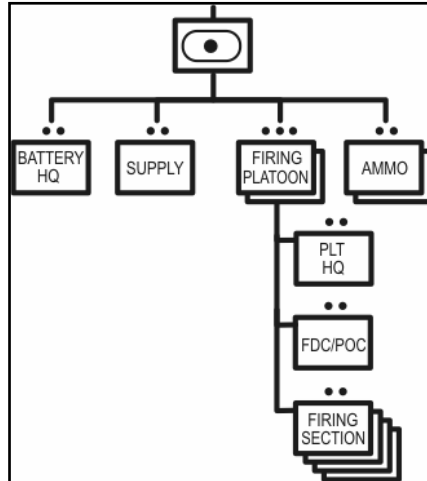
Figure 1-2, Firing Battery Organization

The Platoon Operations Center (POC)

1-5. The POC provides battle command for the firing platoon. The POC is contained in an M577/M1068 command post vehicle configured to support operations. The platoon is equipped with the Advanced Field Artillery Tactical Data System (AFATDS) computer as the primary digital interface between the battalion tactical operations center and the howitzers. Each platoon can command and control all the howitzers of the battery if required.

Headquarters and Headquarters Battery (HHB)

1-6. Headquarters and headquarters battery (Figure 1-3) consist of a battery headquarters, battalion command section, operations/intelligence section, S1, S4, S6, medical platoon, unit ministry team, and a target acquisition platoon. The battery provides communication, command and control for the fires battalion with its subordinate, reinforcing or attached units. The enhanced S2 Section, coupled with the target processing cell, the target acquisition platoon, and access to tactical unmanned aerial vehicles (TUAVs) for target acquisition and battle damage assessment (BDA), constitutes a highly lethal reconnaissance-strike capability. All maintenance capability has been moved to the FSC and will be provided as required.
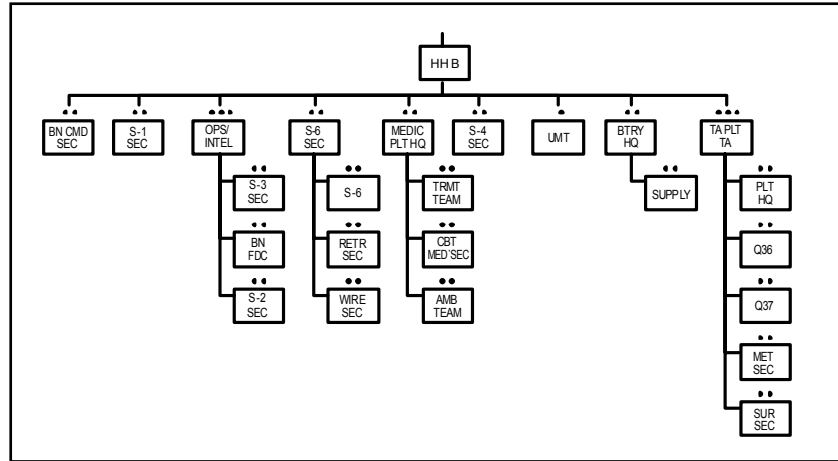
Figure 1-3, Headquarters and Headquarters Battery

TARGET ACQUISITION PLATOON (TAP)

1-7. The TAP provides the fires battalion and the HBCT with the capability to acquire threat mortar, artillery, and rocket systems and provide target intelligence and information. This provides the battalion a counterstrike mission processing capability. The TAP also adjusts friendly fire and registers mortars and artillery with its organic radars. The platoon is organized with a platoon headquarters, Q-36 radar section, Q-37 radar section, and target processing section. The platoon also has a meteorological section and a survey section which provide meteorological support and survey support to the fires battalion and all other units in the HBCT as required and as time permits.

MEDICAL PLATOON

1-8. The fires battalion medical platoon is organized with a platoon headquarters, a medical treatment team, a combat medic section, and an evacuation section. A trauma specialist from the combat medic section and a ground ambulance from the evacuation section are deployed with each battery. Battalion personnel receive force health protection (FHP) from the medical platoon. The FHP includes emergency medical treatment, medical evacuation by ground ambulance, and advanced trauma management at the battalion aid station (BAS). The medical treatment team establishes the battalion aid station, which usually operates from the combat trains. An ambulance team also operates from the BAS.

1-9. Combat medics habitually work with the same battery. It is often necessary to augment these medics with Soldiers who have received intense medical training (combat lifesavers). The goal is to train one combat lifesaver per section throughout the battalion.

FORWARD SUPPORT COMPANY (FSC)

1-10. The FSC (Figure 1-4) is organic to the fires battalion. The FSC provides field maintenance and supply distribution for the battalion. The FSC consists of a company headquarters, a food service section, a field maintenance platoon and a distribution platoon. It can operate from either unit trains or split into combat trains and a field trains. The distribution platoon provides distribution of all classes of supply (minus Class VIII). It is not designed to carry an authorized stockage list (ASL), except as necessary to support issue and turn-in operations. It may carry critical line replacement units (LRU) and combat spares as authorized or directed. The field maintenance platoon can function consolidated or split, depending on the mission, enemy, terrain and weather, troops and support available, time

available and civil considerations (METT-TC). The field maintenance platoon consists of a platoon headquarters, maintenance control section, recovery section, base maintenance section, and field maintenance teams (2ea) to support the firing batteries of the fires battalion.
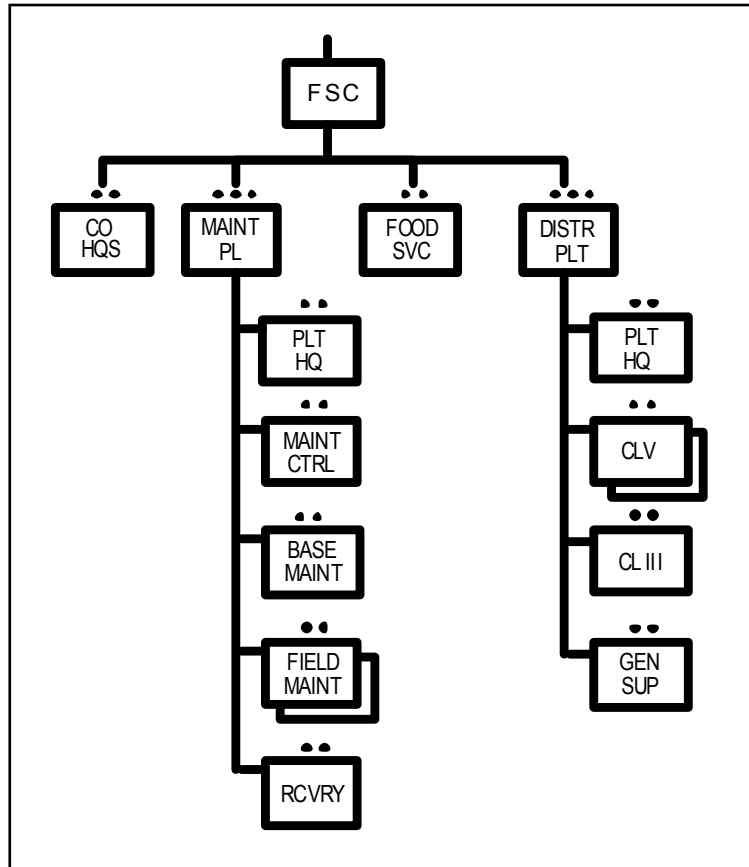
Figure 1-4, Forward Support Company

SECTION II – RESPONSIBILITY OF KEY PERSONNEL

1-11. The battalion commander and battalion command sergeant major (CSM) constitute the command group for the battalion and exercise all command authority within the battalion. The commander is assisted in controlling the activities of the battalion by the battalion staff. The efforts of the fires battalion staff are synchronized by the battalion executive officer (XO). The battalion staff is organized along functional lines. The coordinating staff officers are the S1 (personnel) S2 (intelligence), S3 (operations), S4 (logistics), and S6 (communications and electronics). The chaplain is a member of the personal staff.

1-12. Special staff officers include the fire direction officer (FDO), targeting officer, chemical officer, and physician's assistant. The FSC distribution platoon leader has as an additional duty the responsibility to function as the battalion ammunition officer.

1-13. The duties of each of these personnel are briefly discussed below. Additional information on battalion staff organization and the duties of staff personnel can be found in FM 6-0, *Mission Command: Command and Control of Army Forces*, 11 Aug 2003.

COMMAND SECTION

BATTALION COMMANDER

1-14. The battalion commander, aided by the battalion staff directs all the tactical, logistical, administrative, and training activities of the battalion. He performs the duties of the force artillery commander within the HBCT and is the senior fires and effects advisor to the HBCT commander. In this role, he is responsible for advising the HBCT commander and the maneuver battalion commanders on the employment and training of all fires and effects assets. He does not perform the staff function of the effects coordinator (ECOORD) but assists in this function as directed by the brigade commander. The ECOORD is an additional field artillery (FA) lieutenant colonel (LTC) and a permanent member of the HBCT staff. The duties of the ECOORD are described in detail in Chapter 6. The fires battalion commander directs employment of the battalion in accordance with assigned missions and guidance from the HBCT headquarters. In the reinforcing, general support reinforcing (R/GSR), or general support role, he follows guidance specified for these missions. He works closely with the commanders of supported and supporting units to ensure that the battalion can accomplish its mission. Specific responsibilities include:

- Oversee the training of the entire battalion, with particular emphasis on those elements directly concerned with delivery of fires.
- Coordinates fire support digital training with the brigade fires and effects cell (FEC) and maneuver battalion fires cells (FCs).
- Assist as required/directed by the brigade commander in training company fire support teams (FIST) and brigade combat observation lasing teams (COLT).
- Continually assess the needs of the battalion in terms of its ability to sustain its internal operations and to support assigned missions.
- Establish clear and consistent standards and guidance for current and future operations. Ensure the battalion staff and battery commanders understand the battalion commander's intent.
- Establish policies to promote discipline and morale within the battalion.
- Provide for the administrative and logistical support of the battalion.
- Coordinate/control the operations and/or fires of R/GSR FA units.
- Direct and supervise preparation of the fires and effects support plan (FESP) and the FA support plan (FASP) as documents in support of the maneuver plan.

COMMAND SERGEANT MAJOR (CSM)

1-15. The battalion CSM is the senior enlisted advisor to the commander. He is both a specialist and a generalist, as he must have technical competence as a field artilleryman while being broadly knowledgeable in all functional areas such as operations, administration, and logistics. The CSM best serves as an extension of the commander's eyes and as his primary troubleshooter. He works closely with each of the battalion staff sections and the firing battery leaders, frequently changing his area of focus based on the needs of the unit and the direction of the commander. The CSM usually operates independently of but complementary to the commander, frequently at a critical location where the commander needs additional supervision, oversight, or observation. Because of this, the CSM requires his own vehicle, radio, and driver. The CSM's duties include:

- Assist the commander in maintaining effective communication with senior and subordinate leaders and staffs.
- Validate that the commander's directions and intent are being properly communicated through the leadership chain to the front line Soldiers and that their feedback and concerns are reaching the commander.

● Advise the commander and staff on all matters pertaining to enlisted Soldiers.

● Assist the S3 in planning, coordinating, and supervising collective and individual training to include certification requirements.

● Mentor unit first sergeants (1SGs) and noncommissioned officers (NCOs), supervise and direct NCO professional development, identify and develop future leaders from within the enlisted ranks.

EXECUTIVE OFFICER (XO)

1-16. As second in command and chief of staff, the XO must keep abreast of current and anticipated operations. He must be prepared to assume the duties of the commander if the need arises. He must position himself forward, traveling among the battalion command post (CP), the batteries, and the battalion trains area to perform his duties. Key duties in addition to those in FM 6-0, include:

● Direct, supervise, and coordinate all staff actions and operations, to include the battalion's military decision-making process (MDMP), especially production of the FASP, and battalion staff involvement in the FESP.

● Supervise and direct all logistic efforts within the battalion, to include development of the battalion's combat/field trains concept and logistic plan.

● Direct and supervise administration and logistics operations within the fires battalion

● Perform face-to-face contact with his counterparts on the HBCT, fires brigade, and maneuver battalion staffs as required.

● Direct and supervise development of continuity of operations (CONOPS) plans for the CP, the various operations centers, and each staff section.

● Direct and supervise development of mutual support unit (MSU) operations, as necessary or as directed, with another FA unit.

● In the battalion commander's absence, enforce the commander's standards throughout the unit.

1-17. The battalion commander decides which function the XO will give his primary focus at any given time. This decision is based on the immediate requirements of the battalion and the overall tactical situation. Changing situations will require periodic changes in the XO's focus. The XO must recognize his primary function is to understand the battalion commander's intent and that he is normally the senior officer at the battalion responsible for executing that intent. When he is functioning primarily as second in command, one or more of the primary staff officers (often the S4) assumes a major portion of the functions of senior logistics coordinator. When the XO concerns himself primarily with the logistics support of the battalion, the S3 assumes a greater portion of the commander's duties in the battalion area.

S1 (PERSONNEL OFFICER)

1-18. The S1 plans, directs, and supervises personnel and administration and is the battalion staff coordinating element for health services. The S1 coordinates with the medical platoon for FHP planning. He supervises the battalion personnel administration center (PAC) and serves as a shift leader in the administration and logistics operations center (ALOC) or the battalion support operations center (BSOC). In addition to those listed in FM 6-0, the S1's duties include the following:

● Strength accounting and replacement operations.
● Casualty reporting.
● Coordination of legal services.
● Finance and postal services.

- Administrative procedures and services.
- Enemy prisoners of war (EPW) planning and coordination.
- Awards and evaluations.
- Morale support activities.
- Recommend personnel priorities and employment of S1 assets that support the commander's intent and mission accomplishment.
- Prepare personnel/casualty estimates and plans. In conjunction with the S4, prepare paragraph 4 of the FASP and the logistics plan/tab.
- In conjunction with the S4, establish and maintain the ALOC and BSOC. Supervise operations of the BSOC (if one is established).
- Ensure the S1 section and, when applicable, the BSOC establish and maintain situational understanding—of the general situation, FA battalion operations, and CSS, especially personnel/medical.
- Review the battalion's essential FA tasks (EFATs) for critical personnel, medical, and EPW requirements (e.g., personnel cross-leveling to achieve necessary strength, experience levels, or a particular skill in a battery or section).

S2 (INTELLIGENCE OFFICER)

1-19. The S2 performs a wide variety of tasks concerning intelligence, targeting, and force protection. In addition, he helps the S3 supervise the tactical operations center (TOC). In addition to those listed in FM 6-0, the S2's duties include the following:

- Supervise the intelligence section.
- Develop artillery focused intelligence preparation of the battlefield (IPB) in conjunction with other staff elements, the HBCT S2, the fires brigade S2 when deployed, and the S2 for any supporting/supported FA units.
- Develop enemy artillery order of battle and monitor tactics and techniques of enemy artillery, mortars, and target acquisition (TA) assets.
- Predict artillery target locations and pass predicted locations to a fire control facility, FEC, FDC, or targeting cell.
- Provide survivability and mobility information to the battalion S3.
- In conjunction with the S6, assess the enemy's capability to interfere with signal communications and supervise the counterintelligence aspects of signal operations within the battalion.
- Recommend commander's critical information requirements (CCIR), especially priority intelligence requirements (PIR), related to the primary mission, tasks, and role of the battalion.
- Prepare intelligence estimates and portions of the FASP (the enemy situation portion (paragraph la and the TA tab), with the assistance of the targeting officer and the radar section leader. This includes the radar deployment order (RDO) when applicable.
- In coordination with other S2s, organize and supervise an aggressive collection effort designed to answer PIR.
- Advise and assist the S3 in positioning, tasking, and supervising organic/attached TA assets, and coordinating survey for TA assets.
- Assist in developing and collecting the intelligence and TA data necessary to support counterstrike operations.
- Assist the target processing section in radar employment, positions, decision points for cueing and moving the radar, cueing schedules, and radar zones.

- Template potential enemy locations, determine enemy-to-friendly FA force ratios, evaluate enemy FA/TA capabilities and tactics, and advise the FA battalion and maneuver commanders on the enemy indirect fire and counterfire threats.
- Ensure IPB analysis includes evaluation of the role and capabilities of ground, air, and naval forces, and possibly even satellite/space-based assets in the enemy's counterfire program.
- Ensure all subordinate and supporting units are kept informed of the enemy situation.
- Provide analysis of the air and ground threat to assist the S3 in coordinating the battalion ground and air defense plans.
- Advise the commander and staff on control of classified materials.
- Identifies the role of intelligence in the development of EFETs and EFATs.

INTELLIGENCE SERGEANT

1-20. The intelligence sergeant assists the S2 in the planning, supervision, and execution of intelligence and targeting operations. The intelligence sergeant may be a shift leader for the section, especially in the absence of the assistant S2. In the fires battalion, the intelligence sergeant may perform many of the section's targeting functions. The intelligence sergeant may also be a primary AFATDS operator.

S3 (OPERATIONS OFFICER)

1-21. The S3 is responsible for training, planning, and execution of battalion operations. In addition to those listed in FM 6-0, S3 duties include:
- Advise the FA battalion commander in these specific areas:
  - FA organization for combat and FA attack guidance.
  - Identification and development of essential fires and effects tasks (EFETs) and EFATs.
  - Positioning and movement of firing/TA assets, CP, ALOC, BSOC.
  - The FA operations estimate, MDMP, and the FASP.
  - Employment of organic, attached, and reinforcing firing units.
  - Employment of organic or attached radars and other TA assets to include TUAVs when available.
  - Employment of organic or attached survey assets.
  - Logistic priorities, in coordination with the XO, S4, and S1.
- Rehearsal supervision.
- Supervise and direct the operations and positioning of the TOC.
- Plan, coordinate, and control tactical movement, to include selection of positions, preparation of the tactical movement plan, and terrain management, for all elements under the battalion's control or direction.
- Supervise and direct preparation and dissemination of the FASP, orders, and directives.
- Plan, supervise, and direct battalion survey operations.
- Coordinate plans with higher, subordinate and adjacent fires units.
- Ensure databases and commander's guidance in automated C2 equipment are correct and properly coordinated within the battalion.
- In coordination with the S4 and FSC commander, plan and manage ammunition consumption, distribution, and resupply. Calculate ammunition requirements, basic loads, and required supply rate (RSRs)/control supply rate (CSRs).

● Integrate operations security (OPSEC) into the overall operations of the unit.

● Establish communications priorities.

● Direct and supervise the planning and execution of the battalion's participation in the counterstrike fight.

● Ensure counterstrike plan meets the intent and guidance of the supported maneuver commander and of the fires battalion and fires brigade commanders, as appropriate.

● Ensure that priorities, mission routing, clearance of fires, and attack guidance for counterstrike within the battalion's zone of fire are coordinated and understood by all members of the TOC and by the firing battery leaders.

● Maintain close coordination with the HBCT FEC and with the fires brigade HQ to ensure that the battalion's counterstrike responsibilities are coordinated and synchronized with requirements for close support and shaping operations, therefore not over overtaxing the fires battalion capability.

● Supervise radar management to ensure radar zone management, sector assignments, cueing, and positioning are properly incorporated into the decision support template (DST)/synchronization matrix and the TA tab to the FASP.

● Identify detailed counterstrike responsibilities, to include specified and implied counterstrike tasks, and assign counterstrike responsibilities during the planning process.

● Ensure counterstrike ammunition requirements are addressed in overall ammunition requirements. Evaluate assigned CSRs to determine the impact on counterstrike responsibilities.

● With the S2, Target Processing Section, and FDO, evaluate force protection issues inherent in counterstrike tasks and tactics.

● Coordinate meteorology (met) support for the battalion.

S4 (LOGISTICS OFFICER)

1-22. The S4 coordinates and manages logistical support for the battalion. He coordinates with the FSC commander for the execution of support functions, to include ensuring that requisitions for all classes of supply have been submitted in a timely manner. He performs as a shift leader in the ALOC. The S4's duties include the following:

● Advise the commander and staff on all S4 areas, to include: Logistics C2—centralized versus decentralized logistics operations, battalion trains concept and positioning.

● Ammunition estimates, distribution, and resupply operations.

● Refueling operations.

● Transportation requirements and main supply route (MSR) selection and operation.

● Unit movements.

● Prepare logistics estimates and plans using logistics preparation of the battlefield (LPB) methodology. With the S1, prepare paragraph 4 of the FASP and the logistics support plan/tab.

● Supervise, manage, and coordinate battalion supply and sustainment operations, to include ammunition and refueling.

● Distribution operations for all classes of supply except Class VIII (medical) within the battalion.

● Recommend logistics priorities and employment of S4 assets that support the commander's intent and mission accomplishment.

● With the S1, establish and maintain the ALOC and BSOC. Supervise operations of the ALOC.

● Ensure the S4 section and the ALOC establish and maintain situational awareness—of the general situation, FA operations, and CSS.

● Plan and coordinate administrative movements.

● Request and distribute maps (paper/digital), as required.

● Review the battalion's EFATs for critical logistical requirements (e.g., combat configured loads (CCLs) of ammunition, hot refuel).

S6 (COMMUNICATIONS AND ELECTRONICS STAFF OFFICER)

1-23. The S6 is responsible for communications and automation operations, management, and security. The S6 is a coordinating staff officer and is directly accountable to the XO. In addition to those listed in FM 6-0, S6 advise the commander and staff on the following:

● Selection of unit position areas (PAs), from a communications standpoint.

● Communications and automation planning, operations, priorities, security, training, and rehearsals.

● Electronic counter-counter measures (ECCM).

● Communications and automation requirements associated with EFETs and EFATs, e.g., unique communications and/or automation equipment, nets, database exchange, or procedures for sensor-to-shooter links or other critical communications.

● Plan, manage, and direct communications operations to include establishment of communications networks and systems and installation and maintenance of equipment.

● Coordinate integration of battalion communications systems into those of the supported HBCT maneuver units/FA units and a fires brigade.

● Coordinate with signal units for communications support.

● Supervise operator maintenance of communication equipment.

● Manage all frequency allocations and assignments.

● Manage and direct communications security (COMSEC). Direct and supervise the battalion COMSEC custodian who issues and accounts for COMSEC equipment, key lists, codes, ciphers, signal operating instructions (SOI), and authentication systems.

● Plan, manage, and direct automation systems administration, maintenance, and security.

● Establish automation systems administration and security procedures for automation hardware and software.

● Supervise and direct battalion local area networks (LANs) configuration and usage of battalion network capabilities.

● Prepare communications estimates and write the signal paragraph (paragraph 4a) of the FASP.

● Perform communications reconnaissance and survey to assist the S3 in positioning key elements of the battalion, to include retransmission (retrans) stations.

BATTALION OPERATIONS SECTION

ASSISTANT S3

1-24. The assistant S3 supervises the activities of the operations section and manages the TOC operations in the absence of the S3. The assistant S3 constructs the FA support matrix (FASM) and the FA positioning overlay for the FASP. During execution, the assistant S3 may position himself near the operations situation map and status boards. He is responsible

for maintaining current information on the status boards; supervising the upkeep of the operations map and overlay; verifying target plotting on the target overlay and advising the S3 of any targets that violate graphical FS coordinating measures (FSCMs) or maneuver control measures. His focus is on positioning and ranging targets established in the FESP, maintaining tube strength, and coordinating ammunition resupply. He positions and moves organic or attached radars in conjunction with the S2 and the targeting officer.

OPERATIONS NONCOMMISSIONED OFFICER

1-25. The operations NCO supervises the activities of all NCOs/enlisted Soldiers in the TOC and assists the assistant S3 with operations functions. He performs and supervises net control duties for the battalion command net, maintains the staff journal and message log, and ensures the situation map/charts are current at all times. He also ensures the TOC complex is properly supplied and maintained.

BATTALION MASTER GUNNER

1-26. The battalion master gunner is the weapon system expert in the battalion. He should be the battalion's most knowledgeable Soldier on the unit's primary weapon system. He must be well versed on all aspects of the weapon (operation, maintenance, training, and record keeping) and where applicable, it's supporting ammunition vehicle. The battalion master gunner's duties and responsibilities are as follows:

● Assists the S3 and CSM in managing the battalion's individual and crew training and certification program for 13B or 13M Soldiers. This includes training and certification of officers and senior NCOs. Place special attention on the training and evaluation of howitzer section chiefs. Plan and conduct battalion certification events.

● Assist the S3 in management of the individual and crew training and certification program for all military occupational specialties (MOS).

● Assist the S3 in management of the battalion artillery safety program and coordinate these efforts with the battalion safety officer/NCO as part of the battalion's overall safety program.

● Assist the S3 and XO with maintaining maximum readiness and operational status in primary weapon systems. This includes crew training and maintenance issues for howitzers and ammunition vehicles. Maintain close coordination with battalion and battery maintenance supervisors and with unit artillery mechanics.

● Assist the batteries with the management of their 13B or 13M training programs and with battery safety programs.

● Troubleshoot problems on the battalion's primary weapon system and ammunition vehicles. This is mainly in a support role to the gunnery sergeants in the firing batteries.

● Assist the S3 and S1 in maintaining the most current information and training packages on primary weapon systems and their supporting ammunition vehicles, to include FMs, technical manuals (TMs), bulletins, training circulars, training support packages, and all other possible pertinent information. The master gunner must frequently check official internet sites, professional publications, and other sources of information for current and emerging tactics, techniques, procedures, training, and safety information.

● Maintain a dialogue with master gunners in other battalions to ensure rapid identification of new issues noted by other units.

● Assist the S3 in rapid dissemination of all critical information concerning the battalion's primary weapon platform.

CHEMICAL, BIOLOGICAL, RADIOLOGICAL, NUCLEAR (CBRN) OFFICER /NONCOMMISSIONED OFFICER

1-27. The chemical officer advises the commander and staff on nuclear, biological, and chemical (NBC) defensive operations, contamination, predicted enemy strikes, decontamination, obscurants, and flame. He also writes the NBC portion of the FASP; maintains current status of decontamination sites in the area of operations (AO) and mission-oriented protective posture (MOPP) requirements; and he processes all NBC reports.

1-28. The chemical NCO provides advice to the commander and staff on NBC defense matters, decontamination, equipment maintenance, NBC reconnaissance and support contingency requirements.

TARGET ACQUISITION PLATOON LEADER

1-29. The target acquisition platoon leader is the officer in charge of the target acquisition platoon. He supervises the activities of the platoon to include training, maintenance, security and employment. Specific duties include:

- Performs tactical coordination for FA radars in support of the HBCT. This coordination includes communications, security/force protection support and ADA positioning (engineers and land clearance), logistics, and administration.
- Inspects maintenance of platoon vehicles and equipment.
- Monitors the mission support requirements of all TA radars within the HBCT area of operation.
- Informs the fires battalion commander, S3, S2, and the brigade ECOORD on the status of field artillery TA radars.

Target Acquisition Platoon Sergeant

1-30. The target acquisition platoon sergeant is the senior enlisted Soldier in the platoon. He assists the acquisition platoon leader in the performance of his duties. His other responsibilities are:

- Trains and rates radar section chiefs.
- Coordinates survey support for radars as required.
- Supervises maintenance and training of radar sections.
- Provides input to the targeting officer required to construct and maintain the TA capabilities chart.
- Provides input to the radar employment order (RDO) as necessary.
- Monitors the deployment of the radar sections and recommends general position areas, search areas, and cueing agents to the targeting officer.
- Coordinates the distribution of replacement personnel and administrative actions.
- Facilitates supply distribution for the radar sections.

TARGETING OFFICER—TARGET PROCESSING SECTION

1-31. In the fires battalions, the targeting officer (WO/131A) is located in the target processing section in the target acquisition platoon. He focuses on target information received from TA sources and uses AFATDS to collect, analyze and process this information into required target guidance and instructions. In addition, the targeting officer performs these duties:

- Recommends and updates:
  - TA coverage
  - Command and control of FA TA assets

- ▪ Position areas for FA TA Assets
- Orients FA TA assets to ensure required coverage of the HBCT battlespace. Tracks FA TA assets
- Assist the battalion S2/S3 with development and execution of the FA TA and counterstrike plan.
- Maintains situational understanding (SU) of targeting operations.
- Recommends TSS.
- Uses TSS to develop enemy artillery targets and suspect targets.
- Provides target location error (TLE) information on available TA assets to the S2, S3, ECOORD as a basis for TSS recommendations to the targeting team.
- Advises the fires battalion commander and the HBCT effects coordinator (ECOORD) on counterstrike operations.
- Supports targeting meetings as required.
- Help the battalion S2 write the intelligence, TA, and surveillance portions of the FASP, to include the RDO when applicable.
- Help plan for and manage attached, organic, and OPCON TA assets.
- Assist the S2 in identifying CCIR.
- Conducts predictive BDA and request BDA from external sources/higher HQ.

BATTALION FIRE DIRECTION CENTER (FDC)

FIRE DIRECTION OFFICER (FDO)

1-32. The FDO supervises tactical and technical fire direction (FD) within the battalion. On the basis of guidance from the battalion commander, S3, S2, Targeting Officer, and the ECOORD, the FDO decides where and how the battalion and any reinforcing units will fire. Specific FDO duties include:

- Supervise the FD section.
- Assist the ECOORD in developing the commander's criteria based on the supported maneuver commander's concept for FS.
- Develop and supervise input of appropriate parameters into the AFATDS, Coordination of these parameters with maneuver battalion fires cells (FC) and the HBCT FEC, reinforcing/reinforced FA units, and fires brigade HQ when deployed. Coordination of digital communications and database elements may also be required with users of non-FA digital C2 systems.
- Analyze requested targets for attack by FA. Consider desired effects, method of fire, and types of ammunition needed.
- Ensure dissemination of fire plans and schedules of fires to subordinate and supporting unit FDCs and to FCs and the HBCT FEC as appropriate.
- Coordinate with FCs and the HBCT FEC to process requests for other types of FS.
- Maintain the current target overlay.
- Keep FA elements informed of targets.
- Establish procedures and train personnel to accomplish tactical and technical FD in a degraded (manual/voice) mode.
- Establish procedures for interface between AFATDS, Interim Fire Support Automation System (IFSAS), FDS, or Lightweight Tactical Fire Direction System (LTACFIRE) units, as well as any other digital system with which the FDC may be required to interface.

CHIEF FIRE CONTROL SERGEANT

1-33. He is the automated technical and tactical fire control expert in the battalion FDC. He is responsible for: establishing the tactical database in the battalion automated fire control system; monitoring the technical input and executions of fire plans and missions; advising the FDO on changes or updates to battlefield geometry and firing unit status; and cross-checking status boards with system data.

BATTALION AMMUNITION OFFICER

1-34. The distribution platoon leader manages re-supply of ammunition in the fires battalion and performs an additional duty as the battalion ammunition staff officer. His primary duties include the following:

- Manage the use of the battalion's ammunition-carrying assets.
- Manage ammunition movement from the forward support company holding area to the combat trains area and then forward to the batteries.
- Maintain accountability of ammunition.
- Ensure ammunition basic loads delivered to the batteries contain the proper mix and quantities of ammunition.
- Perform mission analysis to verify ammunition handling capabilities can support current operations. Report shortcomings to the S3.
- Perform the additional duty as the battalion ammunition officer, coordinating with the S4 on all ammunition resupply actions.
- Manage turn-in of residue and unexpended ammunition.

MEDICAL PLATOON LEADER/PHYSICIANS ASSISTANT

1-35. The medical platoon leader and the physician assistant work together to establish the BAS. The treatment team leader (physicians assistant (PA) is dual-hatted as the battalion surgeon. In conjunction with the medical platoon leader he will plan, coordinate, and execute the FHP. The BAS has medically trained personnel to stabilize patients for further evacuation, to perform immediate lifesaving or limb-saving techniques, and to treat minor wounds or illnesses and return patients to duty. Other functions of the medical platoon leader/physicians assistant include the following:

- Receive and record patients
- Notify the S1 of all patients processed and disposition of casualties as directed by tactical standard operating procedure (TSOP).
- Prepare field medical records and verify information on field medical cards.
- Request and monitor aeromedical evacuation.
- Monitor personnel, when necessary, for radiological contamination before medical treatment.
- Decontaminate and treat small numbers of chemical casualties.
- Recommend personnel priorities and employment of medical assets that support the commander's intent and mission accomplishment.
- Prepare medical estimates and plans and in conjunction with the S1/S4, prepare paragraph 4 of the Field Artillery Support Plan (FASP).

Combat Medics

1-36. Trauma Specialists from the combat medic section of the medical platoon habitually work with the same battery. The functions of the medics are to:

- Provide emergency medical treatment and protection for the sick and wounded.

- Assist section crews in evacuating injured crewmen from their vehicles.
- Provide medical evacuation.
- Initiate field medical cards for the sick and wounded, and time permitting, complete cards for deceased personnel.
- Screen, evaluate, and treat patients suffering from minor illnesses and injuries; return to duty patients requiring no further attention; and notify the first sergeant of those requiring evacuation to the BAS.
- Inform the battery commander and the battalion physician assistant of the status of patients seen and the overall status of health and welfare of the battery.
- Train unit personnel self-aid and buddy aid.
- Provide trained combat lifesavers with medical supplies, as required.

The evacuation section ambulances provide medical evacuation and en route care from the Soldier's point of injury or the battery's casualty collection point (CCP) to the BAS. A trauma specialist and an ambulance team are normally in support of a battery. In mass casualty situations, nonstandard evacuation platforms (vehicles) may be used to assist in casualty evacuation as directed by the supported commander. Plans for the use of nonmedical vehicles to perform casualty evacuation should be included in the fires battalion TACSOP and OPORD. From the BAS, patients are evacuated by brigade support medical company (BSMC) ground ambulances and by supporting aviation air ambulances back to the BSMC Level II treatment facility.

Chapter 2

Fires Battalion Command and Control

CONCEPT OF BATTLE COMMAND

2-1. Battle command is the exercise of command in operations involving the art of combat decision making, leading, and motivating Soldiers and organizations to accomplish assigned missions. Commanders visualize the current and future status of friendly and enemy forces and formulate concepts of operations to accomplish the mission. Battle command encompasses assigning missions; prioritizing and allocating resources; selecting the critical time and place to act; and knowing how and when to make adjustments to the mission. The fires battalion battle command systems enable the commander by integrating command, control, computers, communications, and intelligence, providing him with accurate and timely information upon which to base his decisions. Commanders must see, hear, and understand the needs of seniors and subordinates, and guide their organizations toward the desired end state. The concept of battle command incorporates three vital components— decision making, leadership, and control. These components are discussed below.

DECISION MAKING

2-2. Decision making is knowing, if to decide, then when and, what to decide. Making a decision brings with it the cost of committing resources and incurring risks. Decision making includes the following aspects:

- Anticipate the outcome
- Understand the consequences of the decision.
- Acknowledge those decisions that are or may be irrevocable.
- Recognize the time involved to implement a decision.

LEADERSHIP

2-3. Leadership is taking responsibility for decisions and translates those decisions into action. Leadership is the process of influencing an individual or organization by providing purpose, direction, discipline and motivation to accomplish the mission. The fires battalion commander is first and foremost a leader. He leads through a combination of example, persuasion, and compulsion as well as force of will. He reflects his leadership through loyalty to his subordinates, inspiring and directing assigned forces and resources toward a purposeful end and establishing a teamwork climate.

CONTROL

2-4. Command is the art of war within the domain of the commander. Control is the science of war within the purview of the staff. Control monitors the status of organizational effectiveness. It identifies deviations from standards and corrects them. Control provides the means to regulate, synchronize, and monitor forces and functions. These tasks are performed through collection, fusion, assessment, and dissemination of information and data.

2-5. The fires battalion commander will lead from critical points on the battlefield, delegate authority, and synchronize fire support actions with other battle operations. The fires battalion staff works within the commander's intent to direct and control fires and effects to support the HBCT commander's desired end state.

SECTION II – COMMAND AND CONTROL (C2)

2-6. C2 is a process that begins and ends with the commander. The commander must develop techniques and procedures that promote an expeditious flow of information throughout the entire C2 process. These techniques and procedures should be delineated in the unit's tactical standard operating procedure (SOP).

2-7. Units base decisions on the information derived from the C2 process, consisting of the following:

- Acquire information.
- Assess whether new actions are required.
- Determine what these actions should be.
- Direct subordinates to take appropriate actions.
- Supervise and assess.

2-8. The C2 process is accomplished within the C2 system. The C2 system is defined as the facilities and personnel essential to a commander for planning, directing, and controlling operations. The C2 system of the fires battalion is the tactical operations center (TOC), the personnel that man the TOC and a mix of Army Battle Command Systems (ABCS), Force XXI Battle Command System for Brigade and Below (FBCB2), and frequency modulation (FM) radios with which they operate.

2-9. The ABCS provides the electronic architecture in which situational understanding (SU) is accomplished. These systems pass critical information at decisive times; thus, they leverage and exploit tactical success and facilitate future operations. The fires battalion command, control, communications, computer, and information (C4I) architecture is discussed in detail in Section IV and V.

SECTION III – COMMAND AND SUPPORT RELATIONSHIPS

2-10. Command and support relationships are essential elements of command and control. Command relationships define command responsibility and authority. Support relationships define the purpose, scope, and effect desired when one capability supports another. Together they form a framework for developing well trained and flexible fighting organizations that can quickly adapt to changing mission requirements. Command and support relationships are critical for command and control of the fires and effects system.

2-11. Field artillery units will retain their traditional command and support relationships; however, as the Army converts to the modularity construct, the command and support relationships used may be replaced or re-defined by joint-derived command relationships. These will include operational control (OPCON), tactical control (TACON), attached, assigned, organic, and supported and supporting. In this construct, supported and supporting are command relationships. The supported commander requests and receives capabilities, or requires the supporting commander to create effects according to the intent of the supported commander. During this period of transformation, the UEx and subordinate units will operate under the new, joint relationships as well as continue to follow the definition of the standard Field Artillery tactical missions (support relationships) and the eight inherent responsibilities associated with each of them.

2-12. The fires battalion is organic/assigned to the HBCT and will perform the functions as defined of an assigned unit. This includes the delivery of fires for close support, HBCT shaping operations, plus the added mission of counterstrike in the HBCT AO. Being assigned verse direct support (DS) also changes the requirements for establishing communications for the fires battalion, which will now follow the rule of higher to lower. The fires battalion no longer commands the total fire support system and therefore has different requirements for establishing and operating the fire support systems communication network. The fires battalion will establish and act as net control station (NCS) for all subordinate units of the battalion and the HBCT fire and effects cell (FEC) will perform the duties of NCS for the remainder of the fire support system.

2-13. The HBCT is one of the basic maneuver formations for the modularized Army. As such, it is resourced to deploy, fight and operate in a distant AO with or without augmentation. Mission, enemy, terrain and weather, troops and support available, time available and civil considerations (METT-TC) may require the HBCT to be augmented with an attached Multiple-Launch Rocket System (MLRS) battery for example. In this case, the HBCT commander may further attach this battery to his organic fires battalion to facilitate command and control and support. In another case, where the HBCT has attached a full artillery battalion, with an organic support organization, he may place that fires battalion in a reinforcing role to his organic fires battalion. When the HBCT is operating within the context of a UEx and a fires brigade is present, then normal command relationships should be used. Additional fires battalions made available to the HBCT would be assigned either a reinforcing, general support reinforcing, or general support mission.

2-14. An HBCT may be given the mission of follow and support to another brigade. In this situation, the assigned fires battalion of the follow and support brigade may be assigned a reinforcing mission to the fires battalion of the supported brigade. Assignment of this mission would be ordered by the UEx commander.

Table 2-1, Field Artillery Command Relationships

IF RELATIONSHIP IS:		INHERENT RESPONSIBILITIES ARE:							
		Has Command Relationship with:	May Be Task Organized by:	Receives CSS from:	Assigned Position AO By:	Provides Liaison To:	Establishes/Maintains Communications with:	Has Priorities Established by:	Gaining Unit Can Impose Further Command or Support Relationship of:
COMMAND	Attached	Gaining Unit	Gaining Unit	Gaining Unit	Gaining Unit	As required by Gaining Unit	Unit to which attached	Gaining Unit	Attached; OPCON; TACON; GS; GSR; R; DS
	OPCON	Gaining Unit	Parent Unit and Gaining Unit; gaining unit may pass OPCON to lower HQ. Note 1	Parent Unit	Gaining Unit	As required by Gaining Unit	As required by Gaining Unit and Parent Unit	Gaining Unit	OPCON; TACON; GS; GSR; R; DS
	TACON	Gaining Unit	Parent Unit	Parent Unit	Gaining Unit	As required by Gaining Unit	As required by Gaining Unit and Parent Unit	Gaining Unit	GS; GSR; R; DS

Table 2-1, Field Artillery Command Relationships

IF RELATIONSHIP IS:		INHERENT RESPONSIBILITIES ARE:							
		Has Command Relationship with:	May Be Task Organized by:	Receives CSS from:	Assigned Position AO By:	Provides Liaison To:	Establishes/Maintains Communications with:	Has Priorities Established by:	Gaining Unit Can Impose Further Command or Support Relationship of:
	Organic/ Assigned	Parent Unit	Parent Unit	Parent Unit	Gaining Unit	As required by Parent Unit	As required by Parent Unit	Parent Unit	Not Applicable
SUPPORT	Direct Support (DS)	Parent Unit	Parent Unit	Parent Unit	Supported Unit	Supported Unit	Parent Unit; Supported Unit	Supported Unit	Note 2
	Reinforcing (R)	Parent Unit	Parent Unit	Parent Unit	Reinforced Unit	Reinforced Unit	Parent Unit; Reinforced Unit	Reinforced Unit; then Parent Unit	Not Applicable
	General Support Reinforcing (GSR)	Parent Unit	Parent Unit	Parent Unit	Parent Unit	Reinforced Unit and as required by Parent Unit	Reinforced Unit and as required by Parent Unit	Parent Unit; then Reinforced Unit	Not Applicable
	General Support (GS)	Parent Unit	Parent Unit	Parent Unit	Parent Unit	As required by Parent Unit	As required by Parent Unit	Parent Unit	Not Applicable

NOTE 1. In NATO, the gaining unit may not task organize a multinational unit (see TACON).
NOTE 2. Commanders of units in DS may further assign support relationships between their subordinate units and elements of the supported unit after coordination with the supported commander.

TACTICAL MISSIONS

2-15. . As depicted in Table 2-1, the four standard tactical missions continue to have relevance under the modular design, with minor modifications to the communication requirements. Four additional command relationships have been added to the list: Attached, OPCON, TACON, and Organic/Assigned. Responsibilities and communication requirements for these additional command relationships were shown in Figure 2-1.

DIRECT SUPPORT

2-16. The HBCT will be responsible for establishing the brigade fire support net (digital and voice). The HBCT FEC will act as NCS. This net is used to plan and execute fires and effects throughout the HBCT. This net will include maneuver battalion FC, RS FC, the BTB FC and the fires battalion. The fires battalion will establish all internal battalion nets with firing and support units.

- **Reinforcing (R).** An artillery unit assigned the mission of reinforcing will maintain communications with its parent unit and establish communications with the reinforced artillery unit HQ (reinforcing-to-reinforced relationship).
- **General Support Reinforcing (GSR).** An artillery unit with the mission of GSR must establish communications with the reinforced artillery unit HQ (reinforcing-to-reinforced relationship). The senior artillery HQ must establish communications with the GSR unit (senior-to-subordinate relationship).
- **General Support (GS).** An artillery unit with the mission of GS does not have an inherent responsibility for establishing external communications with any other unit.

However, the senior artillery unit must establish communications with its subordinate GS artillery units (senior-to-subordinate relationship).

- **Attached.** An artillery unit with the support relationship of attached will establish communications with the unit to which attached and operate in additional nets as directed by the gaining unit.
- **OPCON.** An artillery unit assigned the support relationship of OPCON, will establish communications as required by the gaining unit and the parent unit.
- **TACON.** An artillery unit assigned the support relationship of TACON, will establish communications as directed by the gaining unit and the parent unit.
- **Organic/Assigned.** An artillery unit assigned to an organization will establish communications as directed by the parent unit.

2-17. The HBCT may be supported by coalition or allied artillery units. In this event command, support and liaison requirements must be coordinated. NATO artillery units are prepared to accomplish the tactical tasks and responsibilities found in STANAG 2484.

LIAISON OPERATIONS

2-18. One of the eight inherent responsibilities of a FA battalion assigned an R or a GSR tactical mission is to provide liaison to the unit being reinforced. A Fires battalion organic to a HBCT that has a follow and support mission may be assigned one of these missions. Also, the battalion commander may also direct liaison be established with another FA unit, a maneuver unit, or any other element when he identifies a need for close, effective coordination with that unit or element. Liaison may even be necessary with nonmilitary elements. Fires battalions organic to HBCTs don't have organic liaison sections and if the decision is made to implement liaison with a unit, this team must be organized from existing resources.

2-19. Liaison is the contact or intercommunication maintained between elements to ensure mutual understanding and unity of purpose and action. Liaison activities augment the commander's ability to synchronize and focus combat power. Liaison includes establishing and maintaining physical contact and communications. Liaison activities ensure the following:

- Mutual cooperation and understanding between commanders and staffs.
- Coordination on tactical matters to achieve mutual purpose, support, and action.
- Exact and precise understanding of implied or inferred coordination measures to achieve synchronized results.

2-20. Overall, liaison becomes another tool to help commanders overcome friction, gain assurance that supporting and supported commanders understand implicit coordination, and achieve synchronized results. Effective liaison enhances the commander's confidence in planning and in mission execution.

2-21. If the reinforced and reinforcing units are digitized, and both units maintain communications and situational understanding, the actual physical presence of a liaison team at the reinforced unit may not be required. If the two units choose to collocate TOCs or fire direction centers (FDCs), the liaison requirement is met and no liaison is required.

2-22. When a fires brigade battalion is assigned a tactical mission of GS (MLRS battalion for example), it may be positioned in the area of operation of a HBCT. The FA battalion commander may consider sending one of his liaison teams to the HBCT FEC. This team can help the battalion commander in tracking the maneuver situation and in keeping the HBCT commander informed of the location and status of a sizable friendly force that is in his area but not under his control.

SECTION IV – COMMAND, CONTROL, COMMUNICATIONS, COMPUTERS AND INFORMATION (C4I) ARCHITECTURE

ARMY BATTLE COMMAND SYSTEMS (ABCS)

2-23. ABCS is a combination of fixed/semi-fixed installations and mobile networks that are interoperable at all echelons and integrate with joint C2 systems. Force XXI Battle Command, Brigade and Below (FBCB2) initiates this network at the tactical level with the remainder of ABCS systems managing and exchanging information in and below/between battalion and higher command posts. ABCS provides C2 functions intended to assist the commander in his tactical decision making process. C2 is defined as all data other than SU.

2-24. The purpose of the command post (CP) is to provide real-time data to the decision maker. The Army Battle Command Systems (ABCS) is designed to provide the battle commander and his staff with a common operational picture, as well as all the information necessary to effectively plan, coordinate, control, and direct the battle. The following systems enable or are part of the ABCS:

- Maneuver Control System (MCS).
- Advanced Field Artillery Tactical Data System (AFATDS).
- All Source Analysis System-Light (ASAS-L).
- Air and Missile Defense Workstation (AMDWS).
- Battle Command Service Support System (BCS3).
- The Tactical Airspace Integration System (TAIS).
- The Global Command and Control System-Army (GCCS-A).
- Force XXI Battle Command, Brigade and Below (FBCB2) system.

2-25. The fires battalion will gain access to this network through a wideband capability provided by the fires battalion small command post node. The small command post node provides secret data and voice over internet protocol (VOIP) phone service. This architecture allows the battalion data network to access the GCCS-A through either a unit hub node (UHB) or a joint network node (JNN).

2-26. At the fires battalion level, assigned operators (25F and 25B) are in charge of setting up the communications package to support data and VOIP service to the headquarters. Setup for the network is a standard procedure that consists of powering the system, pointing to the satellite, and connecting the data equipment for needed dial tone or e-mail/organizational traffic.

2-27. The ABCS is a result of the requirement for commanders to rapidly gain reliable information to achieve information dominance to control their battlespace. The ABCS satisfy two critical battle command C2 requirements; interoperability and situational understanding. The systems which the fires battalion will have direct access to satisfy these requirements are as follows:

- **Maneuver Control System (MCS).** This system provides the fires battalion commander and the staff an automated, near real time capability for planning, coordinating, monitoring and controlling tactical operations. The MCS operator can tailor the applications to display the picture of the battlefield he chooses. The battlefield view is derived from data fed by automatic information provided by a combination of ABCS systems. These sources are local and remote. The MCS is primarily used for creating and sending operation orders (OPORDs). It also is equipped with digital collaborative tools the commander and staff can use in planning future operations and reviewing past operations.
- **Advanced Field Artillery Tactical Data System (AFATDS).** This system provides command, control and communications (C3) for cannon, rockets, missiles,

mortars, close air support, and naval surface weapon systems. It supports the planning, coordinating, control and execution of close support, counterstrike, interdiction, shaping operations and suppression of enemy air defense. It is a single, integrated fire support asset manager. It provides decision aids and an information system for the synchronization of all types of fire support means.

● **All Source Analysis System-Light (ASAS-L).** This system provides the commander and staff with analyzed intelligence and unanalyzed combat information. It allows the analyst to quickly correlate large volumes of information. Once correlated, the analyst has the ability to use a variety of software tools to transform raw data into finished intelligence products. The system receives and displays imagery from national, theater, and tactical sources. It provides an analyzed enemy situation understanding through all source sensor feeds and combat information. It provides the database and analysis tools to assist in collection management and intelligence preparation of the battlefield (IPB).

● **Force XXI Battle Command, Brigade and Below (FBCB2).** FBCB2 is the battle command information system for units operating at the lower tactical level. It provides horizontal and vertical integration of the information generating and processing capabilities of individual weapons, sensors, and platforms. This system provides near real time situational understanding of friendly locations and reported enemy locations. It can process a limited number of message formats, EX: medical evacuation requests, and NBC 1 reports (observer reports). It can create and disseminate orders and overlays and submit logistics and personnel reports. Currently there are two FBCB2 systems in the force: one is terrestrial based, the Enhanced Position Location Reporting System (EPLRS), and the second is satellite based. The 4ID, 1CAV and the Stryker brigades are equipped with the terrestrial system and will keep this system in the near term. The 3ID and future divisions receiving FBCB2 will be equipped with the satellite based BFT system. In the "good enough battle command" solution, only selected weapons, sensors and platforms will be equipped with the satellite FBCB2/BFT (FBCB2/Battle Focused Trainer) system. In the fires battalion, selected vehicles will be equipped with FBCB2/BFT down to the platoon leader level.

● **Battle Command Sustainment and Support System (BCS3)** provides the commander with decision support and situation understanding for planning and controlling the logistics support of combat operations. This system provides the commander with the capability to display current resource status, develop course of action analysis, and to conduct resource tracking. This system will not be located in the fires battalion CP but in the forward support company (FSC).

2-28. ABCS is interoperable with joint and multinational C2 systems at upper echelons, and it is vertically and horizontally integrated at the tactical and operational levels. In addition to the systems listed above the fires battalion will have access to products and information from the following systems:

● **Air and Missile Defense Work Station (AMDWS)** supports the development of air defense artillery (ADA) missions, notification of potential enemy air strikes and theater ballistic missile launch point and impact.

● Tactical Airspace Integration System (TAIS) support air integration planning and coordination and provides the planning and control capability for managing Army airspace command and control (A2C2).

2-29. The digital message capability of ABCS and FBCB2 provides the Fires battalion commander a variety of tools to assist him in commanding and controlling the battalion. It is imperative that commanders and staffs fully understand what the system can and cannot do for them. Commanders should never forget that face-to-face command and control is always the most effective.

SECTION V – FIRES BATTALION RADIO COMMUNICATION OPERATIONS

GENERAL COMMUNICATIONS INFORMATION

2-30. Radio communication is a command responsibility, essential to efficient C2 of the fires battalion and to its ability to provide effective FS. The commander's radio communications plan should address all elements of his command, to include supported, reinforced, and adjacent units. To establish a responsive and dependable communications system, the fires battalion must consider and work within the following parameters:

- The battalion relies heavily on FM radio communications.
- The battalion monitors multiple radio networks while maintaining concept of operations (CONOPS) during displacement.
- The battalion communicates over long distances to many diverse elements, such as fire support teams (FISTs), combat observation and lazing teams (COLTs), FCs, reinforcing units, Fires brigade, and the supported maneuver force.
- The battalion relies increasingly on data communications, which have shorter range capabilities than voice communications.

RADIO COMMUNICATIONS RESPONSIBILITIES

2-31. The commander is responsible for the adequacy and proper use of the radio communications within his command and for their efficient operation in the system of the next higher command. The commander can delegate the authority to establish, maintain, control, and coordinate the battalion's various radio nets to a subordinate. The following paragraphs discuss general radio communications responsibilities.

2-32. The fires battalion S6 has overall authority and responsibility for the communications assets and operations within the fires battalion. The BN S6 must work closely with the HBCT S6 to ensure efficient radio communications for fire support throughout the HBCT AO. The S6 maintains the communications and automation systems, operates retrans stations, and installs wire systems for the fires battalion. The S6 section is organized with a section HQ, an automation management section, a wire section and a retrans section.

2-33. All elements of the battalion evacuate communications equipment for repair through the S6 section. The communications maintenance section performs maintenance on battalion HQ communications equipment within their capability. Mechanics in the FSC provide on-site field maintenance and assistance for the subordinate units of the battalion.

2-34. The automation management section provides assistance with the establishment, operation, and maintenance of the battalion's automation systems. This includes hardware, software, networks, and automation security. Their networking functions include management and maintenance internal to the fires battalion local area network (LAN).

2-35. The retrans section establishes and maintains the FM retrans station as required. Dual retrans capability is essential to maintaining FM voice and data communications over extended distances.

ECHELONS OF COMMAND

2-36. The senior unit is responsible for establishing communications with its subordinate units, whether organic or attached. This responsibility is primarily one of planning and directing the establishment of the linking communications systems since assets belonging to either the senior HQ or the subordinate unit may be used. The HBCT has the responsibility to establish communications with the Fires battalion, which is organic to the HBCT and is the senior unit.

BATTLE AREA

2-37. Adjacent commands must maintain communications with each other to ensure coordination of the combat effort. When facing the FLOT (left-to-right relationship), the command on the left establishes communications with the command on its right. In a non-linear, non-contiguous battle area, units will establish and maintain communications with adjacent units that can mutually support or influence their area of operations.

RESTORING / REESTABLISHING COMMUNICATIONS

2-38. Regardless of which unit is responsible for establishing communications, all units served by the system must help restore any communications system outage. This means that units will work from higher to lower, lower to higher, etc. to reestablish communications when it is interrupted and not wait for the NCS to solve the problem.

PLANNING CONSIDERATIONS

2-39. The communications plan is designed to fulfill the command and control requirements of a tactical mission. To meet specific requirements, commanders may modify their systems based on METT-TC. The S6 assists the S3 in developing the communications plan during the military decision making process (MDMP). The following factors must be considered during the planning phase:

● **Voice and Data Nets.** The fires battalions use a combination of voice and data radio nets, with the mix determined by the operational status of assigned equipment and METT-TC. If digital data capability is lost by the battalion or by one or more of the batteries, the voice nets can quickly become overburdened. The fires battalion communications plan must include plans for converting some data nets to voice while continuing to support the remaining digital data stations and for reconverting to data nets as that capability is restored. It is extremely important to keep voice traffic off digital data nets and vice versa. A voice backup plan should be developed for each operation, and rehearsed frequently. Many of the details can be included in the unit tactical standing opera (TSOP).

● **Planning Ranges.** Range capabilities vary with the method of communications, the type and model of equipment used, terrain, weather, and atmospheric conditions. Jamming also degrades communications range. Since rehearsal on the actual terrain and under the exact conditions is often impossible, experience and thorough map reconnaissance are essential to proper estimation of communications ranges.

● **System Mixes.** The factors of METT-TC have different effects on the communications means. The preferred communications setup is any system or mixture of systems that will communicate the information with the least exposure to enemy electronic warfare (EW) and not place total reliance on radio. A good communications plan maximizes the use of all available systems and backup plans to prevent over reliance on any one system. Much of a fires battalions basic communication planning can be addressed in the unit's TSOP.

ELECTRONIC COUNTER-COUNTER MEASURES (ECCM)

2-40. ECCM should be part of each fires battalion TSOP. They can improve OPSEC and preserve communications. ECCM techniques that have been found to be effective include the following:

● Requiring authentication on non-secure nets if operating in the single channel mode of operation. Proper authentication procedures can eliminate intrusion and imitative deception.

● Not mixing plain and encrypted traffic on the same net. Doing so compromises the nature of the net, which makes interception and analysis easier for the enemy.

● Using secure equipment whenever possible. If the battalion is supporting a unit without secure capability, specify nets that will be unsecured and enforce secure discipline on all remaining nets.

● Limiting transmissions to 5 seconds or less if operating in the single channel mode of operation. This makes interception and direction finding more difficult.

● Working through jamming if at all possible. Jumping nets should be a last resort. Remember that if jamming is bad enough to keep a unit from operating on a net, it may also keep many of the stations from receiving the signal to change frequencies. Anti-jam frequencies must be disseminated well in advance, so that subscriber stations can move to the alternate frequencies in sequence. Susceptibility to jamming is greatly reduced with frequency hopping radios.

● Using only authorized call signs from the automated net control device (ANCD) or signal operation instructions (SOI) and changes them on schedule.

RADIO COMMUNICATION OPERATIONS

2-41. Communications operations must take advantage of all techniques to facilitate mission accomplishment. The following communication operational techniques should be considered and employed to enhance the Fires battalion's C2 capability:

● **Remoted Transmitters.** Remoting transmitters allow for the separation of the radio frequency (RF) emitter from the TOC or other critical facilities. Also, remoting radios allows the transmitter to be sited for optimized communications while allowing the user to position in locations better suited to survivability. Remoting also minimizes on-site or mutual interference while dissipating and reducing electronic signature.

● **Retransmission.** The fires battalion should use retrans operations to extend the area of coverage of a specific radio net or reduce the electronic signature of a position. By use of a retrans site, RF power output can be reduced at the TOC or other location. Overall net ranges can be doubled by the effective use of retrans. FM, very high frequency (VHF) transmission distances are restricted by terrain and obstacles. The sitting of radio equipment is often critical. The following are helpful hints for using FM retransmission:

  ▪ As a minimum, make a map reconnaissance of the AO. S6, S2, and S3 should discuss retrans operations during the planning phase.
  ▪ Analyze the terrain for optimum communications use, the Digital Topographical Support System (DTSS) can be used to assist in this analysis.
  ▪ Select primary and alternate locations for retrans. Consider accessibility, security, and logistical support.
  ▪ Arrange the timetable for site occupation and net operation.
  ▪ Ensure operators are well trained.
  ▪ Ensure users are aware of the tactical situation and how retrans works.
  ▪ If retransmitting digital data traffic, program additional key and/or delay time to allow radios to key up.
  ▪ If using forward entry device (FED), plan to use a nearby firing platoon, battery, COLT, FIST, or FEC to relay messages. This capability is useful when direct communication with an element is not possible. Relay addressing should be established per Fires Battalion TSOP or as identified in the appropriate SOI.

● **Antenna Multiplexers.** Using antenna multiplexers reduces the number of ground plane antennas required to operate multiple radios. The time required to align and tune these devices is considerably less than the time required installing multiple

antennas. However, multiplexers also have several disadvantages, to include reduced communications range and significantly increased bit error rate (BER) for data traffic (the BER will vary for different frequencies).

● **Directional Antennas**. Directional antennas reduce electronic signature in two directions while extending the range of the radio along the long axis of the antenna. Directional antennas should only be used in single-channel mode not frequency-hopping mode.

INTERNAL/EXTERNAL COMMUNICATIONS NETS

INTERNAL NETS

2-42. The fires battalion will require for normal operations six to seven internal nets. The internal nets are as follows:

● Battalion command (CF1) (VHF-FM) (voice) net is used for C2 and collection and dissemination of tactical information and intelligence. The battalion operations section is the NCS.

● Battalion FD 1, 2, 3, and 4 (VHF-FM) (data) nets are identical. They are used for tactical and technical fire direction (FD) from the forward observer (FO) through the fires battalion FDC to the controlling battery/platoon FDC. The FD nets should be assigned according to the mission and the battalion's communications status, not necessarily one per battery. However, one technique frequently used under ideal communications, is to assign one firing battery per net, with the FOs, COLTs, FISTs, and battalion FC spread evenly across the two nets. In some operational situations, when platoons are being used as firing units, it will be required to allocate one FD net per firing platoon. The NCS for all FD nets is the battalion FDC. One or more of the nets can be established as a voice net if necessary.

● Battalion command (CF2) (VHF-FM) (data) net is used for fire support planning and coordination between FA elements, for mutual support unit (MSU) operations and for tactical and technical FD to reinforcing artillery units. The NCS is the battalion FDC section. The CF2 net may be established as a voice net during degraded operations.

● Battalion operations/intelligence (O/I) (VHF-FM) (data) net is used for exchanging targeting, counterstrike, survey, meteorological, and intelligence information within the battalion. These elements can include Firefinder radars, target processing section, survey teams, and met teams. The NCS is the battalion S3 section.

● Battalion administration/logistics (VHF-FM) (voice) net is used for coordinating all battalion administrative and logistical matters. The battalion administration and logistics operations center (ALOC) is the NCS. The fires battalion S4, S1, the FSC commander and his subordinate platoon leaders will operate in this net on a full time bases. The firing battery commanders, 1SGs or executive officer (XO) will operate in this net as required.

EXTERNAL NETS

2-43. The fires battalion may operate on several external nets. The actual number will depend on availability of communications assets, HBCT task organization, and the UEx organization with supporting brigades. The fires battalion may operate in one or all of the following external nets:

● HBCT Command (voice)
● HBCT O/I (voice)
● HBCT A/L (voice)

- Fires brigade OF Net (VHF-FM) (data) (as assigned)
- Fires brigade O/I (VHF-FM) (data)
- HBCT fire support net (voice)
- Maneuver battalion fire support net (voice)
- The fires battalion, HBCT FEC, maneuver battalion FEC may also operate on a naval gunfire (HF) (voice) net.

DIGITAL VS. FM

2-44. Commanders should not rely on digital communications alone. Digitization does not eliminate the requirement for maps and FM communications. The decision to use FM vs. FBCB2 depends on the situation and unit SOP. Digitized systems are designed to facilitate collaborative planning and rapid dissemination of plans and orders. Commanders and staffs must learn to use the ABCS systems extensively during the planning and preparation phase of any operation. Some message traffic should be sent digitally followed with an FM alert directing recipients to check their message queues. FM radio remains the primary means of communications after crossing the line of departure (LD) because it's more responsive, multiple stations can monitor the net and parties convey emotion during the transmission—a critical tool in assessing and understanding the battlefield situation.

Chapter 3

Command Post Operations (CP)

This chapter provides the fires battalion commander and his staff guidance for effective CP operations. It focuses on CP, tactical operation center (TOC) and liaison operations. The chapter is organized into sections. Section I–The Fires Battalion Command Post (CP), Section II–TOC Organization, Section III–TOC Configuration, Section IV–TOC Information Management, and Section V–TOC Positioning and Movement.

SECTION I – THE FIRES BATTALION COMMAND POST (CP)

3-1.   The C2 of the fires battalions exercised through the establishment of a battalion command post (CP) and two to four subordinate operations centers. The TOC, which is comprised of the S3, S2, S6, FDC, and the target processing section (TPS), is habitually located with the CP. The administrative and logistical operations center (ALOC) is located in the combat trains (CT) and is manned by the S4, S1 NCO, battalion aid station (BAS) and elements of the FSC. The ALOC is the operations center for the combat trains. The battalion support operations center (BSOC) is located in the fires battalion support area (FBSA) and is manned by the S1, S4 NCO, FSC company headquarters, and elements of the company not located in the ALOC. The BSOC is the operations center for the FBSA. The ALOC and BSOC are discussed in detail in Chapter 5.

3-2.   The battalion may also form a tactical action center (TAC) to place C2 forward during high intensity, fast moving operations. The TAC would concentrate on the current battle, performing critical operations, FD, and intelligence tasks, while the TOC performed non-critical current tasks and planning and coordination functions. The TAC requires a vehicle that can keep up with the supported maneuver unit, two Advanced Field Artillery Tactical Data Systems (AFATDS) for operations and FD, with supporting communications equipment and Force XXI Battle Command System for Brigade and Below (FBCB2) for situational understanding (SU) and command and control.

3-3.   In offensive operations the TOC may be required to move forward to shorten communications distances and maintain command and control of the firing batteries/platoons. Under these conditions, the fires battalion may use a jump TOC technique, moving some elements of the TOC forward while the rear element of the TOC maintains control. Once the jump tactical operations center (JTOC) is established forward, it takes control and the rear TOC element breaks down and moves forward to reform a TOC forward. Employment of the JTOC is discussed further in Section V.

3-4.   The primary C2 facility is the battalion TOC. The commander usually positions his CP with the TOC. It is normally located where the battalion can best command and control all assets and influence Field Artillery (FA) and other FS systems in support of HBCT operations. With the fielding of increasingly more capable digital C2 systems, the battalion can establish limited TOC operations at various locations, e.g., on the move operating out of one or two vehicles, at the ALOC, at a firing battery or platoon, or at a fires cell (FC).

3-5.   The battalion will also designate an alternate TOC, which will assume control of battalion operations in the event the main TOC becomes inoperable or loses communications.

The alternate TOC may be another FA battalion (with reinforced/reinforcing units), a firing battery, the HBCT FEC, or the ALOC.

FIRES BATTALION CP COMPOSITION

3-6.   The make-up of the fires battalion CP will vary with the situation and the commander's concept of operations. Most of the elements that comprise the CP are in headquarters, headquarters battery (HHB) and the forward support company (FSC). The CP may include the following elements:

- Battalion command element.
- TOC.
- Communications support.
- Survey elements.
- Maintenance and supply as required

BATTALION COMMAND ELEMENT

3-7.   The battalion command element consists of the battalion commander, assisted by the CSM, the XO, and their drivers. They frequently work out of the TOC where they can best monitor and control the battalion's operations. They may also have their own tent for personal use and as a place to work or conduct meetings away from the TOC.

3-8.   The members of the command element are often away from the TOC observing, directing, or otherwise influencing the action at critical places on the battlefield. The fires battalion commander positions himself where he can best fulfill all of his command responsibilities. This may be in the fires battalion TOC, a trains location, a firing battery, or a key traffic or observation point. The fires battalion commander, as the senior artillery advisor for the HBCT commander, may at times be in the HBCT's HQ, a maneuver battalion FC, or with the HBCT commander at a critical location on the battlefield.

3-9.   The battalion XO, CSM, S3 and the brigade effects coordinator (ECOORD) provide critical C2 support which allows the fires battalion commander the flexibility to position himself wherever the situation dictates. The fires battalion commander will have an FBCB2 and frequency modulation (FM) radios in his vehicle that allows him to monitor digital traffic and aid in C2 of the battalion while he operates away from the TOC.

3-10.   The battalion XO may operate out of the ALOC instead of the TOC, especially when focusing his efforts on the battalion's logistic operations. During periods of major planning actions, or when the commander and/or S3 may be out of the TOC for extended periods, the XO will probably be in the TOC.

TACTICAL OPERATIONS CENTER

3-11.   The TOC serves as the fires battalion's primary C2 hub (information management center), assisting the battalion commander in synchronizing FA fires in support of brigade operations. It is the location in the battalion where the majority of planning, staff coordination, plan execution, receiving/disseminating information, and monitoring of key events occur. In order for the fires battalion to accomplish its assigned mission, the TOC (as a minimum) should be able to perform the following critical functions:

- Advise the battalion commander, and as appropriate, key fire support personnel, on the FA organization for combat, FA positioning, allocation of ammunition and FA attack guidance.
- Perform tactical fire direction (FD)—select FA units and ammunition to support fire mission requests in response to the maneuver commander's attack guidance and to ensure the desired effects are achieved.

- Plan FA operations—generate a FASP that outlines the concept of operations and responsibilities for the battalion and describes the fires battalion commander's plan for accomplishing assigned missions and responsibilities. In the fires battalion, the FASP must address the concept of employment and responsibilities of all FA supporting the HBCT, and is prepared in coordination with the HBCT FEC as part of the maneuver OPORD. The operations section, in coordination with the HBCT ECOORD and the maneuver FCs, ensure that the FA plan is synchronized with the maneuver force plan. MCS and AFATDS provide the digital interface that provides a collaborative planning capability to units throughout the HBCT to assist in these planning functions.

- Direct and execute current operations—control FA and target acquisition (TA) assets that are organic, attached, or reinforcing the battalion. Move and position firing elements and orchestrate the delivery of effective close support fires in support of brigade operations.

- Monitor technical FD—provide technical assistance to battery FDCs/platoon operation centers (POCs).

- Maintain situational understanding (SU) of the overall combined arms operation to ensure the battalion provides timely, responsive support and rapidly adjusts to the changes encountered. FBCB2 provides both Blue and Red SU.

- Conduct information management operations, receiving, processing, and disseminating critical battlefield information in all formats.

- Plan and direct counterstrike operations as directed by HBCT HQ. Coordinate and integrate counterstrike operations with Fires brigade counterstrike operations as directed or required.

- Conduct essential intelligence operations and tasks. Access to the All Source Analysis System-Light (ASAS-L) system provides support and assist in this function.

- Perform FA targeting – generally focused on counterstrike or targets related to specific battalion missions (such as suppression of enemy air defenses [SEAD]). The fires battalion will be integrally involved in the total targeting process of the HBCT.

- Plan and direct TUAV employment, focused on finding and destroying enemy artillery in a proactive role as part of the overall counterstrike program. Conduct and report battle damage assessment (BDA) as an integral part of this program.

- Plan and direct Class V operations in coordination with the S4 and distribution platoon leader.

- Plan/direct survey operations to support the battalion's FA operations and any assigned external survey support tasks for radars, target area survey requirements, mortars, or TA/intelligence assets.

- Plan, direct, and conduct all communications operations, to include radio, wire, automation management, local area network (LAN) and signal security.

- Plan and direct NBC defensive operations within the battalion.

- Provide general direction and overwatch of administrative and logistics operations in coordination with the ALOC, FSC and the firing batteries.

- Perform mutual support unit (MSU) operations.

HHB COMMANDER AND FIRST SERGEANT

3-12.   The HHB commander and 1SG are responsible for the security and logistical support for the TOC. Because elements of HHB are usually dispersed among both the battalion TOC, ALOC and the BSOC, the HHB commander and 1SG must work closely with all staff officers and section leaders to ensure adequate support for all elements.

3-13.   With the HHB leadership team usually devoted to the security, support, and movement of the battalion TOC, the FSC commander and 1SG assume responsibility for the

FBSA. (Both leadership teams must coordinate their efforts as elements from both units may be dispersed between the TOC and the FBSA). Command and control (C2) and security responsibilities for the ALOC will be designated by the fires battalion commander and will usually be the S4. While positioning and movement of the TOC are primarily an S3 responsibility, the HHB leadership team provides assistance in reconnaissance, movement, and occupation.

TOC COMMUNICATIONS SUPPORT

3-14.   The S6, the S3, and the HHB commander work together to ensure the TOC has adequate communications support. This primarily includes assistance in the set up and maintenance of radio, wire, and digital communications/automation equipment and retrans capability. Since the S6 must also support the battalion's other operations centers and the firing batteries, the communications element in the TOC may consist of a contact team that travels with and gives priority to TOC support.

SURVEY ELEMENTS

3-15.   The battalion survey sections may base their operations out of the TOC in order to allow better C2 by the S3.

SECTION II – TOC ORGANIZATION

TOC ORGANIZATION

3-16.   The fires battalion TOC consists of two major functional elements—the operations and intelligence (O&I) element (composed of the operations section, the intelligence section, and the target processing section) and the battalion FDC. The O&I element manages both current and future operations and coordinates all aspects of FA support. It also performs the planning and operational functions, such as developing FA plans/orders, conducting artillery focused IPB, developing artillery targets, planning and executing the brigade counterstrike program, tracking the status of subordinate units, and controlling unit movements.

3-17.   The FDC performs tactical FD by processing calls for fire, determining the type and amount of ammunition required to achieve the desired effects, and transmitting fire orders to the firing battery FDCs or POCs. The battalion FDC also monitors technical FD within the battalion.

TOC COMMAND AND CONTROL SYSTEMS

3-18.   As discussed in Chapter 2, the TOC when stationary will operate elements of the Army Battle Command System (ABCS) which provides the fires battalion commander and his staff with a common operational picture, as well as the digital connectivity necessary to plan, coordinate, control, and direct the battle. The fires battalion will also operate in FM radio nets that provide voice and data communications capabilities throughout the HBCT fire support system. The systems the TOC will have organic are as follows:
- Maneuver Control System (MCS)
- Advanced Field Artillery Tactical Control System (AFATDS)
- All Source Analysis System-Light (ASAS-L)
- Force XXI Battle Command Brigade and Below (FBCB2)
- Battle Command Sustainment Support System (BCS3) (this system will be located in the ALOC or BSOC)

3-19.   The fires battalion TOC will also have access to products and information provided by the following systems:

- Air and Missile Defense Work Station (AMDWS).
- Tactical Airspace Integration System (TAIS).
- Digital Topographic Support System (DTSS)

OPERATIONS SECTION

3-20.   The responsibilities of the operations section are to:

- Plan/coordinate the positioning of key C2, logistic elements and firing batteries/platoons supporting current and future operations.
- Plan/coordinate all battalion movements and assist the battery commanders with coordination of movements. This includes assignment of routes and position areas (PAs) and their clearance through the HBCT.
- Maintain current operational status of all organic, attached, and reinforcing/reinforced units.
- Prepare and disseminate all operational reports.
- Maintain friendly situational understanding and common operational picture, maintain the operations maps—manual and automated. Maintain manual status charts, logs, reports, and equivalent automated databases and reports.
- Provide the FDC with the most updated operational data on battery and platoon positions, both current and planned. When applicable, ensure FCs and/or reinforced/reinforcing FA units are receiving all necessary current and planned operational data.
- Coordinate survey requirements for the HBCT zone of responsibility to include radars or units from the Fires brigade.
- Advise the FDC, FCs (if applicable), reinforcing/reinforced FA (as appropriate) on scheduling of all preplanned fires.
- Prepare and disseminate the FASP. As appropriate, assist FCs with development of the FESP and coordinate preparation of the FASP as part of the fire and support plan (FESP).
- Monitor ammunition consumption and direct resupply for the battalion.
- Inform other staff sections (S1, S4, FSC commander, combat trains and field trains) of the current status of the supported forces and any changes that will require changes in FA support.
- Supervise battalion NBC defensive operations.
- Plan, coordinate, and supervise OPSEC within the battalion. Coordinate OPSEC with the S2 and S6.
- Assume control of reinforcing/reinforced artillery battalions during MSU operations, if necessary.
- Coordinate communications requirements for the battalion.

INTELLIGENCE SECTION

3-21.   The intelligence section is an integral part of the O&I section. The intelligence section provides the commander and S3 with intelligence information essential to the operation and survival of the battalion. Specific responsibilities of the intelligence section are:

- Prepare in-depth artillery focused IPB products of the brigade sector in coordination with the HBCT S2. The fires battalion IPB is not an independent product. It is an extension of the HBCT IPB and/or higher FA HQ IPB, focused on specific artillery-related intelligence requirements. The IPB process is a continuous process.

● Assist the S3 in battery and platoon PA selection to ensure that positions are in consonance with IPB insights and survivability requirements.

● Assist the target processing section in the development of the TA tab to the field artillery support plan (FASP) and the radar deployment order (RDO) for organic and attached radars. Ensures the RDO designates positions and establishes cueing procedures. Coordinate the use of all TA radars, organic, or attached, with the battalion S3.

● Develop targeting data based on the HBCT commander's high-payoff target list (HPTL) and attack guidance matrix (AGM). Provide recommendations and input to the targeting team that develops the HPTL and AGM for the brigade commander.

● Monitor enemy artillery tactics and techniques within the brigade area of operation and report to the HBCT HQ.

● Exchange combat information and intelligence with the HBCT, subordinate units, reinforcing/reinforced units, fires brigade, and adjacent units as appropriate.

● Coordinate with battery 1SGs to develop a ground and air defense plan for the battalion.

● Assist the S3 with planning, coordination, and conduct of operations security (OPSEC).

● Coordinate external battalion security requirements.

● Support the development of commander's CCIR, specifically PIR.

TARGET PROCESSING SECTION

3-22.   The target processing section recommends and updates TA coverage, command and control of FA TA assets and position areas for FA TA Assets. The section performs the following additional functions:

● Produce the RDO for the brigade.

● Orient FA TA assets to ensure required coverage of the HBCT battlespace.

● Tracks FA TA assets and reports status to S2/S3.

● Assist the battalion S2/S3 with development and execution of the FA TA and counterstrike plan.

● Maintains situational understanding (SU) of targeting operations.

● Recommends target selection standards (TSS).

● Use TSS to develop enemy artillery targets and suspect targets.

● Provides target location error (TLE) information on available TA assets to the S2, S3, ECOORD as a basis for TSS recommendations to the targeting team.

● Advises the fires battalion commander and the HBCT ECOORD on counterstrike operations.

● Supports targeting meetings as required.

● Help the battalion S2 write the TA and surveillance portions of the FASP.

● Help plan for and manage attached, organic, and OPCON TA assets.

● Assist the S2 in identifying commander's critical information requirement (CCIR).

● Conducts predictive battle damage assessments (BDA) and request BDA from external sources/higher HQ.

● Assist in the planning of tactical unmanned aerial vehicles (TUAVs) missions and operations.

FIRE DIRECTION CENTER

3-23.   The battalion FDC provides tactical fire planning and fire control through automated command and control systems with manual backup and communications equipment. Specific responsibilities are as follows:

● Monitor and operate in the battalion FD and FS coordination nets (voice and data).

● Schedule fire units for preplanned fires in coordination with the S3, brigade and battalion ECOORDs, reinforcing/reinforced FA (as appropriate).

● Review the maneuver commander's attack guidance and ensure they are applied to all fire mission requests. Ensure all battalion elements have the proper guidance and attack criteria entered into digital systems for both current and planned operations. This includes all FCs throughout the HBCT, which will require close coordination with the brigade FEC.

● Execute preplanned fires as requested by FCs, observers, and reinforced units.

● Coordinate fire mission processing procedures (data and voice) with FCs, reinforced/reinforcing units, and targeting/ intelligence assets as appropriate. This includes digital fire mission routing and AFATDS intervention rules.

● Respond to immediate fire requests in the priority established by the brigade commander's attack criteria.

● Ensure the battalion meets the five requirements for accurate predicted fires:
  ▪ Accurate target location and size.
  ▪ Accurate firing unit locations.
  ▪ Updated weapon and ammunition information.
  ▪ Valid met information.
  ▪ Accurate computational procedures.

● Determine registration requirements in coordination with the S3.

● Provide technical FD assistance to battery/platoon FDCs as required. Coordinate for technical FD in case of catastrophic loss of the technical FD capability of battery/platoon FDCs.

● Ensure that all fire missions comply with current fire support coordination measures (FSCMs).

● Assist the S3 in monitoring ammunition expenditures, this includes ammunition lot management. Recommend changes to attack criteria or other tactical FD guidance as necessary.

● Conduct MSU operations as required.

● Establish and practice standard procedures for FDC operations in a degraded mode.

TOC BATTLE STAFF ORGANIZATION

3-24.   The activities of the TOC are supervised by the S3. For the S3 to manage the FA battle, the entire TOC must work as an orchestrated team under his direction. Usually, the S3 is not given a specific shift of duty because he is expected to be directing operations during critical times.

3-25.   The S3 positions himself in the TOC where he can see and hear critical information that will allow him to make sound tactical decisions based on the commander's guidance. In the event the S3 is not in the TOC, the assistant S3 or shift officer assumes the S3s responsibility of managing TOC operations. The S3 and XO should develop shifts to cover 24 hour operations, ensuring that all sections and operations are manned at all times. This should be covered and published in the tactical SOP (TSOP).

3-26.   Each section should maintain a shift log, documenting the major events, actions, and message traffic applicable to the section, as well as accomplishment of major shift responsibilities. The log serves as a record of the major events and as a tool to prepare for shift briefings.

3-27.   Shifts should overlap by about an hour to allow proper handover of the battle. Also, shift changeover for each section may be staggered to improve continuity (e.g., operations at 1200, intelligence at 1400, and FDC at 1600). There should be, by TSOP, an established procedure where, approximately an hour before shift change, all maps, status boards, shift logs, and such are updated with the most current information, all filing and document destruction is accomplished, and general TOC housekeeping completed. Both manual and automated systems must be addressed. The oncoming shift should be given time to review maps, status boards, shift logs, and other applicable tools. The outgoing shift should provide a shift briefing that addresses, as a minimum, current operational status (FA and maneuver), TOC status (vehicles and equipment), and battalion, TOC, and section tasks.

3-28.   The S3 or section leaders may establish a standard TSOP format for the shift change briefing.

SECTION III – TOC CONFIGURATION

3-29.   The following figure provides an example of a TOC configuration (external array and common area). It is provided only as an example and for use as a guide to stimulate ideas for development of a functional TOC tailored to meet the needs of the unit.
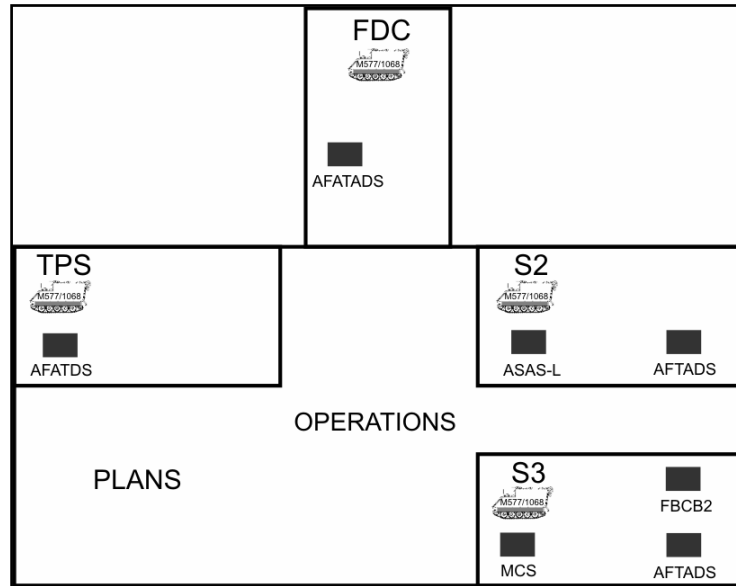

Figure 3-1, Fires Battalion TOC Array

Note: The target processing section, organized with its own M577/1068 provides a flexible capability to plug and play with this section. When the fires battalion is operating as the counterstrike HQs, the configuration depicted in Figure 3-1 might be used. If the fires battalion is reinforced by an MLRS battalion in a mid-intensity conflict/high-intensity conflict (MIC/HIC) environment then the section can be plugged into the reinforcing battalion HQ and that headquarters becomes the counterstrike headquarters. In a stability operations and support operations environment where a more centralized control of counterstrike operations is desired, then the section could be plugged into the brigade fires and effects cell (FEC) and conduct counterstrike operates from there.

SECTION IV – TOC INFORMATION MANAGEMENT

3-30.   The process of C2 in the fires battalion is unique. Unlike the C2 structures of maneuver forces where the commander directs the forces commander-to-commander, the fires battalion S3 controls unit movements and executes artillery fires based on the fires battalion commander's guidance. The battalion commander still commands the battalion, but the S3 is the manager of FA assets and translates the vision of the commander into FA fires.

MANAGEMENT OF TACTICAL INFORMATION

3-31.   The battalion S3 and the rest of the TOC staff control the day-to-day operations of the fires battalion. It is at the TOC where battlefield information is received and processed into FA tactical movement, delivery of FA fires, and sustainment operations. For the battalion staff to effectively track the tactical situation and satisfy the maneuver commander's concept of FA fires, SU and battle tracking must be as accurate as possible. FBCB2, Maneuver Control System (MCS), All Sources Analysis System-Light (ASAS-L), and AFATDS are the digital systems that the staff uses to provide SU, capability for battle tracking, collaborative planning, and rapid dissemination of information.

3-32.   AFATDS provides automated planning, preparation, execution, and assessment of close support, counterstrike, interdiction, shaping operations and suppression of enemy air defense. AFATDS interfaces with other ABCS systems such as MCS, ASAS-L, Battle Service Support System (BCS3), and FBCB2. It can also provide numerous separate overlays to allow specific information when needed such as enemy overlay, target overlay, friendly artillery locations overlay and operational graphics.

3-33.   At the fires battalion the commander's tactical display (CTD) is displayed on MCS. The HBCT staff will build the map, overlays, and other control measures that will be displayed in the CTD. The Red feed will come from ASAS-L and the Blue SU from FBCB2. Feeds from AFATDS will also make available in the CTD field artillery data such as current artillery locations or current FSCM in effect.

3-34.   FBCB2 will provide current blue and red SU, displayed on a map with boundaries and other control measures. It is important to remember that SU provided by FBCB2, satellite based system has a time delay and is near-real time, not real time and should not be used for final clearance of fires.

3-35.   Where the various systems are located throughout the TOC will depend on the TOC design as determined by the commander, XO, and S3. It is imperative that each staff member fully understand the capabilities of each system and use each system to facilitate TOC information management. The physical layout of the TOC should support the flow of information and allow the S3 to direct the efforts of the staff in an efficient manner.

3-36.   The S3 should position himself in the TOC where he can effectively manage his battle staff. He should be at a vantage point where he has access to radios, telephones and digital display devices. He must also monitor and manage the analog back-up systems which are the operations/intelligence maps and other manual status charts. He should position himself so he can take in tactical information, give guidance, and avoid the common pitfall of becoming pre-occupied with tasks better handled by subordinates.

3-37.   The primary information pipelines in the TOC are its internal and external voice and digital nets. (See Chapter 2, for TOC net structures.) Normally, in a fires battalion, the two nets that give the S3 the clearest picture of current events on the battlefield are the HBCT FS coordination and the HBCT command nets (voice). It is important to understand that the fires battalion staff monitors these nets and does not normally transmit on them. To reduce confusion in the TOC, it is recommended these two nets be the only ones audible on remote devices in the operations (extension) area. The other voice nets should be monitored by headset or monitored from inside the appropriate staff vehicles. The S3 is kept informed of the majority of the traffic on the other nets (voice and data) by status charts updates, reviewing message forms, and computer printouts. Anything of significance that requires the S3's attention should be brought to him immediately

3-38.   The battalion FD nets, operations/fire net, and HBCT FS net are the S3's principal conduits to understand where fires are planned and executed. These nets allow the TOC to execute its responsibility to review every mission and provide a secondary independent check to verify that no FSCMs are being violated and to reduce the chances of fratricide. Data and voice missions should be checked. The S3 observes where targets are in relation to the tactical situation to better understand the flow of the battle.

3-39.   The O&I section must closely monitor the information received from all tactical information sources (voice, digital, fax) to verify critical data, identify potentially inaccurate information, and to resolve discrepancies between conflicting reports or data.

3-40.   By monitoring the supported maneuver command net plus the SU provided by FBCB2, the S3 can determine the tempo of the operation, anticipate where the focus of fires will be directed by the ECOORD, and maintain SU. This allows the S3 to be proactive in positioning units and managing ammunition for effective tactical control of fires.

3-41.   The TOC passes tactical orders and information to the batteries and any supporting artillery over the battalion command net. These tactical orders and information will also be sent to the firing batteries over AFATDS. The command net can be remoted to the operations sergeant's post and monitored by a radio telephone operator with headset. The S3 receives the information passed on this net by monitoring the computer screens and by reviewing messages and reports used to update the situation. Situation reports and updates of information with battalion combat and field trains should not be passed on this net. Routine administrative and logistical traffic should be sent on the battalion administrative/logistics net.

3-42.   The S2 monitors the HBCT O&I net and operates an ASAS-L system. The focus of the traffic on O&I net is maneuver specific but the S2 can gather much information relevant to FA support requirements and operational/security considerations. The S2 section should monitor this with either a remote (with headset) or from inside the S2 vehicle. Routine traffic can be passed to the S3 on message forms. Critical traffic requiring the S3's attention may be monitored, from his battle station, on the S2's remote. ASAS-L provides the S2 analyzed intelligence and a host of products to assist in the IPB process. The S2 will ensure that target information generated by the fires battalion target acquisition platoon is entered into the ASAS-L so it can be shared with the HBCT analyst.

3-43.   When the HBCT is subordinate to a UEx and not operating independently or directly for a joint task force (JTF), the fires battalion will also monitor and operate in several Fires brigade nets. These are depicted in Chapter 2.

ANALOG DISPLAY OF TOC INFORMATION

3-44.   ABCS provides the fires battalion TOC with a complete suite of computer systems to assist in the management of information. It is recommended that the TOC also maintain some or all of the following information management tools to augment/back-up the digital systems. The digital systems are totally dependent on generator power and except for FBCB2 and AFTADS will not be available on the move.

MAP BOARDS

3-45.   Standardized map boards should be established in accordance with HBCT HQ TSOP. This will facilitate standard map mounting procedures throughout the organization and allow overlays to be exchanged with minimum loss of accuracy.

OVERLAYS

3-46.   Acetate overlays are constructed to conform to standardized map boards. All overlays should be the same size and edged with tape. The goal is to display graphics on an overlay, mount the overlay on various map boards, and maintain an acceptable degree of accuracy.

3-47.   Units should establish a standard. TSOP, mounting and posting system for overlays. When an overlay is placed on a map board, the following information should be visible:
- Overlay description.
- OPORD, FASP, fragmentary order (FRAGO), number if applicable.
- Unit originating the overlay.
- Date-time group.
- Security classification (top and bottom).
- Grid-line tick marks for orientation (minimum of two).

STATUS BOARDS

3-48.   The staff should track the current status of elements and other combat information on status boards (containing appropriate charts) that are neat and organized. Much of this information may exist in various automated formats in AFATDS or other C2 software. This information is automatically updated as the new information is input by TOC personnel or is digitally received from other elements. Manual status boards and information folders should be compared to the automated information formats/sources to facilitate maintenance and emergency transition to manual operations. However, the manual status boards should be designed to best organize/display required data in a TOC setting.

3-49.   The TOC may position and maintain status boards along functional lines. For example, the S2's status board may contain a RDO, air defense status, survey section equipment status, mission oriented protective posture (MOPP) level, or battalion defense diagram. The operations section status board(s) may contain all the call signs and frequencies, track combat strength and ammunition, FSCMs, observer locations, the field artillery support matrix (FASM), or fires and effects execution matrix (FEEM).

3-50.   Within the TOC, the minimum information to be tracked includes:
- CCIR.
- Commander's intent (Immediate and two above).
- Mission two levels up and the battalion mission statement.

- The maneuver commander's concept of FS.
- Essential fires and effects tasks (EFETs) and essential field artillery tasks (EFATs).
- FASM/FEEM.
- Batteries'/platoons' primary, alternate, and supplementary locations.
- Howitzer status (crew and weapon system) and posture.
- Ammunition carrier strength.
- FDC/POC status—to include personnel strength and status of automated FD systems.
- Ammunition count by type and platoon.
- Radar positions, zones (active and planned), and cueing schedule.
- Order planning timeline.
- NBC status.
- Priority of fires and current FSCMs.
- Call signs and frequencies.
- Air defense artillery (ADA) status.
- Personnel status.
- Task organization/FA organization for combat.
- Radiation exposure status.
- AGM and HPTL.
- Risk assessment.
- Friendly mortar locations.
- Main supply routes.
- Immediate-actions status.

SITUATION MAPS

3-51.   There are normally three situation maps mounted on map boards in the TOC. They are plans, intelligence, and operations maps. Each has functions that may overlap. The plans map is used during the planning process and for future operations. The intelligence map is primarily used for IPB process, FA targeting, and current enemy situation. When the fires battalion is performing the counterstrike mission this map should also serve as the counterstrike operations map. Radar locations and coverage fans should also be displayed on the operations map. The operations map is the most widely used in the TOC to maintain the current friendly situation. The intelligence and operations maps should always complement each other.

3-52.   The operations map should contain overlays depicting the current location of friendly maneuver forces, FISTs, FA units (and range fans), radars under battalion control, proposed PAs, FSCMs, and current fire plan(s).

3-53.   Situation maps should be kept simple and manageable. Tactical information should be displayed on one of the following type overlays:

- Maneuver graphics overlay.
- FA position/movement overlay.
- The target overlay.

Maneuver Graphics Overlay

3-54.   The HBCT TOC produces this overlay, which depicts the brigade's AO, objectives, battle positions, locations of boundaries, phase lines, other maneuver control measures, and

airspace coordination graphics. Normally, the HBCT ECOORD coordinates for a copy for the fires battalion TOC. The S3 uses this overlay in planning movements and clearing fires. As a minimum, the TOC disseminates copies to the firing batteries, survey section, organic/attached radars, combat and field trains, and reinforcing/general support reinforcing (R/GSR) artillery TOCs.

3-55.   Because it constitutes the frame of reference, the maneuver graphics overlay is the first overlay placed on the situation map boards during execution. On the operations map, the S3 uses it as a check to preclude fratricide and to gage the tempo of the battle in regard to the maneuver plan.

FA Position Area Overlay

3-56.   The FA PA overlay is used for planning PAs for firing batteries, trains, the TOC, radar, reinforcing artillery units, and other Fires brigade assets. It depicts all FA unit positions and range fans. Planning PAs is a continuous process that involves the close coordination between the fires battalion TOC and the HBCT TOC. The assistant S3, with help from the S2, normally prepares the overlay. PAs should be clearly identifiable on the overlay. Coordination is made with the HBCT TOC, through the ECOORD, for land clearance. Copies of the overlay are distributed to the HBCT ECOORD, firing batteries, organic/attached radar, combat and field trains, and reinforcing artillery.

Target Overlay

3-57.   As a planning tool, it supplements the target list worksheet or computer printout by graphically depicting all targets and the total fire plan for an operation. It is used in developing the PA overlay for ensuring batteries can be positioned to range targets. This is the top overlay on the situation map. Since the overlay supplements the printed target list and is subject to constant changes, it is not normally reproduced as part of any plan. The degree of precision needed for delivery of fires discourages its use for anything other than a tool for planning and graphic aid in execution.

3-58.   As targets are fired, they should be colored red. This graphically shows the S3 where fires are focused and assists him in anticipating future requirements. Radar capability— radar capability overlays depict the locations/coverage of organic, attached or GS Firefinder radars. It is used to display all confirmed targets located by the radar(s) and control measures in the current zone of operations. This overlay is maintained by the S2 and the TPS.

Additional Overlays

3-59.   There are other overlays that can be used to assist the S3 and TOC personnel in planning and executing the FASP. Most are only needed in special situations. The S3 decides the order in which they appear on the situation map. Some of these overlays may include:

- Obstacle overlay—In addition to showing the location of planned and fired scatterable mines (SCATMINE) minefields; this overlay shows the location of existing and planned engineer obstacles. The S3 may use this overlay in planning PAs for firing preplanned SCATMINE, unit movements to avoid obstacles/choke points and establishing radar sensor zones to help protect forces. The S2 maintains this overlay.

- Event template with critical event matrix—this overlay is developed by the S2 in the IPB process. It illustrates a timed-phased analysis of the enemy's course of action (COA). The event template is an overlay that may contain named areas of interest (NAIs), targeted areas of interest (TAIs), enemy timeline and order of battle, and direct support team (DST) or enemy critical events matrix. The overlay aids the fires battalion staff in planning unit movements while providing continuous fires, ensuring

the FASP will support maneuver operations and when used in conjunction with the FEEM, it assists in fine-tuning FA assets synchronization.

● NBC—this overlay has two functions. The first is to show areas of NBC contamination in the AO. The second is to show the location of decontamination sites and routes to each. The overlay is generated and maintained by the battalion chemical officer/NCO.

● Communications capability—if the terrain presents any unique communications profile limitations, the S6 would construct a site profile of the terrain in the AO. This assists the S3 in planning employment of retrans stations, displacement of units, and TOC site selection.

● Logistics—this overlay is generated by the S4 under the supervision of the battalion XO. It depicts all pertinent logistics facilities such as main supply routes, alternate supply routes, maintenance collection points, mortuary affairs collection points, and ammunition transfer points (ATPs). The S1 and S4 representatives at both the combat and field trains maintain the logistics overlay. A copy is furnished to the TOC.

SECTION V – TOC POSITIONING AND MOVEMENT

3-60.   Movement and positioning of the fires battalion TOC are controlled by the S3 based on the guidance and direction of the commander. The S3 is assisted by the S2, who provides mobility information concerning terrain, trafficability of roads, obstacles, minefields, and contaminated areas, and survivability information regarding ground, air, and nuclear, biological, and chemical (NBC) threat from enemy forces and information about the civilian populace in the area. The S6 provides guidance on communications factors. The HHB leadership team and other members of the TOC may also assist with reconnaissance, security, and advance party operations. Clearance for the positions and movement routes must be coordinated with the HBCT staff and subordinate maneuver battalions, a function that the FEC will assist.

TOC POSITIONING CONSIDERATIONS

3-61.   The S3 uses the IPB products in determining positions. The S3 usually plans primary, alternate, and possibly supplementary TOC positions. The primary consideration for positioning the TOC is its ability to accomplish its mission. He must also consider whether or not the TOC will be collocated with other elements, such as the battalion trains or a supported maneuver unit. Several other factors must also be considered:

● The general movement of the forward line of own troops (FLOT), which may be forward, rearward, static, or erratic. In a sustained, rapidly advancing offensive operation, the TOC may need to be positioned as far forward as feasible. During a rapidly withdrawing retrograde, the TOC may be placed farther to the rear than normal. On a non-linear battlefield, the general ebb and flow of the fight and the disposition of forces is still a consideration, however, security considerations are increased as the situation maybe be less predictable than on a linear battlefield.

● In response to a high enemy counterfire threat the TOC may be placed farther to the rear; outside the range of mortars and as many of the enemy's artillery systems as feasibly possible. Defilade/reverse slope positioning may provide increased protection, however, retrans of communications may be necessary.

● High enemy air threat may place increased need for positioning the TOC in heavily wooded or urban terrain that allows better camouflage. The TOC may also be placed close to ADA that can provide coverage and away from anticipated or identified enemy

air corridors. The use of wooded/urban terrain, coupled with camouflage and light discipline, are also critical to reducing vulnerability to air and satellite imagery.

● Consider positioning the TOC with or near other friendly elements when there is a high risk from enemy penetrating forces or small force operations. When there is a threat of rapid penetration from an enemy attack or counterattack, position the TOC off of the expected axis of advance, especially any high-speed avenues of approach, if possible. Increase the size of the TOC by adding logistic elements or arranging infantry or military police (MP) support.

● To overcome electronic warfare (EW) threat, position the TOC closer to firing batteries or the retrans site. To reduce electronic locating vulnerability, position the TOC in defilade/masked locations and use retrans. Also position the TOC away from the maneuver TOCs and the battalion trains to reduce the threat to them and to reduce the electronic signature. The TOC should be kept small to present the smallest electronic signature.

● Communications factors such as digital and radio communication ranges and retrans capability must be considered. Communications is a function of the distances between units, the capabilities of the equipment, atmospheric conditions, and terrain.

● If canalizing terrain to the rear limits movement options, and the TOC could be quickly cut off, consider positioning close to high-speed avenues needed for movement while considering potential exposure to threat penetrations.

● Terrain that is extremely wet, rocky, or steep, and urban terrain may interfere with weapon platforms, grounding of equipment, tie-downs for extensions and shelters, and preparation of defensive positions.

● Hilly or mountainous terrain provides survivability advantages, but may also interfere with communications for the TOC.

● When extensive coordination with the HBCT HQ is critical the fires battalion may position its TOC close to the maneuver TOC.

● When there is a reinforcing relationship between two FA battalions, the TOC of the two FA battalions may be positioned laterally or in depth, depending on the deployment of the batteries and the concept for FS (in addition to the normal positioning considerations). C2 and survivability are critical considerations due to their generally closer proximity to the FLOT.

JUMP TOC (JTOC) CONSIDERATIONS

3-62.   To facilitate the concept of operations (CONOPS) during movement of the TOC to a new location, the battalion may use a JTOC. This is a variation of movement by echelon in which a small portion of the TOC, and minimal security and support elements, will move to the new TOC location in advance of the remainder of the TOC. During the JTOC's movement, tactical fire control is maintained at the TOC (-), which also begins preparation for movement. Once the JTOC is in place it conducts a CONOPS exchange with the TOC (-) and establishes communications with subordinate, higher, and supported units before it assumes control of the battalion. The remainder of the TOC then march orders and moves to the new TOC location. Normal operations resume once the TOC has been fully established.

3-63.   Composition of the JTOC is limited to key equipment/personnel. As an example, a JTOC may consist of (but is not limited to) the following: high-mobility multipurpose wheeled vehicle (HMMWV), operations vehicle with extension, FBCB2, AFATDS, current status boards and situation maps, S2 or S3, assistant S3, TOC NCO, FDO/FDC NCO, S2 NCO, selected O&I and FDC personnel and other HHB elements to provide support and security. The size and composition of the JTOC will depend on the tactical situation and the S3's major concerns. A smaller JTOC may be preferred during periods of rapid advancement and frequent moves, while a larger JTOC would be desired if security is a major issue, and speed

of movement is not critical. During a rapidly advancing offensive operation, the JTOC may be moving again shortly after the rest of the TOC has closed and assumed control of the battalion.

3-64.   The unit can use a version of the JTOC technique, basically a reversed sequence, during defensive operations when the battalion must move to the rear or laterally away from a penetration. The bulk of the TOC would move first, while the JTOC remains in place controlling the battalion until a new TOC is established. This allows C2 to remain close to the fight, while retaining the mobility to quickly move out at the last possible moment.

3-65.   The battalion can also form a TAC to put the battalion commander and/or S3 closer to the action, near the maneuver commander, his TOC, or the HBCT FEC. It is especially used during operations requiring frequent, fast moves where the main TOC would have trouble keeping pace with the supported maneuver unit. It would be the focal point for battalion C2 of the current fight, emphasizing operations, FD, and limited TA/intelligence functions. The main TOC would follow as soon as possible and monitor the situation, prepared to assume control if necessary. It continues to conduct planning and other TOC functions in order to allow the TAC to concentrate on the current fight during a critical stage in the battle. The TAC will consist of only one or two vehicles that have the speed and maneuverability to keep up with the maneuver forces. It should have more robust communications, FBCB2, and AFATDS capability than a JTOC as it may operate separate from the TOC for a longer period and must be fully capable of controlling the battalion's fires and directing all subordinate elements. The TAC technique is also useful when the commander wants to send a TOC element forward with a battery artillery raid.

ADDITIONAL TOC MOVEMENT TECHNIQUES

3-66.   TOC movement may be influenced by several factors: security, organization for combat, personnel strength, equipment status, availability of mutually supporting battalions, and tactical situation. The TOC may move as a single unit, in two or more echelons, or in several small elements. A major consideration in determining the TOC movement technique is the availability of a reinforcing, reinforced, or another mutually supporting battalion. If another battalion can temporarily assume the TOC functions, the commander and S3 have more options for moving.

NO MUTUALLY SUPPORTING BATTALION

3-67.   The TOC may move by echelon and may utilize the JTOC concept more frequently when another FA unit is not available to temporarily assume control of the TOC operations. If the battalion CTOC must move as a unit, the ALOC or a firing battery can assume portions of the C2 functions until the CTOC is reestablished. Rehearsal and clear TSOPs are needed to prevent confusion.

NO MUTUALLY SUPPORTING BATTALION - CATASTROPHIC LOSS

3-68.   If the battalion TOC is not, or will not be operational and a JTOC cannot be established, the battalion commander may shift control to the brigade FEC or a designated battery/platoon operations center. Since the FECC is no longer organic to the Fires battalion, control by the FEC should be a last option and coordinated/rehearsed well in advance. Another option is for the ALOC to assume all C2 functions except tactical and technical fire control, which would be performed by the brigade FEC or a firing battery. If this occurs, TOC staff still capable of performing their duties should collocate with and assist the temporary element in controlling the battalion until the TOC is capable of resuming control. Generally, the surviving elements of the CP will move rapidly as a unit to the new location (possibly the ALOC) and begin recovery, reorganization, and reconstitution as appropriate. As soon as possible, the TOC would assume control and normal TOC operations would be restored.

MUTUALLY SUPPORTING BATTALION

3-69. When a reinforced, reinforcing, or other mutually supporting battalion is available and TOC movements are required, MSU operations may be conducted to transfer tactical control to the other FA battalion TOC. The supported unit should ensure the supporting unit TOC has an updated status on all elements and digital/voice communications are established. Before reassuming control, the supported unit TOC should re-establish C2.

This page intentionally left blank.

Fires Battalion Target Acquisition Systems

This chapter discusses concepts and procedures pertinent to the tactical employment of the fires battalion target acquisition systems. The tactics, techniques and procedures (TTP) contained in this chapter are applicable to the traditional roles of target acquisition, enhanced by tactical unmanned aerial vehicles (TUAVs).

SECTION I – RADAR EMPLOYMENT

4-1. Sound tactical planning is required to effectively cover the HBCT zone of responsibility with target acquisition (TA) assets. TA planning is conducted at all tactical levels of the HBCT as an integral part of the MDMP process. This ensures TA assets are fully integrated into combined arms operations. The fires battalion headquarters is responsible for employing its organic TA assets in accordance with the HBCT operational plan. This section discusses the tactical considerations for employing radars and TUAVs.

COMMAND RELATIONSHIPS

4-2. TA assets are organized for combat to best meet the commander's intent and accomplish the assigned mission. This is done by establishing command relationships. The commander establishes command relationships for TA assets in accordance with army doctrine. An important consideration when selecting the command relationship is the desired method of control. Radars may remain under the centralized control of the controlling headquarters or decentralized control may be established. Any combination of centralized or decentralized control may be used based on the tactical situation.

4-3. Placing a TA element under another unit using one of the following methods forms a command relationship: attachment, operational control (OPCON), or tactical control (TACON). Command responsibilities, responsibilities for service support, and authority to organize or reassign component elements of a supporting force remain with the higher headquarters or parent unit unless the authorizing commander specifies otherwise. The command relationships and inherent responsibilities are depicted in Chapter 2, Figure 2-1.

ATTACHMENT

4-4. Attachment is the placement of units or personnel in an organization where such placement is relatively temporary. Subject to the limitations imposed by the attachment order, the commander of the formation, unit, or organization receiving the attachment has the responsibility to provide the attached units with sustainment support above its organic capability. However, the parent formation, unit, or organization normally retains the responsibility for transfer, non-judicial punishment, courts martial and human resources support such as strength accounting, promotions and other essential personnel services.

OPERATIONAL CONTROL (OPCON)

4-5. Command authority that may be exercised by commanders at any echelon at or below the level of combatant command is OPCON. OPCON is inherent in command authority.

OPCON may be delegated and is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. OPCON includes authoritative direction over all aspects of military operations and joint training necessary to accomplish missions assigned to the command. OPCON should be exercised through the commanders of subordinate organizations. OPCON provides full authority to organize commands and forces and to employ those forces, as the commander in OPCON considers necessary to accomplish assigned missions. OPCON does not, in and of itself, include authoritative direction for logistics or matters of administration, discipline, internal organization, or unit training.

TACTICAL CONTROL (TACON)

4-6. TACON is the command authority over assigned or attached forces or commands, or military capability or forces made available for tasking, that is limited to the detailed and, usually, local direction and control of movements or maneuvers necessary to accomplish missions or tasks assigned. TACON is inherent in operational control. TACON may be delegated to, and exercised at any level at or below the level of combatant command. TACON allows commanders to apply force and direct the tactical use of logistics assets but does not provide authority to change organizational structure or direct administrative and logistical support.

SECTORS OF SEARCH

4-7. Sectors of search are areas on the battlefield where radars focus their capabilities. Sectors of search are recommended during the IPB process and refined in the decide function of the D3A cycle. During the decide function, decisions are made concerning what targets should be acquired and attacked, where and when targets are likely to be found, and who can locate them. Additionally, the HBCT commander and subordinate maneuver battalion commanders can influence sectors of search based upon their recommendations for call for fire zones (CFFZs) and critical friendly zones (CFZs). Doctrinal employment considerations, in conjunction with templates and intelligence produced during the IPB process, dictate the areas in which the radar search should be focused. The location of friendly boundaries, fire support coordinating measures, and the common sensor boundary (CSB) may also affect the assignment of search sectors.

ZONES

4-8. Zones are a means of prioritizing radar sectors of search into areas of greater or lesser importance. Zones focus radar coverage on the combined arms commander's battlefield priorities. A zone is a geometric figure placed around an area that designates the area as more, or less, important. Four types of zones can be entered into a Firefinder radar:

- Critical friendly zone (CFZ).
- Call-for-fire zone (CFFZ).
- Artillery target intelligence zone (ATIZ).
- Censor zone (CZ).

4-9. Targets developed by the radar are displayed for transmission in order of priority based on the zone from which they were developed. There are two categories of zones, priority and censor. The Q-36 and Q-37 can store a total of nine zones.

PRIORITY ZONES

4-10. Priority zones are prioritized areas for locating hostile weapon systems. There are three types of priority zones in order of precedence:

- CFZ
- CFFZ
- ATIZ

4-11. All other weapon firing locations identified by the radar are displayed after locations identified within priority zones. Firing locations identified within a CFZ or CFFZ generate a FM; CFF message. All other acquisitions generate an ATI; CDR message.

CFZ

4-12. A CFZ is an area established around a friendly unit or location that is critical to the success of the combined arms commander's plan. When the computer predicts an enemy round will impact in a CFZ, the radar generates a call for fire on the location from which the round was fired. This happens automatically unless overridden by the radar operator. A FM; CFF message is sent to controlling fires battalion TOC or the designated counterstrike headquarters as a Priority-1 message. The CFZ provides the most responsive submission of targets to the fire support system. The CFZ does not have to be within the radars search zone.

CFFZ

4-13. A CFFZ designates a search area from which the commander wants to attack hostile firing systems. A CFFZ would be placed around an enemy fire support position identified by IPB as a HPT. A CFFZ generates the second highest priority fire request. A target identified in a CFFZ generates a FM; CFF priority 2 message. The commander may upgrade the priority, to priority 1, for certain CFFZ. A CFFZ must be in the radar's sector of search.

ATIZ

4-14. An ATIZ is an area in enemy territory that the commander wishes to monitor closely. Any weapon detected in an ATIZ will be reported ahead of all acquisitions other than those from CFZs or CFFZs. Detections from an ATIZ generate an ATI; CDR.

CENSOR ZONES (CZ)

4-15. CZ are areas from which the radar is prohibited from reporting acquisitions. A CZ is normally placed around friendly weapon systems to prevent them from being acquired by other friendly radars. The CZ is most often used in non-linear situations or during cross forward Line of troops (FLOT) raids or infiltration. Care must be used when employing a CZ since the radar ignores all acquisitions coming from the CZ. This remains true even if the hostile weapon is firing at a unit inside a CFZ. Figure 4-1 depicts the use of a CZ.
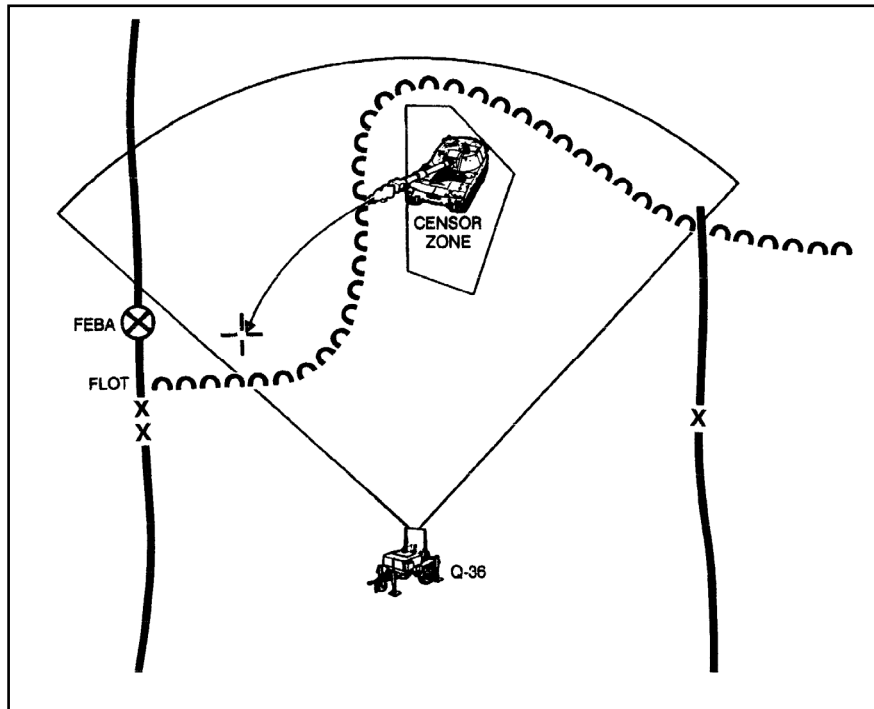
Figure 4-1, Censor Zone.

DEVELOPING ZONE DATA

4-16. Zone data must support the tactical plan and satisfy the radars requirements for data input. The fires battalion S2 and the targeting officer develop zone data for the Q-36 and the Q-37. The data is entered and transmitted from the TOC to the radar using the automated RDO. The following considerations apply when developing zone data:

- Up to nine zones can be entered in the radar. All zones may be of one type or any combination of types.
- A zone must be defined by a minimum of three and a maximum of six coordinates.
- An azimuth should not intersect the boundary of a zone more than two times.
- A radar zone cannot intersect or touch another zone.
- No more than two zones can be along the same search azimuth for radars using the S-250 shelter.
- Grid coordinates must be listed and entered sequentially.
- Zone coordinates cannot fall outside the sector of search (except for CFZ).

ZONE MANAGEMENT

4-17. Fires battalion TA assets are employed to support counterstrike operations. Counterstrike is part of the HBCT commander's overall battle plan and not a separate operation. Radar zones are managed to comply with the commander's guidance and intent and are an important part of force protection and the prioritization of fire support efforts. Understanding the HBCT commander's plan, and integrating effects coordinators into the development, refinement and triggering of planned zones are key to successful radar zone management. Planning guidance may be found in a number of different documents. These locations include the fires paragraph, tasks to subordinate units and coordinating

instructions of the operations plan or order, and the fire support annex. Information from these sources provides the necessary guidance and information to initiate zone planning.

4-18. There is a distinct difference between zone management in the HBCT sector, and zone management in the UEx sector. The HBCT ECOORD and maneuver battalion ECOORDS are directly involved in the planning, refinement and triggering of the zones. Accordingly, the HBCT FEC prioritizes HBCT requirements and allocates radar zones to support the scheme of maneuver. When the HBCT is subordinate to a UEx and not operating independently, the planning for and availability of redundant radar coverage by fires brigade Q-37s is critical to the HBCT's success. This coverage must be included in planning guidance and coordinated as early as possible.

4-19. The fires brigade counterstrike officer (CSO) is responsible for employing fires brigade TA assets. Accordingly, he must be involved in the planning of the HBCT's counterstrike operations and fully understand their TA support requirements. The HBCT FEC, targeting officer, and the fires battalion S2 must coordinate their requirements for available GS fires and additional radar coverage with the fires brigade CSO. Even though the fires brigade's radar coverage will be oriented deeper and focused on UEx priorities, additional HBCT zone coverage can be made available if requested and required. Coordination between the fires brigade CSO and HBCT targeting team members is crucial to the success of the HBCT counterstrike battle.

4-20. Basic guidelines for zone planning include:
- Use top down planning and bottom up refinement.
- Include the top down radar zone plan in the maneuver order.
- ECOORDs, S2s, and targeting officers conduct bottom up refinement that reflects the developed situation template, force protection priorities, and scheme of maneuver.
- The HBCT targeting officer and fires brigade counterstrike officer manages zones by resolving duplication, time phasing zones by priority, including zones on the FS execution/synchronization matrices, and providing zones to radar sections via the radar deployment order (RDO) or radar execution matrix.
- The radar section leader performs technical zone management at the radar.
- Refine and update zones as the operation progresses.

ZONE MANAGEMENT PLANNING SEQUENCE

4-21. The following procedure provides a list of activities essential for successful zone planning.
- Prioritize operational sector and scheme of maneuver events for zone planning based on the commander's intent/guidance (commander, ECOORD, and targeting officer).
- Develop zones during the course of action (COA) development and the wargaming process (S2, ECOORDs, and targeting officers).
- Approve and allocate zones to subordinate FECs that support the scheme of maneuver, meet the commander's priorities for force protection and facilitate the engagement of high payoff targets (commander, targeting team, and FEC).
- Develop and assign decision points as triggers for the execution of planned zones (S2, FEC, targeting officer).
- Incorporate decision points (triggers) for planned zones and radar movement into the appropriate decision support template (DST), synchronization/execution matrices and intelligence collection plan (ICP) (S2, ECOORD, targeting officer).

- Refine to ensure nominated zones facilitate the scheme of maneuver and the commander's intent for force protection (commander, targeting team).
- Rehearse planned zones (radar movement, zone activation and Counterstrike Battle drill) during combined arms, FA technical and fire support rehearsals (commander, ECOORD, targeting officer, S2).
- Refine zones during execution as the IPB improves or the scheme of maneuver changes (ECOORDs, targeting officers, S2).
- Develop positioning guidance for the radar that optimizes the probability of acquisition and supports the coverage of planned zones (S2, S3, and targeting officer).

ZONE MANAGEMENT RESPONSIBILITIES

4-22. Responsibilities for radar employment and zone management must be fixed to focus the planning process and execution. The HBCT commander is ultimately responsible for counterstrike and his staff's fixed responsibilities must include:

- ECOORD:
  - Translates the commander's intent for counterstrike and engagement of enemy indirect fire weapons.
  - Ensures force protection and counterstrike priorities are articulated in the commander's fires paragraph to the OPORD.
  - Recommends zones to the commander during the planning process.
- Targeting team:
  - Synchronizes all target acquisition assets and zone development to facilitate the D3A process.
  - Ensures planned zones are synchronized with the applicable elements of the high payoff target list, (HPTL).
  - Allocates, verifies, and updates zones to ensure the commander's intent for force protection and engagement is met.
  - Assigns cueing agents corresponding to NAIs, TAIs, PIRs and IRs associated with planned zones. The designated cueing agents should be included in the R&S plan and be in position to trigger activation of the zone.
- Targeting officer:
  - Provides guidance to lower echelon ECOORDs/targeting officers and solicits force protection measures—CFZs.
  - Ensures priorities and triggers are developed for the activation and inactivation of zones.
  - Integrates planned triggers into the appropriate DST/synchronization matrixes.
  - Incorporates planned zones into the combined arms and fire support rehearsals.
  - Ensures zones are sent to the fires battalion S2 for inclusion in the RDO.

4-23. Operations officers (S3):

  - Incorporates decision points, planned zones, and radar movement into the DST and synchronization matrix.
  - Ensures the TA TAB to the Field Artillery support plan includes coordination measures for zone development and radar positioning.
  - Ensures land management for the radars is coordinated with maneuver elements.
  - Determines attack guidance and firing unit assignment to support the responsive engagement of counterstrike acquisitions.

- Monitors range capabilities of both the acquisition agent (radar) and engagement systems to ensure positioning and movement supports the counterstrike plan (zones/force protection priorities).
- Maneuver battalion fire support officers:
  - Develops priority zones to support the task force plan-CFZs/CZs.
  - Nominates zones to the HBCT commander (ECOORD/targeting officer) for approval and priority.
  - Develops precise triggers along with identifying and assigning cueing agents for priority zones.
  - Ensures the developed triggers are incorporated into the supported units DST/synchronization matrix.
  - Establishes ownership and responsibility for the zones.
  - Ensures any changes to the scheme of maneuver are compared against the planned zones.
  - Ensures refinement is completed and sent to the fires battalion S2 for transmission to the radar.
  - Activates and refines zones during execution.
- Fires battalion S2:
  - Develops CFFZs based on the templated enemy artillery positions and known intelligence data.
  - Nominates zones to the targeting team for approval and inclusion into the ICP.
  - Receives approved zones from the HBCT ECOORD/targeting officer for inclusion into the RDO.
  - Constructs radar employment plan and RDO in conjunction with the target processing section and targeting officer.
  - Refines zones as IPB improves or the scheme of maneuver changes (updates RDO).
- Fires battalion targeting officer:
  - Ensures the capabilities/limitations of the radar system are considered during the planning process.
  - Selects radar positions that support the coverage of the planned zones and facilitates movement to support the scheme of maneuver.
  - Identifies zone restrictions violated during the planning process.
  - Performs technical zone management of the radar employment plan.

COMMON SENSOR BOUNDARY

4-24. Target duplication between Firefinder radars is likely during combat operations. In addition, the sheer volume of targets passed from the radars may overwhelm the targeting element, especially if the radars are under centralized control. An effective method of reducing or eliminating target duplication is to establish a common sensor boundary (CSB). The CSB is established by the counterstrike headquarters and divides TA search areas into acquisition management areas for Q-36 and Q-37 systems. The CSB is generally depicted by using: a grid line, phase line, or major terrain feature. Q-36 radars should not limit their maximum range to the CSB or establish CFFZs beyond it. Likewise, Q-37 radars should not limit their minimum range to the CSB or establish CFFZ short of it. When possible, the CSB should be positioned in conjunction with the coordinated fire line (CFL). This eliminates the requirement to clear Q-37 generated fire missions. The CSB is not a fire support coordinating measure. It is a zone management tool used by the counterstrike headquarters to enhance the effectiveness of radar coverage.

4-25. The following factors influence the placement of the CSB:

- Availability of attack systems.
- Range of attack systems.
- Range and operational mode of TA radars.
- Known and suspected locations of enemy indirect fire systems.
- Type and availability of munitions.

4-26. The location of the CSB is adjusted based on the tactical situation. Repositioning of radars, changing enemy situations, and the establishment or deletion of fire support coordinating measures (FSCM) may dictate adjustment or deletion of the CSB. Figure 4-2 shows the use of the CSB.
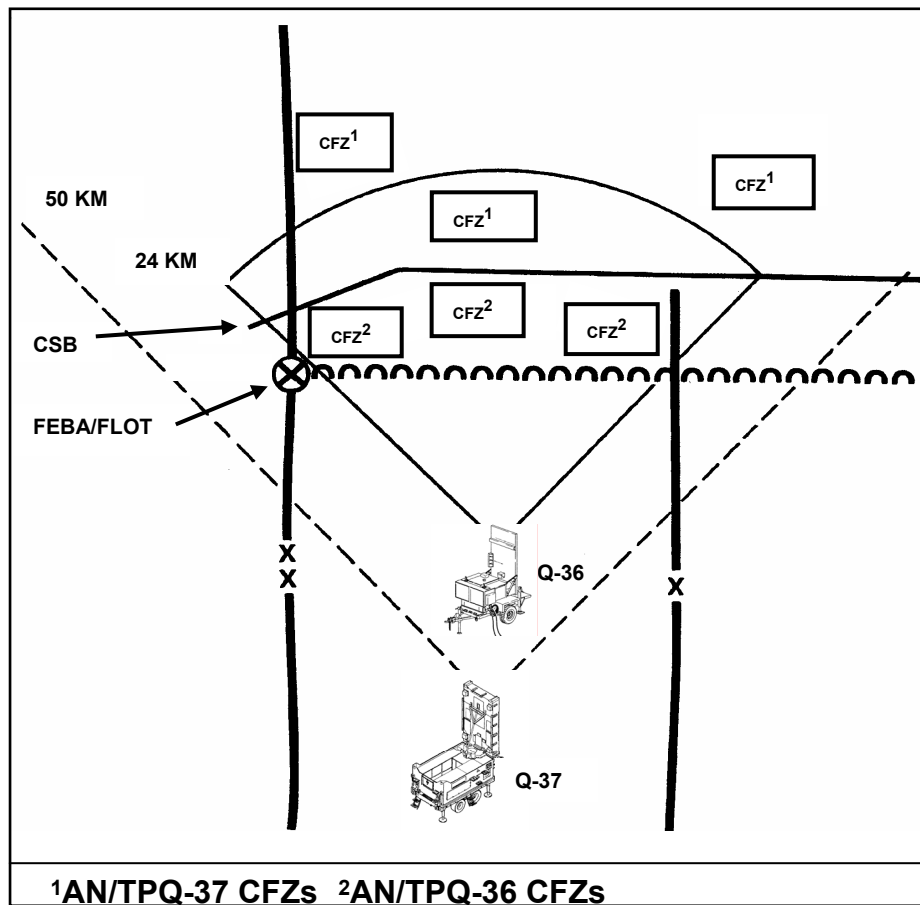
Figure 4-2, Common Sensor Boundary

CUEING

4-27. Cueing is the process designed to prompt or notify the radar to begin radiating to acquire hostile fire. Determining when and how to best cue the radar is one of the most difficult planning decisions. There are as many different methods to cue radar as there are situations when it should be cued. Targeting technicians, the S2 and HBCT ECOORD must establish cueing guidance based on the HBCT commanders guidance. Both authority to cue and priority for cueing requirements must be clearly understood. Planned random schedules based solely on hours of the day are not recommended and are usually ineffective.

Unnecessary cueing subjects the radars to enemy direction finding. Therefore, cueing should be event driven to provide maximum support during critical phases of the battle.

4-28. The cueing of radars may be centralized or decentralized. Centralized cueing routes all cueing requests through the radar controlling headquarters. Centralized cueing may be less responsive based on the level of activity on communications nets and the number of nets the request to cue must go through. During decentralized cueing, the controlling FA headquarters establishes cueing guidance, to include authorized agents, communication links, and conditions under which the radar may be cued. At maneuver battalion or task force (TF) level, the radar cueing instructions are given in the radar deployment order. At HBCT, where a written operation plan (OPLAN) or operation order (OPORD) is used, the cueing guidance should be in the TA tab to the FA support plan. When cueing agents other than FA assets are designated, cueing guidance should be given in the basic order as coordinating instructions or tasks to subordinate units.

4-29. The critical factor when planning radar cueing is responsiveness. Cueing should allow the radar to locate enemy positions during initial volleys of fire, preferably the first rounds. There are two techniques for cueing; situational (pro-active), and demand (reactive). Situational and demand cueing may be used separately or in combination.

SITUATIONAL CUEING

4-30. Situational cueing is the preferred technique for cueing radars and is the most responsive. This method ties cueing to events and/or triggers that are determined during the IPB and planning process. For example, during offensive operations an event or trigger may be a breaching or air-assault operation. In a defensive operation, cueing may be tied to suspected enemy phases of fire depicted on the decision support template. Situational cueing focuses the radar on the commander's intent and what is critical.

DEMAND CUEING

4-31. Demand cueing is the activation of radar once the enemy is known to have begun firing. For demand cueing to be effective, cueing agents must be designated and a responsive communication system between the agents and radar established. Specific cueing guidance must also be established to fully exploit the radars capabilities and minimize or eliminate unnecessary radiation. The situation will dictate who best can cue the radar and the specific conditions under which it should be cued. Possible cueing agents may include:

- Combat observation/lasing teams (COLT).
- Forward observers (FOs); (FISTS).
- Observers in helicopters.
- Rear area CPs.
- HBCT or UEx-level EW systems.
- Scouts.
- S2s.
- HBCT ECOORD, maneuver battalion fires support officers.
- Targeting officers.

4-32. Cueing must be based on real-time information so that the radar has a high probability of tracking projectiles when it is turned on. Consider the situation where a task force fire support officer is designated as a cueing agent. The following events occur:

- The task force trains area receives hostile artillery fires.
- The task force fire support officer cues the radar.
- The radar responds and locates the hostile artillery firing on the task force.
- The radar transmits a call for fire to the fires battalion.

●   The battalion FDC executes the attack in accordance with the established attack guidance.

TARGET ACQUISITION RADAR ROLE DURING OFFENSIVE OPERATIONS

4-33. The primary role of TA radars in the offense is to locate enemy targets for attack by friendly fire support systems. During offensive operations, particular attention must be given to planning TA operations to facilitate future operations. TA planners must ensure a smooth transition from one phase to the next by providing continuous radar coverage across the zone of operations. Requirements for radar positioning and movement are identified during the MDMP and tied to specific events. This allows continuous coverage by facilitating mutually supporting coverage between radars. The fires battalion commander monitors this process closely to ensure that the use of terrain, movements and radar zones are properly coordinated.

4-34. The first consideration for radar zones in the offense is CFFZs. Establishing CFFZs facilitates immediate counterstrike to suppress enemy artillery that may disrupt the scheme of maneuver. CFZs may be planned through the zone of operation or along the axis of advance and activated when entered by friendly forces. This is particularly important in areas where friendly forces are most vulnerable, for example, at river crossings, breach sites or open areas.

4-35. Control of radars will generally be more decentralized to facilitate command, control, movement, and cueing. The fires battalion headquarters will designate cueing agents that can cue radars by calling them directly. This is necessary to streamline the TA and counterstrike effort when committed maneuver forces may be particularly vulnerable to enemy indirect fire.

TARGET ACQUISITION RADAR ROLE DURING DEFENSIVE OPERATIONS

4-36. The primary role of TA radars in the defense is to provide target intelligence and information to allow friendly forces to take force protection measures and enable counterstrike mission processing. TA planners must also consider transitions to offensive operations such as counterattacks. Positioning, task organization, and on-order missions should facilitate transitions.

4-37. The first consideration is the use of the radar's zone capabilities to provide coverage for critical units or installations using CFZs. The HBCT commander should indicate the assets that are deemed essential to ensure mission accomplishment. If the commander does not identify these assets, the ECOORD or targeting officer must query the commander for the necessary guidance. Once the guidance is obtained, the information is passed to the fires battalion headquarters for implementation.

4-38. The second consideration for the use of zones is areas in which to use CFFZs. On the basis of IPB and other target indicators, CFFZs are used to monitor suspect areas from which enemy artillery fires may jeopardize the mission. This facilitates the use of counterstrike to suppress, neutralize or destroy those targets.

4-39. ATIZ may be established in areas where we are not sure about enemy artillery and need to develop the situation. They can also be used in areas of suspect enemy artillery that the commander wishes to monitor closely but are out of friendly artillery range. Finally, a CZ might be used around friendly artillery or mortar positions when their location would expose them to detection by friendly Firefinder radars.

TARGET ACQUISITION RADAR ROLE DURING STABILITY OPERATIONS AND SUPPORT OPERATIONS

4-40. The primary role of TA radars in stability operations and support operations) is similar to the defense and is to provide intelligence and information to allow friendly forces to take force protection measures and enable counterstrike mission processing. Mission processing in stability and operations and support operations may not be striking with artillery, army aviation or CAS due to the rules of engagement (ROE) but sending out maneuver units to destroy the enemy firing unit. Especially in an urban environment, where collateral damage is a major concern, indirect fires may not be the method or weapon of choice for counterstrike operations.

4-41. The first consideration is the use of radar's zone capabilities to provide coverage for critical units or civilian areas using CFZs. The HBCT commander should indicate the forward operating bases (FOBs) and critical civilian areas (government offices, etc.) that are deemed essential in achieving his desired effect.

4-42. The second consideration for the use of zones is areas in which to use CFFZs. On the basis of IPB or predictive analysis technique, CFFZs are used to monitor suspect areas from which enemy artillery/mortars may fire. This facilitates the development of a plan, either with fires or maneuver to destroy these targets.

4-43. Radar coverage of the HBCTs AO may not be totally achieved with the two organic radars (Q36, Q37) in a SOSO environment. Additional coverage from a fires brigade's Q37s operating in the area or the augmentation of light counter-mortar radars (LCMR) may be required. This may also be a factor in other non-contiguous operations and must be addressed early in the planning process so additional radar coverage can be made available.

RADAR TASKING PROCEDURES

4-44. There are several methods for specifying coverage for radar sections. They include the radar deployment order (RDO), the radar execution matrix, and the AFATDS RDO format. All three methods provide the required information for conducting radar operations. However, the primary method for orienting radars is digitally using the AFATDS RDO.

SECTION II – UNMANNED AERIAL VEHICLE OPERATIONS

4-45. The HBCT is organized with a TUAV platoon in the MI Co. The platoon has three ground control stations (GCS) and seven aerial vehicles. TUAV capabilities make them ideal for conducting brigade reconnaissance and target acquisition. Providing TUAV capability to the fires battalion greatly enhances the battalion's capability to conduct shaping, counterstrike, and SEAD operations. When the HBCT commander directs, a Mission Planning and Control Section (MPCS) will be attached to the target acquisition platoon of the fires battalion. The MPCS consist of a GCS along with associated personnel and supporting equipment. The MPCS receives the mission, plans and controls the TUAV, and reports information. The fires battalion S3, S2, and targeting officer will provide the MPCS all the information required to plan and execute the TUAV mission. The TUAV operated by the fires battalion contributes to the overall intelligence picture but is principally employed for target acquisition (TA) and battle damage assessment (BDA). The fires battalion will perform the following tasks when provided TUAV capability:
- Acquire and locate enemy strike assets to facilitate counterstrike.
- Acquire and transmit targetable data to support the attack of HPTs and dangerous targets of opportunity.
- Provide target designation.

- Provide surveillance
- Provide BDA.

4-46. This arrangement allows the reconnaissance elements to concentrate on collecting combat information while fire support staffs support them with TA, fires and BDA. Acting together, the reconnaissance, TA, intelligence staff and fires battalion delivery units constitute a highly capable reconnaissance-strike complex.

SECTION III – COUNTERSTRIKE OPERATIONS

4-47. Counterstrike is focused on preemptive destruction of the enemy's total strike capabilities (indirect fire and AD), C4ISR, support systems and logistics areas. Counterfire is the second component of counterstrike. Counterstrike gains freedom of action for all friendly maneuver forces. It can be accomplished by the fire support system using both lethal and nonlethal means. Counterstrike is not a separate battle. It is inseparably tied to close and deep operations and is part of the overall combined arms fight to achieve fire superiority. While a fine line may exist between counterstrike and shaping operations, once an indirect fire target is capable of affecting the close fight, its attack is considered counterstrike. Intelligence assets must be prioritized to accurately locate targets. Attack assets (such as artillery, mortars, close air support, attack helicopters, naval gunfire and EW assets) must be brought to bear on the enemy total fire support system. Counterstrike is the HBCT commander's responsibility within the brigade area of operation. The fires battalion commander is his primary advisor and executor. Field artillery target acquisition exists to support the HBCT commander's scheme of maneuver during the offense and provide radar coverage for his most vulnerable assets during the defense. Effective use of target acquisition enhances observation of critical terrain; for example, avenues of approach, potential assembly areas, and possible enemy reconnaissance routes. HBCT commanders must emphasize that all combat information must be reported through fire support as well as operational channels. The commander ensures proper positioning of TA assets for optimal probability of detection and maximum effectiveness of counterstrike.

UEX COUNTERSTRIKE OPERATIONS

4-48. The UEx counterstrike role is focused deep, beyond the HBCT area of operations while also being prepared to provide coverage and reinforcing counterstrike fires within the HBCT AO. In the modularity concept, the HBCT orchestrates and executes counterstrike in support of HBCT close operations. The UEx may provide additional resources (reinforcing fires battalion) to HBCTs to conduct close counterstrike operations. Additional resources may be in the form of attached Q-37 radars or providing additional radar coverage of the HBCT zone. This allows an orderly and calculated division of labor. The UEx normally accomplishes this through the use of UEx forward boundaries, phase lines, or simply by de-conflicting specific target sets. The UEx normally assumes responsibility for long range enemy artillery systems and those mid-range or close range systems that the HBCT cannot strike due to system overload. The HBCT locates and attacks mortars, short range cannon systems and rocket systems within their AO within its delivery capability.

4-49. UEx has a myriad of assets to conduct counterstrike operations to include the fires brigade, aviation brigade, Air Force, US Navy and/or USMC air interdiction and reconnaissance sorties, Army reconnaissance and attack helicopters, and EW. The UEx facilitates the HBCT counterstrike fight by allocating resources. These resources often include reinforcing artillery battalions, CAS, attack helicopters, EW, and intelligence support. In some situations, and after careful consideration, UEx commanders may temporarily draw on HBCT FA assets to support UEx counterstrike operations. However, diversion of limited HBCT acquisition, processing, and attack assets entails the risk of their

destruction and non-availability to support HBCT operations during critical close support phase of the operation. Equally important is the timing of their return to HBCT control, particularly in the heat of battle. The return must be carefully planned and coordinated.

4-50. UEx artillery contributions to the overall counterstrike effort include the responsibility to:

- Implement the organization for combat with the fires brigade counterstrike assets by retaining fires brigade assets at UEx level or allocating them to subordinate HBCTs in accordance with missions and guidance issued by the UEx HQ.
- Supervise preparations and execution of counterstrike responsibilities by subordinate UEx elements within counterstrike sectors of responsibility established concurrently with the designation of maneuver boundaries and AOs for subordinate HBCTs. This includes striking targets within a HBCTs or adjacent unit's AO, if requests for such support have been submitted and approved by UEx. Within capability, UEx may also respond to requests for additional fires from adjacent units.
- Detect multiple rocket launcher battalions, helicopter forward operating bases, and other counterstrike targets with organic fires brigade assets, reinforced by collectors from the UEx BFSB, long-range reconnaissance units, and special operations forces (SOF).
- Attack threat fire support systems with MLRS and cannon battalions of the fires brigade to a range of 30 km (45 km for guided MLRS [GMLRS]). Beyond 45 km, ATACMS, Army aviation, Air Force, US Navy and/or USMC sorties, and ground maneuver forces may be available for target attack.
- Recommend the acquisition of additional sensor and attack assets from echelons above UEx, the joint task force (JTF) commander, or other services.
- Assess the success of efforts to protect friendly units from threat fire support systems. As needed, recommend modifications to intelligence collection and attack priorities to enhance force protection through a more effective attack of enemy counterstrike targets.

4-51. By allocating UEx assets, issuing attack guidance, and identifying UEx HPTs, UEx influences how subordinate HBCTs fight their counterstrike battle. They can shape a HBCTs counterstrike effort by attacking threat FS systems in depth, providing MLRS and ATACMS fires, and EW support. Within HBCT AOs, UEx commanders:

- Define areas of counterstrike responsibility by establishing boundaries for subordinate units.
- Provide IPB products and critical intelligence information developed at UEx or higher and adjacent HQ.
- Attack targets nominated by the HBCTs. The UEx, after coordination with HBCT FECs, may attack threat FS targets within HBCT AOs by massing fires to achieve required effects (for example, massing fires to neutralize a reconnaissance strike complex). Also, procedures for attacking threat systems firing across boundaries must be coordinated. However, in all cases the HBCT must orchestrate and give final approval for all UEx fire missions within its AO.
- Provide HBCTs with additional assets for detecting and attacking threat FS systems.
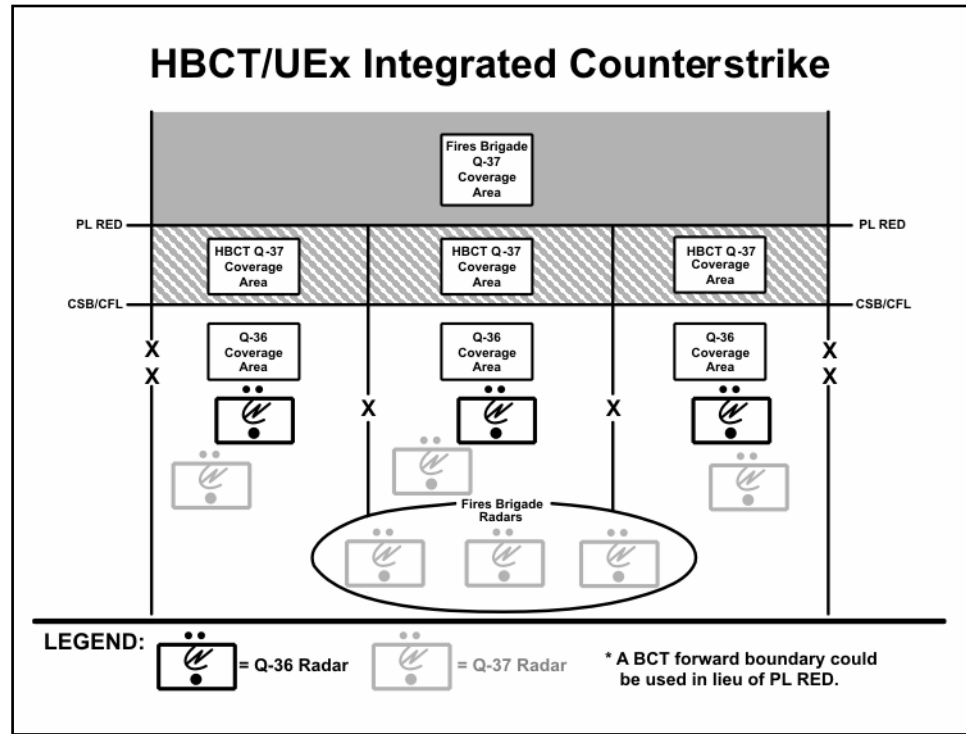
Figure 4-3, Integrated Counterstrike Operations

HBCT OPERATIONS

4-52. The Army's transformation to a modularity concept has created new and emerging designs for HBCT. The force design places the Q-36 and Q-37 in the HBCT adding flexibility and enhanced force capabilities. The HBCT may employ its radars while operating as an autonomous force, early entry force, operating directly for a JTF commander, operating in an AO where enemy counterfire is limited, or operating as part of a UEx. When deployed under several of the potential contingencies, the HBCT would perform its own counterstrike operations in the same manner as a traditional division. The main differences are:

- The HBCT has fewer radars, one Q-36 and one Q-37.
- May or may not have counterstrike support from a fires brigade.
- The organic fires battalion performs the functions of a counterstrike headquarters.

4-53. In the HBCT, the fires battalion positions and tasks radars based on IPB and the commanders guidance. The Q-36 radar is positioned to acquire mortars and short-range artillery while the Q-37 radar is positioned to acquire longer-range artillery and rockets. Deconfliction of coverage in autonomous operations is simplified since the fires battalion controls both radars. Even so, a CSB might be established to segregate Q-36 and Q-37 coverage areas. If established, the CSB should be placed in conjunction with the HBCT coordinated fire line when possible. This eliminates the need to clear acquisitions before firing. Radar zones are established in the traditional method based on operational needs. In more non-linear situations, call for fire zones (CFFZ) may be pre-cleared to facilitate target attack. A non-linear battlefield may place the radars in a firebase type situation instead of a typical zone of action. The CSB might be a circle surrounding the force with the Q-36 acquiring targets inside the circle and the Q-37 acquiring targets outside the circle. Figure 4-4 depicts this concept.
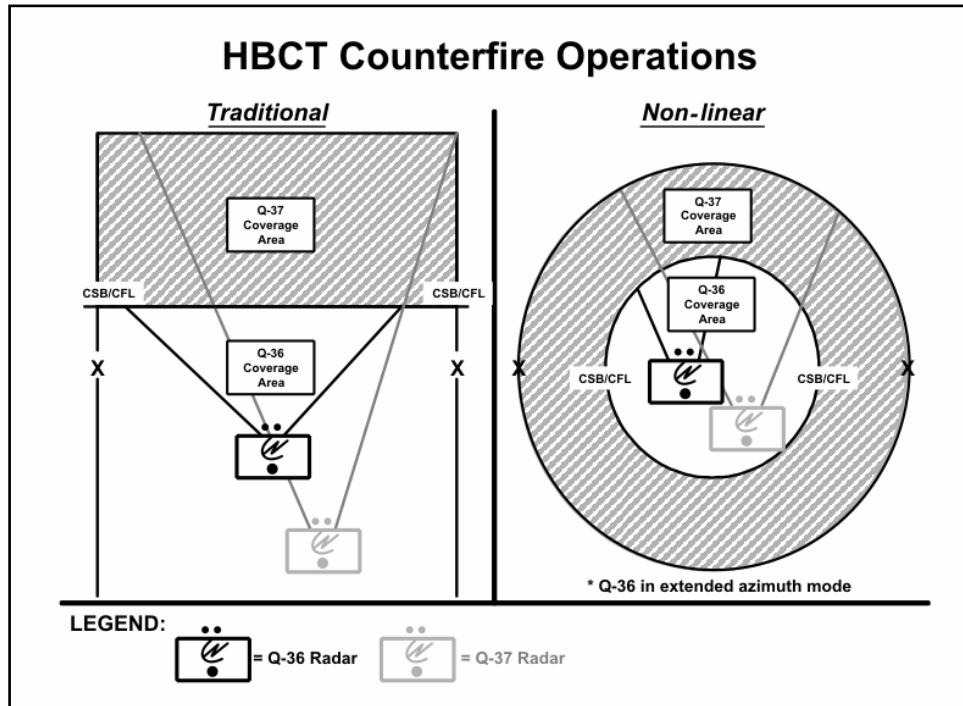
Figure 4-4, HBCT Counterfire Operations

HBCT NON-LINEAR COUNTERSTRIKE OPERATIONS

4-54. The TA assets of the HBCT and UEx provide the force commander with a greater ability to support counterstrike operations in a non-linear environment. The UEx can assign HBCTs autonomous counterstrike responsibilities in their AOs and provide TA and counterstrike coverage in the remaining UEx areas. The UEx accomplishes this by establishing graphical control measures and zones of responsibility (ZOR) to segregate the UEx and HBCT counterstrike fights. This is very important when HBCTs are attacking along axes and have assailable flanks or when there are large gaps between HBCT AOs. HBCT radars establish their coverage areas to correspond with the HBCT's AFATDS ZOR. Each UEx controlled Q-37 establishes the specific coverage areas designated by the UEx FEC. These coverage areas are developed based on IPB and focus only on those areas affecting UEx operations. This allows the FEC to focus counterstrike operations on critical areas and systems and eliminate coverage of areas that pose little threat to the force.

SECTION IV – COLT EMPLOYMENT

MISSION

4-55. The five COLT teams organic to the HBCT are assigned to the HHC of the HBCT. The mission of the COLT team is to provide the HBCT commander with high technology observation teams that are dedicated to executing specific fires tasks throughout the depth of the HBCT's battlespace. This mission includes calling for conventional artillery and rocket fires, providing laser designation for smart munitions and, as a secondary mission, providing reconnaissance and surveillance. Although originally conceived to designate for Copperhead missions, COLTs can provide final ballistic guidance for any munition requiring reflected

laser energy. At present, the team can provide laser designation for smart munitions delivered by Army, Air Force, Marine Corps or Navy aircraft. COLT teams in the HBCT will be equipped with the fire support surveillance and sensing system (FS3) that greatly enhances their acquisition and lasing capability.

OPERATIONS

4-56. Each COLT team has the organic communications equipment to operate on two nets during mounted operations. During dismounted operations, they have the ability to operate on only one net at a time. The teams have a number of potential nets on which they may have to operate:

- Maneuver battalions digital/voice fire support net.
- HBCT operations and intelligence net.
- HBCT digital/voice fire support net.
- Recon Squadron (RS) internal net.

4-57. The primary net should be the assigned units digital FS net. If COLT teams have good digital communications on that net, they can perform their primary mission and most other agencies can send them digital messages. The parent unit SOP or order should specify times or situations when they need to check in on one of the other nets.

4-58. COLT teams support the targeting process by detecting, tracking, initiating target attack and reporting BDA. During the decide phase of the targeting process, COLT teams are assigned specific HPTs to observe and or attack, normally in conjunction with a specific NAI or TAI. The COLT team positions to observe the NAI or TAI and attack the specified HPTs. If the target is only designated for observation, the COLT will report and track the target. Or, the COLT may accept a target cross-cued by a sensor or other intelligence source. If the target is designated for attack, the COLT will initiate target attack passing the mission to the appropriate FEC over the digital fire support net. Upon completion of attack, the COLT reports any required BDA.

Chapter 5

Fires Battalion Logistics Operations

The term logistics operations describes the full range of personnel services and health services functions as well as the traditional logistical support of supply, maintenance, field services, and transportation. All the logistic functions are described in FM 4-0. Logistic planning must focus on maintaining and supporting the battalion's Soldiers and weapon systems as it executes the commander's intent while conducting operations. With the development of new technological methods of sharing information such as Force XXI Battle Command Brigade and Below (FBCB2) System and Battle Command Sustainment Support System (BCS3), leaders at the fires battalion and battery levels can provide the foresight and responsiveness necessary to anticipate and maintain the high operational tempo of a heavy brigade combat team (HBCT) fires battalion.

The concepts and organizational structures found in this chapter reflect a paradigm shift from the supply-based logistic system of the Army of Excellence (AOE) to a technology-enhanced, distribution-based CSS system. A distribution-based logistical system combines information capabilities with efficient delivery systems to form an effective distribution pipeline for military operations. Direct throughput of supplies from UEx and HBCT to the fires battalion is the rule rather than the exception with distribution-based logistics. The forward support company (FSC) is the cornerstone of the distribution-based logistics system at the fires battalion level. The FSC contains all the logistical elements that were in the AOE headquarters and headquarters battery and service battery plus direct support maintenance that resided in the forward support battalion (FSB). The AOE organizational and direct support levels of maintenance are now performed as field maintenance executed by the maintenance platoon of the FSC. Personnel service support (PSS) functions; religious, legal, and command information support are organized and performed as they were in the AOE organization. This chapter is divided into three sections: Section I–Organization and Functions; Section II–Fires Battalion Trains; and Section III–Fires Battalion Logistic Planning.

SECTION I – ORGANIZATION AND FUNCTIONS

5-1. This section outlines the logistic support organizations in the fires battalion and the external support elements with which the battalion interfaces. The fires battalion in the HBCT is organized with an FSC that performs the support functions that were traditionally performed by the headquarters and headquarters battery (HHB), service battery, and the FSB.

5-2. The fires battalion commander can task organize the logistic assets for centralized or decentralized command and control (C2). Centralized support lightens the support burden on the firing batteries and can increase mobility. Decentralized logistic support gives the firing batteries more control over their logistic operations, facilitates attachment of a battery to another field artillery (FA) unit or to a maneuver unit, and allows independent operations. In determining how much centralization will be required, the battalion commander considers the following:

- Mission, enemy, terrain and weather, troops and support available, time available, and civil considerations (METT-TC).
- Personnel status (strength and experience) of these sections.
- Availability of equipment.
- Availability of external support.
- Capability of the battalion staff to supervise additional sections.

FORWARD SUPPORT COMPANY

5-3. The FSC (Figure 5-1) is organic to the fires battalion. The FSC provides field maintenance and supply distribution for the battalion. The FSC consists of a company headquarters, a food service section, a field maintenance platoon, and a distribution platoon. It can operate from either unit trains or split trains. When using split trains, logistic and support assets will be organized into a combat trains and a fires battalion support area (FBSA).
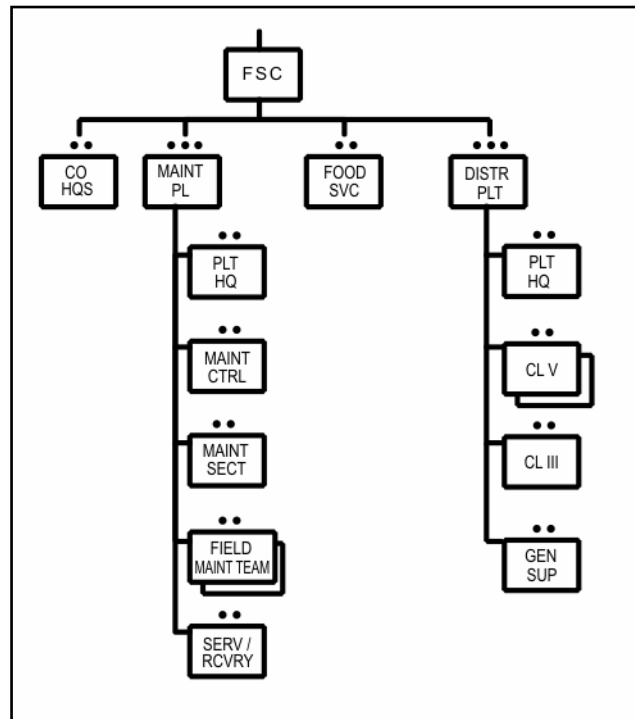

Figure 5-1, Forward Support Company

5-4. Combat trains are positioned forward in the zone to provide responsive support to the firing batteries and will have the administrative and logistics operation center (ALOC) as its C2 element. The FBSA is established more to the rear of the HBCT zone and has as its C2

element the battalion support operations center (BSOC). The FSC splits its assets and personnel between the two trains areas as required to achieve the most responsive support to the firing batteries while providing a higher degree of survivability for logistic support assets.

5-5. The field maintenance platoon can function consolidated or split, depending on METT-TC. It consists of a platoon headquarters, maintenance control section, service/recovery section, maintenance section and two field maintenance teams (FMTs) designed to provide support to the firing batteries.

5-6. The distribution platoon has three sections: a class V section, a class III section, and a general supply section. The distribution platoon provides distribution of all classes of supply (minus class VIII). The FSC is not designed to carry an authorized stockage list (ASL), except as necessary to support issue and turn-in operations. It may carry critical line replacement units (LRUs) and combat spares as authorized or directed. Combat spares are defined as a combination of shop stock, bench stock, and prescribed load list (PLL).

5-7. The FSC is organized with a food service section that is designed to provide class I food service and food preparation for the FSC, HHB, and firing batteries. The food service section can prepare and deliver hot meals to the separate battery areas. It distributes prepackaged food, prepared food, or both. It can provide one heat-and-serve meal and one cook-prepared (A or B ration) meal per day. The food service section is under the direct supervision of the FSC commander and first sergeant (1SG).

5-8. The fires battalion executive officer (XO) is responsible for coordinating all CSS operations in the battalion. The S4 identifies the logistical requirements for the fires battalion and coordinates the requirements with the FSC commander. The FSC provides all logistic support (less medical) to the battalion and is the logistics operator at the battalion level. The principal source of external support to the battalion is the HBCT brigade support battalion (BSB).

5-9. The distribution platoon provides supply and transportation support to the fires battalion. It is comprised of a platoon headquarters section, class V section, class III section, and a general supply section.

5-10. The platoon headquarters section manages the distribution of supplies in support of the fires battalion. This section performs the following functions:

- Maintains a current listing for all on-hand commodities.
- Processes receipts, issues, and turn-ins.
- Processes turn-ins to maintenance (for repairable items).
- Establishes facilities for limited storage, receipt, and issue of all supported commodities.
- Performs limited storage, receipt and issue of all supported commodities.
- Delivers issued assets (logistics packages (LOGPACs)) pickup retrogrades (turn-ins to maintenance or for disposal).

5-11. The class III section is responsible for supporting retail fuel operations in the fires battalion. The section is organized with the following equipment to accomplish this mission:

- One truck cargo M977A2R1.
- One truck cargo W/E M1083A1.
- Four truck tank M978A2R1.
- One trailer FB M989A1.
- One trailer FB M1095.
- One tank pump unit 126ETP.
- One tank unit liquid dispenser.

5-12. The class V section is responsible for supporting all class V operations in the fires battalion. Small-arms ammunition constitutes an insignificant portion of the fires battalion daily tonnage requirements and can be handled routinely with normal ammunition resupply. The fires battalion S4 plans for and supervises class V operations, and the distribution platoon leader (DPL) supervises resupply operations. The S3, S4, and DPL must continually coordinate and exchange information concerning ammunition. Each must know the required supply rate (RSR) submitted to the HBCT, the CSR established by the HBCT, and the authorized basic load. This information is provided to the battalion and battery commanders so they can plan resupply operations and set priorities. The class V section is organized with the following equipment to accomplish its mission:

- Eight trucks cargo PLS M1075.
- Two trucks cargo W/E M1083A1.
- Eight trailers PLS M1076.
- Two trailers flat bed M1082.

5-13. The maintenance platoon provides field maintenance to the fires battalion. The platoon consists of a headquarters section, maintenance control section, service/recovery section, maintenance section and two maintenance support teams. The maintenance platoon provides C2, field maintenance, battle damage assessment, and repair to the fires battalion organic batteries. The platoon maintains a limited quantity of combat spares (PLL and shop stock) in the maintenance control section. The maintenance platoon operates the unit maintenance control point (UMCP) in the combat trains or FBSA, depending on METT-TC. The maintenance platoon performs unit maintenance on all battalion equipment except COMSEC and medical equipment. The maintenance platoon leader is assisted by the maintenance platoon sergeant and a maintenance control section warrant officer (W2 915A0).

5-14. The maintenance platoon headquarters section provides command, control, and supervision for all administrative functions of the platoon. With guidance from the FSC commander, it plans and conducts all necessary training activities.

5-15. The maintenance control section is the primary manager for all maintenance in the fires battalion. The maintenance control section performs all of the Army Maintenance Management System (TAMMS) and dispatching operations and tracks scheduled services for the battalion using Unit Level Logistics System-Ground (ULLS-G) and Standard Army Maintenance System (SAMS). All battery ULLS-G boxes and PLL clerks are collocated with the maintenance control section. The maintenance control supervisor manages the ULLS-G operators. The ULLS-G clerks operating each battery box process each DA Form 5988-E (*Equipment Inspection Maintenance Worksheet*) completed by the operator or crew and verified by the maintenance support team. The maintenance control section consolidates and submits all requests for repair parts using the Very Small Aperture Terminal (VSAT) System. The maintenance control section is equipped with a CSS Automated Information System Interface (CAISI) that allows interface between the ULLS-G and SAMS to the VSAT System. This provides flexibility for the maintenance control section to communicate with the VSAT no matter where the section is located in the battalion.

5-16. The maintenance section provides field maintenance for the FSC and the fires battalion HHB. This section also provides reinforcing maintenance to the maintenance support teams supporting each of the firing batteries.

5-17. The fires battalion's primary level of support comes from the FSC FMTs, which are organized to provide field maintenance for all combat platforms organic to the firing batteries. The FMT, when operating forward with the batteries, operates under the control of the firing battery XO or 1SG and is supervised by the MST noncommissioned officer in charge (NCOIC). FMTs carry limited onboard combat spares to help facilitate repairs forward. If inoperable equipment is not repairable due either to METT-TC or a lack of repair

parts, the team uses recovery assets to recover the equipment to the UMCP or designated linkup point.

MAINTENANCE CONCEPTS

5-18. The following battlefield maintenance concepts illustrate how echelons overlap to provide continuous maintenance support to the batteries. The maintenance platoon leader task-organizes the maintenance platoon according to directives he receives from the FSC commander. The battalion XO, S3, S4, and FSC commander analyzes the current and anticipated support requirements and recommends to the fires battalion commander the maintenance concept to be used. They will recommend to the commander the appropriate support at battery, UMCP, tactical operations center (TOC), and trains locations.

5-19. In most tactical situations, the battalion will provide each firing battery an MST. In some instances, the battalion's recovery vehicles may also be positioned forward with each firing battery but remain under battalion control. This provides a quick-fix capability for those items that can be repaired quickly without hindering tactical operations and a recovery capability for those items requiring more extensive repairs.

5-20. The battalion normally establishes the UMCP in close proximity to or as part of the combat trains. The maintenance platoon leader organizes the UMCP according to the maintenance requirements and the tactical situation. The UMCP cannot become a collection point for nonoperational vehicles to the extent that it cannot move everything collected at the UMCP with organic assets. Anything that cannot be repaired in the UMCP or that cannot be towed by UMCP assets is recovered to the FBSA or sent directly to repair facilities at the UEx echelon.

5-21. The rest of the maintenance platoon is in the FBSA under the control of the maintenance platoon sergeant. The platoon maintenance section performs maintenance on FSC and HHB equipment and assists the FMTs as required. The battalion maintenance platoon may be required to organize to support five elements—two firing batteries, HHB/TOC, the combat trains and the FBSA. A detailed discussion of combat trains and FBSA follows in Section II.

SECTION II – FIRES BATTALION TRAINS

5-22. The fires battalion trains is a grouping of equipment and vehicles to provide CSS support to the batteries. The organization of the fires battalion trains varies with METT-TC and space available. Generally, trains can be organized for combat in a single location with all support operating under direct control of the FSC commander, which is termed "unit trains." Trains can also be organized in dual locations—combat trains and FBSA.

- The combat trains contain those elements providing critical battlefield support forward with or near the firing batteries.
- The FBSA contains those FSC sections and elements not forward in the combat trains and is usually positioned farther to the rear of the fires battalion but forward of the BSB.

5-23. In either the single or dual location trains concept, C2 of logistic support assets is the overall responsibility of the battalion XO. He is assisted in this function by the FSC commander, the S1, S4, and in some situations, the HHB commander.

UNIT TRAINS

5-24. When logistical support resources are centralized in one location, they are called unit trains. This option provides the following:

● Centralized coordination and control of logistical personnel and equipment.
● Enhanced security and capability for ground defense.
● A single base for CSS activities

5-25. Unit trains may be appropriate in slow-moving or static situations, when the tactical situation forces the trains to be a self-contained operation, when the battalion is in an assembly area, or during an extended tactical march. Unit trains normally consist of the FSC logistic assets, except for field maintenance teams positioned with the firing batteries and possibly a UMCP. The UMCP may be positioned closer to the firing batteries or near the fires battalion TOC to facilitate rapid repair and evacuation of equipment. The FSC commander is responsible for and commands unit trains.

DUAL TRAINS

5-26. The preferred method of supporting the fires battalion is through dual trains. The use of the dual trains technique provides the following (Table 5-1):
● Immediate responsive forward support tailored to the tactical situation.
● Flexible resource usage.
● Increased resource survivability and enhanced responsiveness when the tactical situation is fluid or when the battalion is operating over extended distances.

Table 5-1, Combat Trains and FBSA Example

FBSA *(Fires Battalion Support Area)*	*COMBAT TRAINS*	*FIRING BTRY*
FSC (-) FSC CDR/1SG MAINT PLAT HQ (-) FOOD SERVICE SEC MAINT SEC DIST. PLAT HQ (-) GEN SUPPLY SEC CLASS III SEC (-) CLASS V SEC (-) FIRES BN. S1/S4 (-) BSOC	FSC (-) FWD TEAMS HHB CDR (If collocated with BN TOC) UMCP MAINT CONTROL SEC BAS CLASS III SEC (-) CLASS V SEC (-) FIRES BN S1/S4 (-) ALOC	FIELD MAINT
NOTE: This is one example of how the FBSA and combat trains could be configured. Based on METT-TC, the commander will configure the fires battalion trains to meet operational requirements.		

COMBAT TRAINS

5-27. The battalion combat trains are organized to provide immediate critical logistics support to the firing batteries. They are the hub of logistics operations for the battalion. When the combat trains are collocated with the battalion TOC, the HHB commander may be designated as the commander of the combat trains. When the combat trains are located away from the HHB/TOC area, the fires battalion commander designates who commands the combat trains. The fires battalion ALOC is located in the combat trains, and the S4 is

responsible for supervising and managing this operations center. Combat trains may include the following:

- The S1/S4 (minus) ALOC (which also serves as the CP for the combat trains).
- Maintenance control section
- Petroleum, oils, and lubricants (POL) (emergency resupply to the batteries).
- Ammunition (emergency distribution to the firing platoons).
- Battalion aid station.
- Decontamination assets.
- Elements of the communications platoon.
- UMCP.
- MSTs with recovery (if not forward with batteries).

5-28. The combat trains are located close enough to the forward line of own troops (FLOT) to be responsive to the forward batteries and platoons, but if possible, they should not be within range of enemy indirect fire. They generally occupy an area between the FBSA and about 1 to 4 kilometers behind the forward battery or platoon position areas (PAs). Combat trains must move often to stay in supporting distance of the firing units.

5-29. The ALOC is the focal point of battalion logistics operations and is the combat trains operation center. It should have the capability to serve as an alternate battalion TOC (less tactical fire direction (FD) capability). The ALOC concentrates on ammunition and POL resupply, priority equipment repair and salvage, and emergency medical care. The ALOC must—

- Stay abreast of the tactical situation (battle tracking).
- Monitor the battalion command net to identify logistic support requirements.
- Receive requests, reports and requirements from subordinate elements.

5-30. The ALOC uses the FBCB2 System to maintain tactical situational awareness. If the ALOC is required to take command of the battalion, the Advanced Field Artillery Tactical Data System (AFATDS) capability for tactical fire direction is provided from the battalion TOC. The S4 also operates the BCS3. This system provides the capability to monitor and track requests for and the status of repair parts and supplies for the fires battalion. This system provides the fires battalion the capability to develop logistics estimates for future operations as well as to provide the commander with a current status of logistics operations supporting current operations.

5-31. ALOC personnel analyze, consolidate, and forward battalion requirements to the BSOC. The BSOC coordinates with and directs elements of the FSC in the FBSA to take actions to meet the requirements of the forward units.

UNIT MAINTENANCE CONTROL POINT (UMCP)

5-32. The fires battalion often establishes a UMCP to provide forward maintenance support to the battalion. The FSC commander may designate either the maintenance platoon leader or platoon sergeant as the commander of the UMCP. Under the dual trains concept, the UMCP may locate in the combat trains, especially when increased security is required. However, the unit may also establish the UMCP outside of but near the combat trains if required to facilitate mission accomplishment.

FIRES BATTALION SUPPORT AREA (FBSA)

5-33. The FBSA includes those elements not in the combat trains and not required for immediate support of the batteries. It generally occupies an area between the BSB and the combat trains, usually about 8 to 12 kilometers from the firing batteries and firing platoon

PAs. When possible, it should definitely be outside of enemy indirect fire range. The FBSA may include the following:

- The FSC headquarters (minus).
- The S1/S4 (minus) BSOC, including the personnel and administration center (PAC) (which serves as the CP for the FBSA).
- Maintenance section (minus) (to perform scheduled maintenance and maintenance for trains elements).
- Remaining distribution platoon elements: class III, class V, and supply section.
- Food service section.

5-34. The BSOC serves as the operations center for the FBSA and the key interface with the FSC commander and his subordinate elements. The BSOC ensures coordination of all CSS actions through the FSC with outside organizations. The BSOC, supported by the FSC, may manage the following functions:

- Receipt/distribution of class V.
- Receipt/distribution of mail and official documents.
- Receipt/preparation/distribution of class I items (e.g., water, ice).
- Receipt/distribution of class II, III, IV, VII, VIII (in coordination with the medical platoon leader), and IX
- Monitor repair operations performed by the maintenance platoon of the FSC.
- In-process new personnel.
- Process legal actions and awards, personal, and finance transactions.
- Provide fire support planning for the FBSA.

5-35. If the FBSA is some distance away from the BSB area, the fires battalion may elect to place a small logistics liaison element in the BSB support area to facilitate coordination.

5-36. Both the ALOC and BSOC include S1 and S4 personnel cross-trained to ensure continuous operations. The S4, assisted by the personnel staff NCO (PSNCO), supervises ALOC operations. The S1, assisted by the S4 NCOIC, usually supervises the BSOC. S6 section personnel may augment both operation centers to provide communications and automation support. The FSC commander, 1SG, and subordinate platoon leaders have vital functions to perform in both the ALOC and the BSOC.

5-37. The designated combat trains or FBSA commander is responsible for trains security. In all trains areas, a perimeter defense is planned. Elements in the trains are assigned a specific sector to defend. Mutually supporting positions that dominate likely avenues of approach are selected for vehicles armed with crew-served weapons. Reaction forces and OPs are established in accordance with unit tactical standing operating procedures (TSOP). To enhance security, an alarm or warning system is arranged. Sector sketches, fire plans, and obstacle plans should be prepared. The designated trains commander directs rehearsals to ensure that all personnel know the parts they play in the defensive scheme.

LOGISTICS PACKAGE (LOGPAC) OPERATIONS

5-38. The most efficient resupply of forward units is done by using LOGPACs. LOGPACs are organized for each battery and element, usually in the FBSA under the supervision of the battalion S4 NCOIC and the distribution platoon leader. They are moved forward to the logistics release points (LRPs) daily for routine resupply. When possible, all LOGPACs are moved forward in march unit under control of an officer in charge (OIC) or NCOIC. Special LOGPACs are organized and dispatched as required by the tactical situation and logistical demands. In the current contemporary operating environment (COE), every LOGPAC is a tactical operation and must be planned and rehearsed accordingly. Convoy operations, to include security, actions on contact, and detailed C2 procedures must be planned and

rehearsed. The S4 must plan and coordinate LOGPAC operations to ensure that they fully support the commander's tactical plan and that they are executed in a secure and tactically sound manner. The S3 is required to monitor LOGPAC operations and to be prepared to respond with assistance if an emergency situation develops. The FBCB2 System assists the S3 in following LOGPAC operations and maintaining situational awareness of this important and potentially dangerous mission.

SECTION III – LOGISTICS SUPPORT PLANNING

5-39. Logistics planning must address logistics support during all phases of an operation. The battalion staff develops the logistics support plan concurrently with the tactical plan. Supporting logistics plans must be as detailed as the tactical plan and fully synchronized and integrated. Use of TSOP and contingency plans greatly help the support staff officers in the planning effort. The field artillery support plan (FASP) addresses the key what, where, when, why, and how of logistic support issues as well as deviations from the routine procedures established by the TSOP.

5-40. To develop and execute sound plans, logistic support personnel must achieve and maintain a high degree of situational awareness and initiate actions well before the start of operations they are to support. Careful management of the information flow demands that information requirements be clearly identified early in the process, vigorously pursued, and shared with all involved.

5-41. Field artillery logistics preparation of the battlefield (LPB) is a conscious effort to identify and assess factors that facilitate, inhibit, or deny support to the fires battalion. It involves a review of known essential field artillery tasks (EFATs) for logistic support tasks and the use of S2 IPB products as an aid in analyzing the manning, arming, fueling, fixing, moving, and sustaining factors. The goal is to determine the fires battalion logistic support requirements that will allow the development of a logistics estimate and a feasible concept of support.

5-42. The process requires that the fires battalion commander, XO, and S3 understand data needed by logistics support staff to plan and provide timely, effective support. It requires that the S1 and S4 understand the mission, the scheme of operations/fires, and battlefield time and space implications for support. The LPB is a coordinated effort that—

● Determines data requirements to support required actions.
● Identifies sources for pertinent data and collects raw or processed data.
● Analyzes collected data and develops it into decision information by assessing the impact on the mission and competing courses of action (COAs).
● Integrates decision information into the MDMP by incorporating it into logistical estimates and fires plans and actions.

5-43. Sources that provide relevant logistical data include the following:
● HBCT briefings, plans, and orders.
● Fires battalion commander's planning guidance and intent.
● Operations and intelligence briefings and overlays.
● Wargaming and rehearsals.
● Modified tables of organization and equipment (MTOEs), subordinate unit status reports, and route reconnaissance overlays.
● Traffic circulation and highway regulation plans.

5-44. A logistics estimate, which includes LPB, is a continuous analysis of logistics factors affecting mission accomplishment. Emphasis is on how the status of logistic support will

impact on proposed COAs. Logistics planners use these estimates to recommend the best COA (that can be supported) and to develop plans to support the operation.

5-45. Logistics estimates at the fires battalion level are usually informal. As a minimum they are formulated in a briefing format that should address facts, assumptions, and conclusions in each of the following areas:

- Human resources (e.g., quality of life, personnel, casualty estimates, and force health protection (FHP).
- Ordnance (e.g., class V status; restrictions; distribution system; RSR; controlled supply rate (CSR); ; combat-configured load (CCL); maintenance; and class IX status, repair times, and evacuation policy).
- Supply (e.g., class III [bulk] status, distribution system, restrictions).
- Transportation (e.g., status of transportation assets, critical lines of communication (LOC), and main supply route (MSR) status).
- Sustaining the Soldiers and their systems (e.g., classes I, II, III, (package), IV, VI, VII, IX, and water and field services status).
- COAs that can be supported.

5-46. On the basis of mission analysis, resources are compared with requirements. Shortfalls are evaluated in close coordination with operations planners to determine their effect on selected COAs.

5-47. The logistics staff must complete the logistics estimates in time for commanders to confirm the feasibility of the plan, modify plans and priorities as necessary, and calculate risks. Timely completion also facilitates the generation and coordination of supply and support requests.

Chapter 6

Fires and Effects Organizations and Responsibilities

SECTION I – FIRES AND EFFECTS ORGANIZATIONS

6-1. The heavy brigade combat team (HBCT) is designed with a fires and effects cell (FEC) as an organic, standing organization within the HBCT headquarters. The FEC expands the functionality of the traditional brigade-level fire support element (FSE). This improved functionality includes the following:

- The improved ability to integrate available nonlethal capabilities into targeting.
- The capability of managing counterstrike operations when required.
- The capability of planning, integrating, and synchronizing nonlethal operations.
- Improved joint fires connectivity.

6-2. The HBCT has traditional fire support (FS) organizations, battalion/ squadron fires cells (FC) and company/troop fire support teams (FISTs) that work closely with the FC. These traditional organizations remain vital parts of the combined arms infrastructure that exists within the HBCT.

6-3. The FEC plans, coordinates, integrates, and synchronizes the full spectrum fires and effects in support of HBCT operations, including lethal and nonlethal effects. The FS organizations at battalion/squadron level and below ensure lethal fires, to include organic mortars and any additional fires and effects allocated by the HBCT FEC, are delivered on time and on target. Together, the FEC and FS organizations enable the HBCT to conduct effects-based operations to protect the force and shape the battlefield.

FIRES AND EFFECTS CELL (FEC)

6-4. The FEC is led and directed by the effects coordinator (ECOORD) for the HBCT. The ECOORD is a field artillery (FA) lieutenant colonel assigned to the HBCT staff. Traditionally, the fires battalion commander performed this function. Under the HBCT design, the fires battalion commander is still the senior fires and effects advisor to the HBCT commander and will advise him on training, employment of fires, and other fires and effects operations as required by the HBCT commander. This is a commander-to-commander relationship, with the fires battalion commander not having fires-and-effects staff responsibility. The ECOORD performs all the staff functions associated with fires and effects and advises the HBCT commander accordingly. The FEC is the special staff through which the ECOORD plans, coordinates, integrates, and synchronizes all fires and effects activities to support HBCT operations. Primary FEC functions include the following:

- Planning, coordinating, synchronizing, and executing fires and effects in support of HBCT operations.
- Collaborating in the intelligence preparation of the battlefield (IPB).
- Coordinating the tasking of sensors during development of the collection plan with the HBCT S2, the military intelligence company (MICO) commander (as needed), and the reconnaissance squadron (RS) to acquire targets.
- Participating in the HBCT military decision-making process (MDMP).
- Participating in the HBCT targeting process.

- Being responsible for coordinating, integrating, and synchronizing information operations into combined arms operations.
- Managing the establishment of and changes to fire support coordinating measures (FSCMs).
- Coordinating maneuver space for the positioning of field artillery assets.
- Coordinating clearance of lethal and nonlethal attack against targets (clearance of fires).
- Performing combat assessments as a result of employing lethal and nonlethal effects.
- Coordinating requests for additional fires and effects, both lethal and nonlethal.
- Coordinating for joint fires through the higher headquarters.
- Coordinating requests for additional nonlethal effects/operations assets through the higher headquarters (i.e., information operations (IO), civil affairs (CA), to include psychological operations (PSYOP).
- Providing input to the HBCT's common operational picture (COP) to enhance situational understanding.

Table 6-1, HBCT Fires and Effects Cell (FEC)

Command Group	
LTC – Effects Coordinator (13A)	
SGT – Fire Support Sergeant (13F20)	
Deputy Command Group	
(As directed by Commander)	
Main Command Post	**Tactical Command Post**
MAJ – Deputy Effects Coordinator (13A)	CPT – Asst Effects Coordinator (13A)
CPT – Asst Effects Coordinator (13A)	CW4 – Targeting Officer (131A)
MSG – Operations Sergeant (13Z))	SFC – Targeting NCO (13F40)
CW3 – Target Anal (131A)	SPEC – Fire Support Specialist (13F10)
SFC – Fire Support Sergeant (13F40)	**USAF Tactical Air Control Party (TACP)**
SSG – Targeting NCO (13F30	MAJ – Air Force Staff Officer (01A0)
SPEC – Fire Support Specialist (13F10)	E7 – Air Force Staff NCO (00D4)
PFC – Fire Support Specialist (13F10)	E6 – Air Force Staff NCO (00D3)
IO Element	
MAJ – IOCOORD (30A)	
Brigade Operational Law Team (BOLT)	
MAJ – Brigade Judge Advocate (27A)	
CPT – OPLAW (27A)	
SSG – Paralegal NCO (27D)	
MAJ – CA Officer (39C)	
CPT – Electronic Attack Officer (35G)	
SFC – Senior PSYOP NCO (37F)	
USAF Tactical Air Control Party (TACP)	
MAJ – Air Force Staff Officer (01A0)	

Table 6-1, HBCT Fires and Effects Cell (FEC)

E7 – Air Force Staff NCO (00D4)	
E6 – Air Force Staff NCO (00D3)	
Additional Joint Augmentation As Required:	
USN NSFS – LNO	
USMC – LNO	

6-5. The FEC is a standing organization within the HBCT headquarters and has resources to support current operations from a tactical command post (TAC CP) and plan for future operations from a main CP. The FEC consists of an operations section (TAC CP element), nonlethal/non-line-of-sight section, which is composed of the plans and targeting element and the IO element (main CP). Additionally the FEC has the limited capability to provide coverage to the command group and the deputy command group when deployed. All elements work from the main CP if the TAC CP is not deployed. Selected operations elements become part of the TAC CP when it is deployed, while the plans and targeting section and IO section remain at the main CP. An Air Force tactical air control party (TACP) collocates with the FEC. As mission, enemy, terrain and weather, troops and support available, time available, and civil considerations (METT-TC) dictates, the FEC can be augmented by other Army agencies; e.g., reinforcing FA units as well as assets to provide/enhance IO and related activities. The FEC collaboratively plans and executes full spectrum fires and effects in an integrated fashion with the other battlefield operating systems (BOSs) within the HBCT. The FEC is the centerpiece of the HBCT's targeting architecture, focused on both lethal and nonlethal target sets. The BOLT provides legal review of plans, targeting and orders. The FEC is the HBCT's primary staff element that coordinates and integrates joint effects into the commander's concept of operations.

PLANS AND TARGETING SECTION

6-6. The three principal functions of the plans and targeting section are planning for future operations, targeting, and HBCT shaping operations. Being located in the HBCT main CP facilitates collaboration with the other BOSs. The plans and targeting section prepares fires and effects products used in the MDMP and targeting process. On adoption of a course of action (COA), the section produces and disseminates the fires and effects portions of the HBCT operation order (OPORD). The plans and targeting section prepares recommendations for the HBCT targeting meeting and implements the resulting decisions through targeting guidance in Advanced Field Artillery Tactical Data System (AFATDS). Leveraging the intelligence, surveillance, and reconnaissance (ISR) assets available at the main CP, the section plans and executes HBCT shaping operations. Functions of the FEC plans and targeting section include the following:

- Developing the concept of fires, fires and effects execution matrix (FEEM), target list, restricted target list and identifying FSCMs for each COA.
- Developing/refining AFATDS targeting guidance for each COA.
- Developing target criteria (TCRIT) for input into AFATDS for each COA.
- Producing HPTL, target selection standards (TSS), and attack/effects guidance matrix (A/EGM) for HBCT OPORD.
- Preparing products for the targeting meeting.
- Implementing targeting guidance in AFATDS.
- Updating/purging targeting files.
- Maintaining interoperability with collection assets and All-Source Analysis System-Light (ASAS-L).

- Assisting the operations element in clearance of fires when required.
- Planning and executing shaping operations as directed.

OPERATIONS ELEMENT

6-7. The operations section may be located alongside the plans and targeting section in the HBCT main CP or forward with the TAC CP when it is deployed. It tracks and maintains situational understanding of all fires and effects assets. Its main function is to execute current operations, focusing on the decisive fight. Functions of the TAC CP FEC element include the following:

- Monitoring the tactical situation.
- Maintaining and updating unit information and digital/voice status.
- Ensuring tactical fire control with supporting FA and target acquisition (TA) assets.
- Monitoring processing of preplanned fires in the FS plan.
- Coordinating clearance of all fires with units.
- Maintaining and updating the current active NFA list.
- Maintaining digital link to FA/TA assets.
- Tracking and maintaining situational understanding of close air support (CAS).
- Tracking and maintaining situational understanding of naval surface fire surface (NSFS).
- Sending fire missions to the battalion fire direction center (FDC) for processing.
- Requesting combat assessment reports.
- Ensuring memorandums for records (MFRs) and artillery target intelligence (ATI) reports are received and processed.

INFORMATION OPERATIONS ELEMENT (IO ELEMENT)

6-8. The IO element of the FEC consists of planners for IO, CA, PSYOP, electronic attack (EA), and legal support to civil-military operations (CMO). The IO element plans, coordinates, integrates, and synchronizes the application of nonlethal effects operations to support the HBCT. Through reach-back, the IO element has access to information necessary to enhance situational understanding to support HBCT operations and, when necessary, makes recommendations for augmentation of its nonlethal capabilities. Augmentation with nonlethal capabilities broadens the range of effects available to the HBCT.

6-9. 6-8. The IO element of the FEC consists of planners for IO, CA, PSYOP, electronic warfare (EW), PAO and BOLT. The IO element plans, coordinates, integrates, and synchronizes the application of nonlethal effects operations to support the HBCT. The IO element makes recommendations for augmentation of its nonlethal capabilities. Augmentation with nonlethal capabilities broadens the range of effects available to the HBCT.

6-10. The IO element capability distinguishes the FEC from a traditional FSE. The IO element serves as the coordination cell for PSYOP, CA, public affairs, legal matters, and EW. The IO element, working for the ECOORD, integrates these assets into HBCT operations to apply nonlethal effects against both traditional and asymmetric threats in the area of operations (AO). With the exception of PSYOP and CA, which have planners at the battalion level when a PSYOP or CA element is attached, nonlethal planners do not exist at the battalion/squadron levels and below. The IO element works closely with the HBCT S3 and FEC staff to identify nonlethal requirements, focus necessary HBCT assets, integrate IO into the targeting process, and assess the effectiveness of those activities. Clearly, in the context of full spectrum effects and operations, the manner in which nonlethal operations are planned, coordinated, and executed in concert with the HBCT's overall mission is crucial to

meeting the commander's intent. Close coordination with the S2, S6, and other HBCT staff elements as necessary is required.

6-11. The IO element is the principal staff organization for all matters concerning civil-military operations (the civilian impact on military operations and the impact of military operations on the civilian populace). The IO element coordinates and deconflicts the efforts of augmentation elements such as PSYOP detachments, CA teams, and EW teams.

6-12. The IO element may request support for specific functions from higher headquarters. These functions may include electronic warfare, computer network operations, PSYOP, and counterpropaganda based on METT-TC factors. The IO element integrates and synchronizes these augmentation assets with reconnaissance and surveillance operations and the maneuver plan.

FIRE SUPPORT ORGANIZATIONS

6-13. All fire support organizations in the HBCT are organic to maneuver units. Fire support organizations in the maneuver battalions and the reconnaissance squadron (RS) all support the HBCT FEC. The ECOORD will advise the HBCT commander on training, personnel management, maintenance, and equipment readiness for all subordinate fires and effects organizations. The maneuver battalions and the RS are each organized with a FC. The BTB has fire support planners assigned to its staff to help the commander and staff plan and execute rear area effects up to a Level II threat (See Table 6-3). The maneuver companies and the reconnaissance troops each have organic FISTs. The infantry company FIST includes platoon forward observers for each of its three platoons. Combat observation lasing teams (COLTS) are consolidated into a platoon organic to headquarters and headquarters company of the HBCT, supervised by the ECOORD and are an HBCT asset to be employed by the brigade commander. HBCT fire support organizations subordinate to the FEC are shown in tables 6-1 through 6-6.

Table 6-2, Maneuver Battalion/Squadron Level

MVR BATTALION/SQUADRON FIRES CELL			
Duty Position	Grade	Specialty	Quantity
Fire Support Officer Asst Fire Support Officer	O3 O2	13A 13A	1 1
Fire Support NCO	E7	13F40	1
Targeting NCO Fire Support Sergeant	E7 E5	13F40 13F20	1 1

Table 6-3, Brigade Troops Battalion

BTB BATTALION FIRES Staff/Planners			
Duty Position	Grade	Specialty	Quantity
Fires Support NCO	E7	13F40	1
Targeting NCO Fire Support Specialist	E5 E4	13F20 13F10	1 1

Table 6-4, Armor Company/Troop Fire Support Team

ARMOR COMPANY/TROOP FIRE SUPPORT TEAM			
Duty Position	**Grade**	**Specialty**	**Quantity**
Fire Support Officer	O2	13A	1
Fire Support Sergeant	E6	13F30	1
Fire Support Specialist	E4	13F10	1
RATELO/Driver Note: Dismounted Troop has Platoon FOs same as Inf platoon (See Table 6-5)	E3	13F10	1

Table 6-5, Infantry Fire Support Team

MECHANIZED INFANTRY COMPANY FIRE SUPPORT TEAM			
Duty Position	**Grade**	**Specialty**	**Quantity**
Fire Support Officer	O2	13A	1
Fire Support Sergeant	E6	13F30	1
Forward Observer	E5	13F20	3
Fire Support Specialist	E4	13F10	3
Radio Tele Operator	E3	13F10	4

Table 6-6, Brigade COLTS

MECHANIZED INFANTRY COMPANY FIRE SUPPORT TEAM			
Duty Position	**Grade**	**Specialty**	**Quantity**
Fire Support Officer	O2	13A	1
Fire Support Sergeant	E6	13F30	1
Forward Observer	E5	13F20	3
Fire Support Specialist	E4	13F10	3
Radio Tele Operator	E3	13F10	4

SECTION II – FIRES AND EFFECTS KEY PERSONNEL RESPONSIBILITIES

EFFECTS COORDINATOR (ECOORD)

6-14. The ECOORD is the permanently assigned full-time fires and effects staff advisor to the HBCT commander and staff. He works closely with the commander to ensure mutual understanding of all aspects of fires and effects planning, coordination, and execution in support of the HBCT operations. He assists the HBCT S3 in integrating fires and effects into the maneuver commander's concept of operation. The ECOORD's primary responsibilities include the following:

- Directing FEC operations, including IO.
- Training the FEC to perform all of its functions.
- Advising the HBCT commander and staff on available fires and effects capabilities and limitations.
- Planning, coordinating, and orchestrating fires and effects in support of HBCT operations.
- Participating in the MDMP.

- Preparing the fires and effects paragraphs in the HBCT OPORD that describe the concept/scheme of fires and effects to support HBCT operations.
- Directing and supervising the FEC to develop products required to support OPORD development and the MDMP.
- Briefing the HBCT commander to get his approval of the concept for fires and effects.
- Disseminating the approved concept to HBCT fire support organizations, the fires battalion, the fires brigade and the UEx FEC.
- Ensuring battalion FCs plan fires in accordance with the commander's guidance for current and future operations.
- Facilitating the targeting meeting (lethal and nonlethal) in the absence of the HBCT XO.
- Coordinating training of subordinate FCs with their respective maneuver units and with the fires battalion.
- When directed, accompanies the HBCT commander in the command group during execution of tactical operations.

FIRES AND EFFECTS OPERATIONS NCO

6-15. The fires and effects NCO is the senior enlisted assistant to the ECOORD. Having battle staff skills, he understands and actively participates in the MDMP and production of the OPORD. He may act as shift leader in the FEC; either at the main CP or TAC CP. Major responsibilities include the following:

- Ensuring that the FEC is fully manned for 24-hour operations and all of its equipment is fully functional.
- Performing FEC digital network management and troubleshooting to ensure internal and external connectivity.
- Supervising the enlisted personnel in the FEC and processing administrative matters pertaining to the FEC.
- Managing FEC situational understanding (SU) input to the HBCT COP.
- Preparing required reports in accordance with HBCT standing operating procedures (SOP).
- Maintaining files and documents.
- Developing and enforcing FEC SOP.

ASSISTANT EFFECTS COORDINATOR

6-16. The Assistant ECOORD is an FA major who assists the ECOORD in all his duties and assumes the ECOORD's responsibilities in his absence. The assistant ECOORD and the ECOORD split responsibilities between the main CP and the TAC CP when both CPs are deployed. Figure 6-1 depicts an example of how the ECOORD may man the two CPs and two command groups. The HBCT commander and ECOORD determine who fights from which location and the manning and equipment to support the operation. When not deployed with the TAC CP or a command group, the assistant ECOORD serves as a shift leader in the FEC operations section.

PLANS AND TARGETING BATTLE CAPTAIN

6-17. The plans and targeting battle captain supervises the plans and targeting section in the FEC. He assists the assistant ECOORD in his duties and acts as the assistant ECOORD in his absence. He focuses on developing the plans and products needed for the MDMP and

targeting process. He actively participates in the IPB process and performs staff coordination to ensure fires and effects are incorporated into HBCT operations as required.

TARGETING OFFICER

6-18. The HBCT FEC is organized with two targeting officers, a CW4 131A0 and a CW3 131A0, which provides a targeting officer at the main and TAC CP when the CPs are split. When the CPs are united, the main CP has 24- hour coverage for targeting. The two targeting officers' responsibilities can be split, one having lethal targeting and the other nonlethal targeting. The targeting officers use AFATDS to collect, analyze, and process information into required target attack guidance and instructions. They use the information provided by the HBCT's acquisition systems, as well as those assets available through reach-back to locate high-payoff targets (HPTs) for attack. They work with the plans and targeting battle captain and the information operations coordinator (IOCOORD) during the MDMP to develop targeting guidance to be entered into AFATDS as well as distributed with the HBCT OPORD. This guidance includes the following:

- High-payoff target list (HPTL).
- Target management matrix (TMM).
- Attack/effects guidance matrix (A/EGM).
- Target selection standards (TSS).
- Target/effects synchronization matrix (T/ESM).
- Battle damage assessment (BDA) requirements.

6-19. During operations, they provide recommendations to the targeting team on updating targeting priorities. They prepare products for the targeting meeting as directed by the ECOORD. They direct updating and purging of targeting files as required.

6-20. The targeting officers ensure that interoperability is maintained with collection assets of the HBCT, particularly ASAS-L. They develop the guidance to be entered into AFATDS so that the FEC receives targeting information from ASAS-L as well as provides information to the S2.

TARGET ANALYST NCO/TARGETING NCOS

6-21. The targeting NCOs (target analyst/targeting team) with the targeting officers provide a 24-hour capability to plan and coordinate targeting operations. Their primary responsibilities include the following:

- Operating and maintaining the targeting AFATDS.
- Maintaining the targeting COP display.
- Maintaining the target production display.
- Updating and purging targeting files as directed by the targeting officer.
- Ensuring targets that are acquired are processed to the appropriate fires and effects assets in accordance with the T/ESM.
- Ensuring essential voice and digital connectivity within and outside of the FEC.

FIRE SUPPORT SPECIALIST

6-22. Fire support specialists work under the supervision of the fires and effects operations NCO to support the operations and plans and targeting sections as directed. Their primary responsibilities follow:

- Operating the plans and targeting sections AFATDS.
- Supporting the development of fires and effects planning and targeting products as directed by the plans and targeting battle captain and targeting officers.

- Operating and maintaining voice communications equipment.
- Operating the operations section AFATDS.
- Maintaining updated unit information; i.e., FISTs, COLTs, radar, battery, and mortar locations and digital/voice status.
- Maintain the current NFA list.
- Fire mission processing.
- Coordinating clearance of fires with adjacent units.
- Operating and maintaining voice communications equipment.
- Operating assigned vehicles.

INFORMATION OPERATIONS COORDINATOR (IOCOORD)

6-23. The senior IO officer (Functional Area 30) is the IOCOORD and chief of the IO element that is responsible for planning, coordinating, integrating, and synchronizing IO for the HBCT. Primary responsibilities follow:

- Working with the ECOORD to advise the HBCT commander on IO effects in the context of planned lethal and nonlethal fires and effects to support tactical operations. His advice focuses on the status of friendly, neutral, and adversary IO system capabilities and vulnerabilities.
- Supervising the IO element.
- Ensuring IO effects are integrated into HBCT operations planning and the resulting OPORD.
- Ensuring that IO actions (performed by assigned or augmenting IO assets) are coordinated, integrated, and synchronized with the HBCT plan/order.
- Obtaining and processing relevant information and intelligence to produce IO situational awareness. Provide IO situational awareness information to the FEC situational awareness COP.
- Ensuring the IO element performs required staff coordination for IO support from higher headquarters.
- Integrating IO into the targeting process.
- Advising the ECOORD on deception opportunities and capabilities.
- Conducting assessments of IO contributions to the operation.
- Providing assessments of IO situation and capabilities to support ongoing MDMP.

CIVIL AFFAIRS (CA) OFFICER

6-24. The CA officer is the staff lead in planning, coordinating, and monitoring civil-military operations (CMO) in the HBCT area of operations/area of responsibility. This by definition includes humanitarian assistance, populace resource control (including noncombatant evacuation operations and displaced civilian operations), foreign nation support, and emergency management/disaster mitigation.

6-25. The CA officer brings civilian considerations to the forefront during the targeting process to create the desired nonlethal and IO effects on the host nation population. These actions help ensure that civilians have minimal impact on HBCT tactical operations. He is responsible for the following:

- Integrating CA objectives/HPTs with the HBCT targeting process.
- Writing the CA annex or appendix to the HBCT OPORD.
- Conducting liaison with key civilian organizations in the HBCT AO.
- Synchronizing civilian relief effort with HBCT objectives.

- Providing a direct linkage with the civil-military operations center (CMOC) (when established).
- Providing maneuver commanders regional/cultural expertise through reach-back.

ELECTRONIC ATTACK (EA) OFFICER

6-26. The EA officer works closely with the targeting officers and plans battle captain to plan, coordinate, and synchronize EA operations. Primary responsibilities follow:

- Requesting and obtaining intelligence reports and identifying potential adversary C4I targets.
- Recommending EA objectives in developing TSS and the HPTL.
- Nominating C2 targets for lethal attack.
- Coordinating with the RS for EA operations to disrupt C2.
- Recommending EA employment for inclusion into the T/ESM.
- Recommending EA objectives to focus and synchronize RS operations.

PSYCHOLOGICAL OPERATIONS (PSYOP) NCO

6-27. The PSYOP NCO plans, coordinates, and monitors HBCT operations that focus on influencing, informing, deceiving, disrupting, delaying, degrading, or destroying the adversaries' means of C2 and IO. Other responsibilities include the following:

- Recommending supporting PSYOP objectives (SPOs) and potential target audiences (PTAs) to the HBCT commander.
- Writing the PSYOP appendix to the HBCT OPORD.
- Serves as the IO element NCOIC, maintains the Maneuver Control System (MCS) and the common operational picture (COP) for the IO element.
- Establishes measure of effectiveness (MOE) and monitors the effectiveness of PSYOP operations.
- Coordinates counterpropaganda.
- Establishing voice and digital linkage with supporting PSYOP elements.
- Coordinating resources from/for supporting attached PSYOP elements or UEx headquarters.

LEGAL OFFICER

6-28. The Brigade Judge Advocate, along with the OPLAW Judge Advocate and the Paralegal NCO form the Brigade Operational Law Team (BOLT). This team normally locates in the Main CP with the IO element. However, it can be deployed forward in whole or in part as directed by the HBCT commander. The Brigade Judge Advocate serves both as a personal and special staff officer. The BOLT provides operational law advice to the commander and staff. The BOLT provides legal advice during and all other planning and targeting sessions conducted by the HBCT staff. The members of the BOLT serve as subject matter experts on rules of engagement (ROE), targeting, international law, law of armed conflict(including treatment of detainees, EPWs, civilians on the battlefield and other noncombatants) and all other legal aspects of operations The BOLT provides or coordinates with other legal offices for legal services in military justice, administrative and civil law, contract and fiscal law, claims, and legal assistance. The Paralegal NCO provides administrative and paralegal support to the judge advocates in the BOLT and supervises the paralegals in the HBCT battalions. This NCO is responsible for establishing voice and digital linkage with UEx headquarters legal support elements.

JOINT AND ARMY AUGMENTATION TO THE FEC

6-29. Joint and Army augmentation is essential to HBCT operations. The FEC routinely functions with a US Air Force TACP. In addition to the Air Force TACP, other joint augmentation includes liaison officers to plan and coordinate NSFS and US Marine Corps support.

AIR FORCE TACTICAL AIR CONTROL PARTY (TACP)

6-30. A TACP (habitually attached to Army CPs) is collocated with the FEC at the HBCT main CP. The overarching mission of the HBCT TACP is to plan, coordinate, and direct aerospace support for land forces. The air liaison officer (ALO) advises the HBCT commander and staff on air support effects. He leverages the expertise of his TACP with linkages to the UEx TACP to plan, coordinate, synchronize and execute air support operations. He also maintains situational understanding of the total air support and air support effects picture. The HBCT is organized with two TACPs. One operates with the TAC CP to coordinate and execute close air support (CAS) in the close, decisive fight. The second TACP operates from the main CP and assists the XO/staff in coordinating and executing brigade-level shaping operations. The battalion-level TACP includes an ALO and enlisted terminal air controllers (ETAC) with the added responsibility of terminal attack control. Air Force ETACs are required at each of the maneuver companies and are employed by the company commander to provide CAS to support the company. TACPs coordinate activities through an Air Force air request net and the advanced airlift notification net. TACP functions include the following:

- Serving as the Air Force commander's representative, providing advice to the HBCT commander and staff on the capabilities, limitations, and employment of air support, airlift, and reconnaissance.
- Providing an Air Force coordination interface with the HBCT FEC, the battalion FCs, and the air defense cell and the brigade aviation element.
- Assisting in the synchronization of air and surface fires and preparing the air support plan.
- Providing direct liaison for local air defense and airspace management activities.
- Integrating into the staff to facilitate planning air support for future operations and advising on the development and evaluation of CAS, interdiction, reconnaissance, and joint suppression of enemy air defenses (JSEAD) programs.
- Providing terminal control for CAS and operating the Air Force air request net.

NAVAL SURFACE FIRE SUPPORT (NSFS) LNO

6-31. The NSFS LNO supervises a NSFS team that may be attached to the HBCT FEC and coordinates and controls naval surface fires. The HBCT NSFS team communicates on the UEx/Army force (ARFOR) NSFS (high- frequency) net to gain naval surface fires. This net is also used for daily planning between the HBCT and UEx/ARFOR. Below brigade, HBCT fire support digital and FM radio nets are used to exchange requests for naval fires and effects.

US MARINE CORPS (USMC) LNO

6-32. A USMC LNO (may also be an LNO team) may augment the FEC based on METT-TC to coordinate naval and/or USMC air support to the HBCT. The FEC processes requests for naval/USMC air support through this LNO and/or team. A firepower control team may be attached to the maneuver battalions and/or RS to perform terminal control of naval/USMC air support. In the absence of an observer from the firepower control team, the company/troop FIST or the Air Force ETAC may control naval and/or USMC air.

SECTION III – RESPONSIBILITIES OF SUBORDINATE FIRES CELLS

BATTALION/SQUADRON FIRES CELLS (FC)

MISSION

6-33. The FC provides an organic fires coordination capability within the RS, BTB, and maneuver battalion HQs. The FC assists the battalion/squadron in executing its portion of the HBCT's scheme of fires and effects. Through its AFATDS, the FC provides the company FIST/COLT digital linkage to the battalion/squadron mortars as well as fire support assets available at the HBCT or higher levels.

FIRE SUPPORT OFFICER

6-34. The battalion/squadron fire support officer plans, coordinates, and executes fire support for the battalion commander's concept of operation. His responsibilities include the following:

- Advising the commander and his staff on fire support matters. This includes making recommendations for integrating battalion/squadron mortars into the scheme of fires and their movement in the scheme of maneuver.
- Supervising all functions of the battalion/squadron FC.
- Ensuring all fire support personnel are properly trained to support battalion operations.
- Preparing and disseminating the fire support execution matrix and/or the fire support plan.
- Assisting in the coordination for positioning or movement of lethal and nonlethal assets in the battalion AO.
- Conducting bottom up refinement of the HBCT fires and effects plan.
- Directing development of battalion essential fire effects tasks (EFETs).
- Coordinating with the TACP on CAS missions and for terminal control personnel.
- Providing coordination channels for nonlethal effects support (to the HBCT FEC).
- Planning, directing, and monitoring the employment of laser designators where they will best support the commander's concept of operation.
- Translating the commander's intent into AFATDS guidance.
- Establishing and maintaining communications with the HBCT FEC, subordinate FIST, and the battalion/squadron mortars.
- Participating in fires and effects rehearsals.
- Processing requests for additional fire support with the HBCT FEC.
- Providing staff supervision of the FA assets attached or under operational control (OPCON) of the battalion.
- Disseminating the approved target list and execution matrix to subordinate elements.
- Recommending appropriate changes in the target list and attack guidance when required.

FIRE SUPPORT SERGEANT

6-35. The battalion/squadron fire support sergeant is the enlisted assistant to the battalion fire support officer. His responsibilities include the following:

- Training and validating the enlisted personnel of the battalion FC and FIST.
- Assisting the battalion fire support officer in developing essential fires and effects tasks to support battalion/squadron operations.

- Ensuring voice and digital connectivity with the HBCT FEC, supported and supporting units, and fires and effects assets.
- Planning and coordinating all support (administrative and logistical) for the FC.
- Maintaining and updating the FS status charts and situation maps.
- Performing the duties of the battalion fire support officer in his absence.

FIRE SUPPORT SPECIALIST

6-36. The responsibilities of the FS specialist follow:

- Operating and maintaining section equipment, including computer equipment.
- Helping in FS planning and coordination.
- Operating and maintaining communications equipment.
- Preparing and maintaining a situation map.
- Preparing and posting daily staff journals and reports.
- Assisting in establishing, operating, and displacing the FS equipment.

SECTION IV – RESPONSIBILITIES OF FIRE SUPPORT TEAMS

COMPANY/TROOP FIRE SUPPORT TEAMS (FISTS)

MISSION

6-37. The FIST provides the maneuver companies/troops with fire support coordination, precision targeting, terminal control, and effects assessment capabilities. Each battalion FC has subordinate FISTs that are organic to and support each maneuver company and reconnaissance troop. Each FIST operates from a fire support vehicle (FSV) possessing a target acquisition/communications suite with the capability to designate laser guided munitions. The battalion commander can direct that FISTs be task organized within the battalion/squadron based on METT-TC considerations and employed according to an observation plan where they can best acquire targets in support of the operation. Air Force ETACs are employed forward with each maneuver company and may also be task organized and positioned where they can best support the operation.

FIST CHIEF

6-38. The FIST chief is the company fire support officer. He works with the company commander during combat operations to successfully accomplish all company-level fires and effects tasks. The maneuver commander is responsible for integrating fire support and maneuver. The company fire support officer must fully understand the company commander's scheme of maneuver. On the basis of the commander's guidance, the company fire support officer integrates fires and effects into the maneuver plan and presents the plan to the commander for his approval. His responsibilities follow:

- Planning, coordinating, and executing fire support.
- Providing coordination channels (to the HBCT FEC) for nonlethal effects support.
- Advising the company commander on fire support matters, including making recommendations for integrating company mortars into the battle plan.
- Establishing and maintaining communications with platoon observers, company mortars, and the battalion FC.
- Ensuring that the fires and effects support plan and/or execution matrix is prepared and disseminated to key personnel.

● Planning, directing, and managing the employment of laser designators where they will best support the commander's concept of operation.

● Providing emergency control of joint fires and effects missions in the absence of qualified personnel.

SUPPORT SERGEANT

6-39. The company fire support sergeant is the senior enlisted assistant to the company fire support officer. The fires support sergeant acts as the company fire support officer in the FIST chief's absence. He is responsible for the following:

● Training all enlisted personnel assigned to the FIST.

● Ensuring the FIST is adequately manned, equipped, and trained to perform all duties and responsibilities.

● Supervising the fire support specialist.

● Providing SU of the close fight to the battalion FC.

● Ensuring communications with the battalion FC, battalion mortars, and subordinate observers.

FIRE SUPPORT SPECIALIST

6-40. The fire support specialist works under the guidance of the fire support sergeant. His responsibilities follow::

● Operating and maintaining section equipment, including computer equipment.

● Assisting in FS planning and coordination.

● Operating and maintaining communications equipment.

● Preparing and maintaining situational understanding maps or displays.

● Preparing and posting daily staff journals and reports.

PLATOON FORWARD OBSERVER

6-41. Platoon forward observers (FOs) are assigned to the FIST of each infantry company. Equipped with target acquisition devices to accurately locate targets and communications necessary to forward targets to AFATDS, the FOs are the primary shooters in the companies. They are normally collocated with the platoon leaders. They provide target refinement; execute planned fires, and request fires for their supported platoons. The FO may direct CAS in emergencies when no TACP is available.

COMBAT OBSERVATION LASING TEAM (COLT)

6-42. The COLT is a high-technology observer team designed to maximize the use of smart munitions. In the HBCT, five COLTs are organic to the HHC of the HBCT. The HBCT ECOORD is responsible for training the COLTs and for performing precombat checks and mission briefings/rehearsals before employment. Their employment is planned and executed under the supervision of the HBCT FEC. COLTs can be used as independent observers to weight key or vulnerable areas. Although originally conceived to interface with the Copperhead, a COLT can be used with any munition that requires reflected laser energy for final ballistic guidance. The self-location and target ranging capabilities of the ground/vehicular laser locator designator (G/VLLD) allows first-round fire for effect (FFE) with conventional munitions to be achieved.

6-43. The COLT gives the maneuver commander a powerful capability to attack hard against point targets as well as area targets if the delivery systems are available. To maximize the effectiveness of the COLT, positioning must be carefully considered. To provide the best

coverage and to allow the greatest survivability for the COLT, consideration should also be given to employing COLTs as pairs or with a company/troop FIST.

6-44. The HBCT ECOORD or his representative positions COLTs to support the HBCT commander's overall intent. The commander approves the COLT positioning during the rehearsal or as part of the published operation plan and/or order.

6-45. COLTs can attack targets as part of the HBCT shaping battle or observing critical targets. Support and security for them is a consideration since they are extremely vulnerable if positioned forward of the maneuver battalions without security. Planning and integrating the COLTs into the RS scheme of operations should always be considered, which will provide them some degree of security. COLTs should always be an integral part of the HBCT observation plan. To execute fires for the HBCT, COLTs should not be positioned outside the range of friendly artillery during defensive operations. During offensive operations, they should not be positioned outside the ability of the HBCT to ensure their support, protection/extraction, and the ability to communicate with the HBCT TAC or main CP.

This page intentionally left blank.

Chapter 7

The HBCT Fires and Effects System

Within the HBCT staff there is only one fires and effects organization and that is the fires and effects cell (FEC), which is organic to the HBCT headquarters. Traditional fire support organizations (battalion/squadron FCs, company/troop fire support teams (FIST) and infantry platoon forward observer (FO) teams) are organic to maneuver units but have a requirement to coordinate and synchronize their efforts with the HBCT FEC. The HBCT commander integrates and synchronizes fires and effects with maneuver to accomplish the mission. The HBCT fires and effects system is comprised of three major components:

- Command, control, communications, computers and intelligence (C4I) systems and command and control (C2) facilities to analyze, decide, and act faster than the enemy. It is capable of bringing to bear full-spectrum lethal and non-lethal fires and effects on any adversary.

- Reconnaissance, surveillance, and target acquisition (RSTA) resources needed to acquire targets through information gathering operations. This effort includes counterfire radars that can detect enemy mortar and artillery targets.

- Both lethal and non-lethal means to enable the HBCT to be decisive in combined arms operations and achieve desired objectives and end state.

This chapter will present discussion on the three components of the HBCT fires and effects system: Section I–C2 Facilities and Systems, Section II–Reconnaissance, Surveillance, and Target Acquisition and Section III–Lethal and Nonlethal Fires and Effects.

SECTION I – C2 FACILITIES AND SYSTEMS

COMMAND AND CONTROL FACILITIES

7-1. The HBCT's staff sections normally are distributed among four command and control organizations: the command group, the deputy command group, TAC CP, and main CP. The HBCT commander organizes his staff within each CP to perform essential staff functions to aid him with planning and controlling operations. These command and control organizations are normally positioned within the HBCT's AO to maintain flexibility, redundancy, survivability, and mobility.

COMMAND GROUP

7-2. The commander fights the battle from the command group and normally positions himself where he can most influence the outcome. From this location, the commander is better able to observe critical events, maintain communications, and sense the battle. Despite the increased capability provided by the C2 digital systems, command remains a personal endeavor. The commander should leverage the C2 digital systems to free himself from his command posts if he wants to be physically present so he can see his subordinates to

provide guidance, direction, or motivation. He may also want to physically see the terrain he is to fight on to clear up any ambiguity he may have or to reinforce his decisions. The commander considers the following in determining his location on the battlefield:

- Linkage of the ABCS network to make timely decisions, including the ability to judge the progress, condition, and morale of his forces. Within technical limitations, communications systems adapt to the needs of the commander, not vice versa.
- Time and location of critical events that have the greatest impact on mission accomplishment. Ideally, the commander selects a location where he can observe and influence the conditions that aid in making a critical decision.
- Security for the command group.

7-3. The command group normally consists of the commander, the effects coordinator (ECOORD), the air liaison officer (ALO), and other key staff officers as directed by the commander. The command group is not a permanent organization; rather it is formed anytime the HBCT commander is away from one of the CPs to control an operation. The command group is equipped to operate separate from the TAC CP wherever the HBCT commander feels it is necessary to influence operations with rapid decisions and orders. The commander determines the actual placement of personnel within the command group.

HBCT TACTICAL COMMAND POST (TAC CP)

7-4. The tactical command post (TAC CP) is a temporary C2 organization that directly assists the commander with controlling current operations. The S3 is responsible for the activities and employment of the TAC CP.

7-5. The TAC CP organization is simpler, smaller, and more austere than the main CP. It operates as one integrated cell that provides intelligence, current operations, and fires and effects. It is composed of those elements that the commander deems necessary. When not deployed, the TAC CP personnel remain a part of the main CP and assist operations in their functional cells. Its small size and high mobility allows frequent displacement and a comparatively low physical and electronic signature. The TAC CP is normally manned with:

- The HBCT S3.
- A current operations officer, normally the assistant S3.
- An intelligence officer, normally the assistant S2.
- The ECOORD.
- The assistant ECOORD (CPT).
- The operations element of the FEC.
- Other staff area representatives as required for a particular operation.

7-6. In addition to controlling current operations, the TAC CP serves the following functions:

- Provides the command group with combat information and intelligence.
- Relays the commander's decisions and instructions as required.
- Provides the net control station for the HBCT command radio net and backup net control station for the operations and intelligence (OI) radio net.
- Provides a forward location for issuing orders.
- Provides a forward planning facility, if necessary.
- With augmentation serves as the main CP when the main CP is displacing or unable to function.
- Exercises command and control over operations such as a passage of lines, relief in place, shift of the main effort, or construction of a strongpoint. Provides command and control for a special task force.

7-7. Collocation of the ECOORD with the HBCT commander is vital for synchronized delivery of full spectrum effects in HBCT operations. When at the Main CP, the ECOORD has a stable C2 environment from which to guide and monitor the interaction between the FEC and the HBCT operations section. If deployed forward in the command group configuration, secure long-range voice and digital communications between the ECOORD and the FEC must be assured. The FEC and assistant ECOORD must maintain voice and digital connectivity with the command group. A fire support officer and a fire support NCO may be provided to the command group to make sure the ECOORD has up-to-date information by maintaining digital connectivity with the FEC. The assistant ECOORD must also be postured to assume a lead role in fires and effects coordination and synchronization if communications with the ECOORD is lost.

HBCT MAIN COMMAND POST

7-8. The main CP is the HBCT commander's principal command and control facility. It has a broader and more future-oriented focus than the TAC CP. The HBCT XO is responsible for supervising all staff activities and functions within the main CP. It operates from a stationary position and moves as required to maintain control of operations. In linear operational environments, it locates to the rear of the maneuver battalion area of operation and, if possible, out of enemy medium artillery range. In nonlinear operations, it locates where it can best support HBCT operations and is least vulnerable to potential hostile actions. This may be within the AO or from sanctuary (a location outside the immediate AO). The main CP provides the following functions:

- Controls current operations when the TAC CP is not deployed.
- Synchronizes combat, combat support, and combat service support activities in support of the overall operation.
- Provides a focal point for the development of intelligence.
- Conducts targeting operations to include targeting meetings and integration of sensor to shooter linkages.
- Supports situational understanding (SU) for the HBCT commander and subordinates by monitoring, analyzing, and disseminating information.
- Monitors, anticipates, and provides information in support of the commander's decision points.
- Plans future operations.
- Plans and executes deep, shaping operations within brigade AO
- Monitors rear operations.
- Coordinates with higher headquarters and adjacent units.
- Keeps the higher headquarters informed.
- Provides net control station for the operations and Intelligence radio net and backup net control station for the command radio net.
- Provides terrain management and Army airspace command and control (A2C2).
- Provides a stable, secure planning facility.
- Produces and disseminates the commander's orders.
- Plans and controls reconnaissance and surveillance operations.
- Integrates IO, information management (IM), and ISR to support attainment of information superiority (IS) at critical points in time and space.

7-9. Although the main CP houses the staffs (coordinating, special, and personal), it is organized into cells for functionality.

CURRENT OPERATIONS CELL

7-10. The current operations cell monitors and controls operations throughout the HBCT AO and maintains the COP. It coordinates with higher and adjacent units, analyzes relevant information, and provides recommendations to the commander.

PLANS CELL

7-11. The plans cell maintains a current and projected view of the situation and plans future operations based on the orders from higher headquarters, projected outcomes of the current operation, and the HBCT commander's guidance. The cell works closely with higher headquarters to enhance parallel and collaborative planning.

FIRES AND EFFECTS CELL (FEC)

7-12. The fires and effects cell (FEC) coordinates fires and effects for the HBCT and assists both the current operations and plans cells. It provides expertise, planning capability, and insures the integration of fires and effects into brigade operations. It provides liaison to lethal and non-lethal fires and effects units supporting the brigade. The cell works under the direction of the ECOORD and consists of a plans and targeting element, an operations element (OPs), and an IO element. FEC functions and tasks were previously discussed in Chapter 6.

ISR CELL

7-13. The ISR cell gathers, analyzes, and disseminates information gathered on the enemy, terrain, and civilian population, and maintains the enemy component of the common operating picture (COP). The cell works under the direction of the HBCT S2 and consists of the assistant S2, the S2X team, intelligence analysts, all source intelligence technician, and intelligence sergeant. The ISR cell works with the current operations and plans cells as well as the RS squadron commander, S3, and S2 to plan and synchronize the reconnaissance and surveillance plan in support of the PIR. The cell also works closely with the FEC in the execution of targeting and combat damage assessment.

MANEUVER SUPPORT CELL

7-14. The maneuver support (MANSPT) cell is responsible for planning, integrating, and synchronizing mobility, survivability and military police (MP) support for all operations. The MP Provost Marshal resident within the MANSPT cell provides oversight of organic MP assets and serves as the special staff officer to the commander. During offensive operations, MPs best support the brigade's maneuver and mobility by facilitating movement control, refugee movement and control, straggler and refugee movement and control, and EPW evacuation. In the defense, MPs are best employed in the area security role to enhance the HBCT's maneuver and mobility. The MPs provides a robust force protection asset through mobile patrols for recon, detection, and response to threat incidents. The MANSPT cell assists the HBCT staff with developing engineer plans that include engineer task organization, the integration of the scheme of engineer operations, and obstacle plans with the HBCT scheme of fires and effects. The MANSPT cell also coordinates all military and civilian engineer efforts within the HBCT's AO. The MANSPT cell plans for engineer assets and units not task organized to the HBCT's subordinate units. The MANSPT cell also supports the HBCT with terrain analysis products. The digital topographic support (DTS) team provides 24-hour digital terrain data production support and analysis using the digital topographic support system (DTSS).

AIR DEFENSE CELL

7-15. Air defense cell is responsible for the planning, coordinating, integrating, and controlling air defense to include developing air defense plans, ADA task organization, scheme of air defense operations, and reconnaissance and surveillance planning. They also provide planning for ADA assets and units not task organized to HBCT subordinate units. This cell is also responsible for coordinating with the brigade aviation elements (BAE) for Army airspace command and control (A2C2) planning within the HBCT, to include de-confliction of UAV operations.

BRIGADE AVIATION ELEMENT

7-16. As a part of Army transformation, each HBCT will have a brigade aviation element (BAE). The BAE is a planning and coordination cell whose major function is to incorporate aviation into the ground commander's scheme of maneuver. The BAE focuses on providing employment advice and initial planning for aviation missions, unmanned aerial vehicles (UAVs), airspace planning and coordination, synchronization with the air defense cell, the air liaison officer (ALO) and the fires and effects coordinator (ECOORD). The BAE also coordinates directly with the AVN BDE or the supporting aviation task force (TF) for detailed planning.

7-17. The BAE does not take the place of aviation TF involvement in the planning process. It assists the HBCT in aviation planning and provides the AVN BDE or the supporting aviation TF leadership with HBCT mission information. It is critical that aviation commanders and S3s participate and lead aviation mission planning in support of the HBCT. The BAE has the following responsibilities:

- Integration and synchronization of aviation into the HBCT commander's scheme of maneuver.
- Focus on incorporating aviation into the commander's plan.
- Coordinates directly with aviation brigade(s).
- Close integration/synchronization with the air liaison officer (ALO) and ECOORD (fires and effects coordinator).
- Employment advice and planning for the reconnaissance and attack elements, assault helicopters, airborne command and control assets, heavy helicopters, medical evacuation (MEDEVAC) helicopters, and unmanned aerial vehicles (UAVs).
- Army airspace command and control (A2C2) planning, coordination, and airspace deconfliction for combined arms, joint, interagency and multi-national (JIM) operations.

COMMAND, CONTROL, COMPUTERS, COMMUNICATIONS (C4) NETWORK

7-18. HBCT C4 systems are advanced information technologies that enable:

- Near real-time information updates.
- Continuous assessments and command decisions to be disseminated early and instantaneously resulting in living OPORDs and OPLANs.
- Multi-echelon collaborative planning that is made possible through a joint common operational picture (COP) that is developed and maintained through focused information sharing.
- Pattern recognition and options acceleration through situational understanding (SU) and accelerated MDMP.

7-19. Portions of the Army Battle Command System (ABCS) comprise the bulk of the advanced information technologies the HBCT employs. The ABCS consists of eight sub-systems:

- The Global Command and Control System- Army (GCCS-A).
- The Tactical Airspace Information System (TAIS).
- The Maneuver Control System (MCS).
- The All-Source Analysis System-Light (ASAS-L).
- The Advanced Field Artillery Tactical Data System (AFATDS).
- The Air-Missile Defense Planning and Control System (AMDPCS).
- The Battle Command Sustainment and Support System (BCS3).
- The Force XXI Battle Command Brigade and Below (FBCB2)

7-20. The ABCS integrates command and control systems found at all echelons (from the ground force component commander at theater or joint task force level to the individual Soldier or weapon platform) in an Army force deployed for land combat, peace operations, humanitarian assistance or operations in aid of civilian authorities. The complete ABCS consist of automation systems, support systems and associated supporting communications systems. It operates in a distributed computing environment (DCE) that supports client/server data exchange within a CP/Cell and facilitates sharing of information between CPs via US message text format (USMTF) messages. The HBCT Information Network provides connectivity. Additional systems that may round out the HBCT C4 infrastructure include the Digital Topographic Support System (DTSS), the Integrated Meteorological System (IMETS), and the common ground station (CGS) providing TUAV interface.

7-21. The Maneuver Control System (MCS) is the hub of the ABCS in the HBCT command posts. It is the primary system for the creation and dissemination of orders, graphics and operations-related reports. It automates the creation and distribution of the common operational picture (COP) for ABCS. MCS provides common applications necessary to access and manipulate the joint common database (JCDB) and automatically integrates information from other battlefield operating systems (BOS) to provide timely, accurate status information that can be collated into a COP. Major capabilities of the MCS include:

- Integrating information horizontally and vertically.
- Friendly and enemy unit locations (Blue and Red situational understanding (SU))
- Terrain.
- Friendly graphics.
- Artillery range fans.
- Air and missile defense umbrellas.
- Obstacles and contaminated areas.
- C2 nodes.
- Supply nodes.
- Using MS Word templates and web browser technology provides the ability to develop and distribute battle plans and orders.
- A show me whiteboard and audio provides the capability to conduct collaborative planning sessions.
- Displaying status of personnel, equipment, and supplies to support resource management and command/staff MDMP and targeting.

7-22. The All-Source Analysis System-Light (ASAS-L) supports intelligence operations, providing linkages to strategic and tactical intelligence sensors and sources. Major functions include:

- Data access, database creation and management and correlation of intelligence information.
- Creation and dissemination of intelligence reports, templates, and annexes.
- Receipt of intelligence reports from a variety of sources including JSTARS, UAV, Prophet, as well as FBCB2 and other components of the ABCS.
- Display of enemy (Red) SU picture. Facilitates management of this picture with near real-time updates.
- Intelligence Synchronization.
- Linkage to JSTARS and UAV.
- Support of HBCT targeting operations.

7-23. ASAS-L is located in the Main CP in the S2 section. The S2 uses the ASAS-L to receive intelligence reports from all sources and create and manage the correlated Red SU picture. All HQ sections and elements with ASAS-L can access this picture to maintain an understanding of the tactical situation. In the case of the FEC, access to an updated Red display from ASAS-L is critical to perform ongoing targeting and fires and effects planning, coordination and synchronization. The S2 routinely transmits the ASAS-L picture he generates down to subordinate units who receive it either on ASAS_L or FBCB2. He also transmits the enemy SU picture to UEx where the G2 analysis control element (ACE) integrates it further into operational planning.

7-24. The Advanced Field Artillery Tactical Data System (AFATDS) is a single integrated fire support asset manager. It provides decision aids and an information system that enables the control, coordination, and synchronization of all types of fire support means. The system provides connectivity with the MCS, FBCB2, ASAS-L remote workstation, BCS3, and the AMDPCS. The AFATDS automates tactical fire direction functions to greatly speed up the processing and dissemination of:

- Conventional fire plans.
- Targeting information.
- Fire missions generated from incoming target intelligence.
- Fire support coordinating measures (FSCM) and battlefield geometry.
- Ammunition and firing unit data.
- Meteorological and survey data.
- Operations orders, graphics and matrices.
- Movement routing and orders.

7-25. AFATDS also provides the following essential fire support capabilities:

- Weapon-to-target pairing based on target type, commander's guidance, unit availability, weapons status, and ammunition availability.
- Digital situational awareness from Army, Marine, and Air Force ground and air-based sensors, and other C2 systems.
- Planning tools for fire support planning, route development and management, and course of action analysis.
- Digital connectivity to enable vertical and horizontal coordination through the exchange of maps, messages, and graphics.

7-26. The Air and Missile Defense Planning and Control System (AMDPCS) consist of the Forward Area Air Defense Command, Control, Communications and Intelligence (FAADC3I) system and the Air and Missile Defense Workstation (AMDWS). AMDPCS integrates air defense, firing units, sensors, and C2 centers into a coherent system capable of defeating/denying the low altitude aerial threat.

7-27. The FAADC3I is the collection of computer and communications systems that serve to control air defense elements and create the air battle picture. The FAADC3I provides real-time enemy air engagement operations, airspace situational awareness, and air threat early warning.

7-28. Within the HBCT main command post, the Air Defense management (ADM) cell utilizes the AMDWS to maintain the enemy and friendly air picture for the HBCT. Major capabilities and functions of the AMDWS include:

- Disseminating and receiving orders and reports
- Providing airspace SU by fusing aircraft and tactical ballistic missile threats, ground force information, and control measures.
- Facilitating air and missile defense (AMD) planning and analysis to develop ADA missions and requirements.
- Notifying other battlefield operating systems (BOS) of potential enemy air strikes.
- Displaying air control orders, current firing unit status, alert posture, missile expenditure, and personnel ready for duty for air battle management.
- Enabling sensor-to-shooter early warning and cueing

7-29. The HBCT aviation element (BAE) is responsible for planning and coordinating aviation assets and capabilities into the ground commander's scheme of maneuver. The BAE focuses on providing employment advice and initial planning for aviation missions, unmanned aerial vehicles (UAV), airspace planning and coordination, synchronization with the Air Force liaison officer (ALO) and the ECOORD. The BAE also coordinates directly with the AVN BDE or the supporting aviation task force (TF) for detailed mission planning.

7-30. The Tactical Airspace Integration System (TAIS) is the system the BAE operates to integrate airspace management. It automates A2C2 planning and operations and air traffic services. It also helps planners build Army input for the joint air coordination order (ACO) to distribute the approved A2C2 overlay. TAIS takes input from multiple sources and combines it into a single picture. Combined with the electronic ground picture, it helps users visualize both the air and ground battle space.

7-31. The Battle Command Sustainment and Support System (BCS3) is the logistics component of ABCS that provides automated information on all classes of supply, field services, maintenance, medical services and movements. This information is consolidated and collated into situation reports and planning estimates for current and future operations. Digital connectivity with the MCS ensures information exchange and operational planning, with the BCS3 exploiting the following capabilities:

- Displaying current logistics information, by classes of supplies, items or units, as color-coded charts, or detailed tabular reports.
- Enabling the performance of quick or deliberate COA analysis in support of current or planned missions.
- Performing resource-tracking IAW unit task organizations down to company level, and maintaining status of the current commander's tracked items list (CTIL) to focus logistical operations on critical requirements across the HBCT

INTELLIGENCE

7-32. In order for the HBCT commander to effectively bring to bear his fires and effects system upon the enemy; he must have a reliable picture of the disposition of his adversary. He obtains this through organic and reach-back intelligence capabilities. The HBCT's intelligence team consists of the brigade and battalion S2s, the MICO, and the recon squadron (RS). This section focuses on the intelligence assets (in the context of C2) that the

S2 and the MICO commander exploit to ensure the HBCT commander has the necessary enemy picture to decisively employ his fires and effects system.

7-33. The HBCT is organized with an S2 element at the brigade and at each subordinate battalion headquarters. These staff elements translate the commander's intent and commander's critical information requirements (CCIR) into intelligence, surveillance and reconnaissance (ISR) tasks. Operating as an extension of the brigade S2 staff, for the internal and external management of ISR assets, is the MICO. It provides analysis to support the development of the HBCT COP, targeting requirements and effects criteria, and intelligence preparation of the battlefield (IPB). The fires battalion S2 and the FEC plans and targeting element figure prominently in this S2/MI architecture as principal conduits for the HBCT's long-range capability to acquire and attack targets throughout the breadth of the battlefield. The fires battalion S2, with the aid of the FEC plans and targeting element, assesses intelligence reports and information that the HBCT S2/MI team has fused to develop the COP and feed the HBCT targeting process. The fires battalion uses this enemy artillery focused intelligence in the development and execution of the counterstrike program for the HBCT.

TARGETING

7-34. The HBCT targeting effort is managed and executed from the Main CP by the brigade XO. The targeting and plans cell of the FEC assists in this function and plays a major role. The MICO is organized with a mission management capability to provide dynamic tasking of organic ISR assets in response to targeting priorities. The ISR integration team uses combat information from organic and external collectors, routed through the ASAS-L, to tip off and cue precision targeting tools such as UAV, or other sensors.

7-35. Special consideration is given to the counterstrike program that is so essential to HBCT survivability and flexibility. Depending on the magnitude of the indirect fire threat, a large portion of the HBCT's RS and ISR capabilities may be dedicated to counterstrike programs. An early focus on mitigating the threat will improve the HBCT's survivability. The FEC is fully networked with the HBCT S2/MI intelligence team and will work closely with all the effects providers to manage the attack of targets and to produce BDA assessment of targets once attacked.

ISR INTEGRATION TEAM

7-36. The MICO provides ISR integration capabilities to the HBCT Main CP and the RS squadron. At the HBCT HQ level these capabilities are manifested in the ISR Integration Team. The team provides an expanded collection management section and a remote unmanned aerial vehicle (UAV) ground control station (GCS) to augment the S2. The HBCT ISR Integration Team includes an ISR Requirements Team and the S2X team. These teams provide linkages to the ASCC/ARFOR ACE and joint/national agencies, and have sufficient intelligence automation, communications, and collaborative tools to support situational awareness and targeting. To support situational awareness, the HBCT ISR Integration Team receives digital reports from the RS squadron and other reporting elements. It incorporates near real-time moving target indicators (MTI), Synthetic Aperture Radar (SAR) imagery, preprocessed Communications Intelligence (COMINT), reports from the CGS, as well as electronic intelligence (ELINT) and imagery from the use of Tactical Exploitation of National Systems (TENS). The organic capability to exploit imagery from organic sensors allows the S2 to annotate and disseminate imagery intelligence to subordinate elements.

- **S2X Team**. The S2X Team is the focal point for all matters associated with human intelligence (HUMINT) and counter intelligence. The S2X Team conducts mission management and provides technical steerage for HBCT HUMINT operations. It also analyzes tactical CI/HUMINT reports, accesses national/theater HUMINT

databases and fuses the information into a consolidated HUMINT situation. The Team manages the special funding of HUMINT operations. The S2X Team ensures the HUMINT collection, analysis, and dissemination effort is in concert with the commander's requirements. It consists of a Team Chief (CPT, 35E, HUMINT COLL Tech (CW2, 351E), HUMINT collector (SGT, 97E), and SR CI sergeant (E7, 97B).

- **Signals Intelligence**. The HBCT relies heavily on external support from a UEx/ARFOR analysis control element (ACE) for SIGINT analysis. national, theater, and UEx-level analyses are available from a higher headquarters ACE via ASAS-L.
- **TROJAN Spirit**. Trojan Special Purpose Intelligence Remotely Integrated Terminal (Spirit) system provides long-range dedicated high-capacity, multi-level secure electronic link between the HBCT and the UEx/ARFOR. The TROJAN Spirit provides the organic non-terrestrial reach capability required to access theater, joint, and national analytic products.
- **Common Ground Station (CGS)**. The CGS provides JSTARS intelligence feeds and joint tactical terminal (JTT) feeds of theater and national intelligence broadcasts to the HBCT Main CP.
- **Ground Control Station (GCS)**. The GCS combined with a UAV remote video terminal (RVT) brings in UAV imagery to the CP. The GCS is not strictly a video tool but also allows the UAV to be controlled and vectored by an operator.

ARTILLERY TARGET INTELLIGENCE

7-37. Artillery target intelligence can come from many sources such as the following:

- Direct observation by special operations forces (SOF), scouts, and FOs.
- ELINT sources such as the PROPHET radio frequency intercept system.
- HUMINT sources employed by the HBCT Military Intelligence Tactical HUMINT Platoons.
- Weapons-locating radar (AN/TPQ-36 and AN/TPQ-37).
- Unmanned aerial vehicles (UAV).
- Higher HQ and Joint sources, including the Joint Surveillance Target Attack Radar System (J-STARS).
  - Maneuver formations down through the squad level.

SECTION II – RECONNAISSANCE, SURVEILLANCE AND TARGET ACQUISITION

ARMED RECONNAISSANCE SQUADRON

7-38. The HBCT has robust capabilities to gain information superiority and deny adversaries the ability to achieve surprise, or to template the force and engage it effectively. These information superiority capabilities are manifested in its organic RS. As the HBCT's primary source of combat information, the RS squadron seeks to see and understand the operational environment in detail. Success in this realm empowers the HBCT to anticipate, forestall, and dominate threats, ensuring mission accomplishment through freedom of maneuver and decisive action. RS operations are guided by the CCIR, formalized and incorporated into the HBCT ICP.

RECONNAISSANCE AND SURVEILLANCE (R&S)

7-39. Reconnaissance is a focused intelligence collection effort, performed before and during other combat operations to provide information and intelligence that is used by the

commander and his staff to develop, confirm or modify the operational plan. In contrast, Surveillance is the systematic observation of airspace or surface areas by visual, aerial, electronic, photographic, or other means.

7-40. Surveillance is inherent in both reconnaissance and security missions, but may be conducted separately utilizing the squadron's unique capabilities. The focus and tempo of the collection effort primarily comes from the priority intelligence requirements (PIR) specified in the HBCT CCIR, his intent, and the specified (critical) area(s) in which information is needed. Specific requirements for collecting intelligence information are normally found in the HBCT ICP.

TARGET ACQUISITION (TA)

7-41. Along with its ISR missions the RS squadron, as well as other maneuver elements within the HBCT, has responsibilities for target acquisition and battle damage assessment. Other HBCT units and assets with inherent target acquisition responsibilities include FC, COLT and FIST assets and the TA platoon organic to HBCT. The goal of the target acquisition effort is to provide timely and accurate information to enhance the attack of specified targets. TA systems and equipment perform the key tasks of target detection, location, tracking, identification, classification, and battle damage assessment for fire support operations.

7-42. The TA platoon organic to the fires battalion provides acquisition of threat mortar, artillery, and rocket systems to, enable counterstrike operations, and generate artillery target intelligence. The platoon consists of one Q-36 radar, one Q-37 radar, a meteorological section, and a survey section. The platoon deploys in whole or part within tailored force packages. Once in theater, the fires battalion controls the employment of the platoon and any additional counterfire radars attached or augmenting the HBCT. Counterfire radars require external assets for security. The meteorological section provides meteorological support to artillery and mortars to enhance the accuracy of their fires. The survey section provides common survey for field artillery firing units and mortars when assets are available.

7-43. The RS squadron employs three recon troops and additional assets provided by the UEx or the HBCT. Parts or all of these assets (as directed by the HBCT commander) can be focused toward the counterstrike fight. If the enemy indirect fire threat is a significant one, the commander may initiate a deliberate, all-out effort to acquire, target, attack, and eliminate its capabilities before it can be used against the HBCT.

7-44. If RS operations are focused on counterstrike, the FEC will work closely with the RS squadron FC to fully integrate FA support into the operation. The HBCT FEC also manages the employment of tactical air to attack targets not within the range of supporting artillery. The fires battalion will manage TA radar zone coverage to ensure adequate coverage across the HBCT and establish quick-fire linkages to a firing platoon or to a fires brigade asset to ensure the fastest response possible against enemy indirect fire weapons once they begin to fire.

7-45. Each recon troop and maneuver company has an organic FIST with the capability to laser designate targets for terminally guided artillery and Air Force, Navy and/or USMC terminally guided munitions. The FIST performs its essential fires and effects tasks in support of troop operations, aiding in the employment of supporting mortars and close air support. The RS may also have all or some number of the HBCT COLT teams OPCON which also have the capability to employ all types of terminally guided munitions. Supporting field artillery fires allocated to RS operations will be specified in essential fires and effects tasks that were identified in top-down fire planning. This support is integrated into RS operations as part of the scheme of fires and effects for HBCT operations with specific synchronization instructions reflected in the appropriate attack/effects guidance matrix.

7-46. The employment of the HBCT fires and effects system during RS squadron operations can be initiated through a variety of sensor cues resulting from deliberate and incidental contacts. The RS squadron has numerous sensors available for executing its IRS missions. TUAV, ground sensors, and CI personnel may also be made available to the commander to augment his internal assets. With the use of digital and analog systems, the squadron commander can also utilize external assets available to him from ARFOR, joint, and national levels as well.

7-47. Every system or combination of systems employed by the RS squadron is capable of reporting the presence of enemy and therefore is a source for the initiation of fires and effects. In many cases, the accuracy in target location of an initial contact may not be sufficient to generate an immediate fire mission or other tactical response. The HBCT FEC must be attuned to this and ensure its targeting elements work closely with the RS FC to see that minimum target selection standards are met and/or cross-cue other sensors to gain an accurate target location.

7-48. During the counterstrike fight, counter-recon fight or the close fight the fires battalion should be the primary recipient of direct sensor inputs, in order to fully exploit the AFATDS digital architecture to provide timely and responsive fires and effects. The HBCT FEC must constantly monitor execution of current operations and consider the full range of both lethal and non-lethal attack options to meet the commander's guidance in achieving desired effects on enemy formations or capabilities. The IO Element assists in determining how to best achieve the desired effects most efficiently. Eliminating the threat's capabilities may not require actual physical destruction.

SECTION III – LETHAL FIRE SUPPORT AND NON-LETHAL FIRES AND EFFECTS

DISTINGUISHING LETHAL FIRE SUPPORT AND NON-LETHAL FIRES AND EFFECTS

7-49. A distinction is made between lethal fire support and non-lethal fires and effects in an attempt to better characterize what the HBCT fires and effects system can provide in support of operations.

7-50. Lethal fire support is synonymous with lethal fires and is that support directly associated with cannons/howitzers/rocket launchers and joint systems delivering or firing projectiles/munitions/rockets by indirect fire. The focus of lethal fires and fire support is on lethal attack to destroy, neutralize, suppress, harass the enemy and his military combat capabilities, thereby rendering him combat ineffective.

7-51. In contrast, non-lethal fires and effects are battlefield effects delivered by any means, which do not produce lethal results on the enemy. For the HBCT, confronting an asymmetric adversary requires an expanded application of nonlethal effects. Creating the conditions for success against an asymmetric threat requires the HBCT commander to consider options other than the application of lethal force, and the full integration other combat elements to generate alternative combat power.

7-52. Nonlethal fires are traditionally delivered by the same platforms and munitions, which deliver lethal fires. Currently, these are limited to smoke and illumination. Their employment is planned and executed in much the same manner as lethal fires. In the future, projectiles may deliver a broader range of non-lethal effects such as jamming, anti-radiation, incapacitating liquids, and other effects.

7-53. Nonlethal effects include elements of offensive and defensive information operations (IO). Nonlethal effects operations include IO and a majority of it core, supporting and related

activities. civil affairs, civil military affairs (CMO), public affairs, PSYOP, PSYACTS and related supporting legal operations can have considerable impact on influencing target audiences. The term nonlethal effects is not synonymous with the term IO. Engineer operations may also provide nonlethal effects, along with other projects planned and executed by HBCT units.

7-54. The HBCT commander relies on his FEC to plan, coordinate, integrate, and synchronize in execution lethal effects, nonlethal effects, and IO to support his scheme of maneuver. This includes the massing of firepower or the massing or concentration of nonlethal effects to limit, disrupt, divert, destroy, or damage enemy forces in depth.

ORGANIC HBCT LETHAL FIRE SUPPORT

7-55. Organic HBCT lethal FS capabilities include 120mm mortars and 155mm howitzers. Their quantities are shown in Table 7-1.

Table 7-1, HBCT Lethal Fire Support Capabilities

FS System	Quantities	Unit Distribution
120mm mortars	14	4 per Maneuver Battalion 2 per RECON Troop
155mm howitzers	16	2X8 FA Battalion

7-56. Mortars belong to the maneuver commanders as their readily available indirect fire support but are considered a vital part of the HBCT's first line fires response. The battalion/squadron fire support officers play important role in advising maneuver commanders on how to synchronize mortar employment with the unit's scheme of maneuver. The 120mm mortars must be fully integrated into the digital fire support system, with essential fires and effects tasks (EFET) planned and executed as part of the overall fires and effects operation to support the maneuver battalions and the RS squadron concept of operation. However, the fire support officer's most valuable contribution to the squadron and maneuver battalion fights come from coordinating and integrating into maneuver operations, additional fires and effects allocated by the HBCT from the fires battalion, reinforcing fires battalion or joint sources.

7-57. Additional lethal joint or Army attack systems and their capabilities, which may be made available to the HBCT for employment, are described in Chapter 9.

INFORMATION OPERATIONS (IO)

7-58. The HBCT conducts IO (coupled with information management (IM) and ISR) to achieve information superiority and dominant SU. IO are those actions taken to affect the adversaries' decision making processes, information, and information systems, while protecting one's own information and information systems. The HBCT's ability to conduct full-spectrum operations is critically dependent on the information environment. This ability is especially pertinent for the HBCT, as its employment in small scale contingency operations will likely see its opponents exploiting local population to engage in asymmetrical action against the deployed force.

7-59. The multifunctional HBCT FEC structure provides the HBCT staff an organic capability to perform all tasks of a traditional FSE, plus, integrate nonlethal IO capabilities in support of the operational plan. Specific responsibility for planning and oversight of IO is embedded within the FEC in the form of the IO Element. As an integral part of effects planning, the IO Element synchronizes organic HBCT assets with UEx/JTF IO objectives to develop the IO component of the effects concept and operations plan. The ability to use reach-

back to national assets in conjunction with organic intelligence collection assets afforded by the RS squadron and augmenting PSYOP and CA assets expedites the assessment of intended nonlethal effects.

ELEMENTS OF INFORMATION OPERATIONS

7-60. IO are enabling operations that create and present opportunities for decisive operations. Commanders use both offensive IO and defensive IO simultaneously to accomplish the mission, increase their force effectiveness, and protect their organizations and systems. Commanders conduct IO through a combination of the 12 IO elements and the two related activities of public affairs (PA) and civil-military operations (CMO).

Elements of Information Operations

CORE:

    Operations Security.

    Psychological Operations.

    Military Deception.

    Electronic Warfare.

    Computer Network Operations.

    Computer Network Attack.

    Computer Network Defense.

    Computer Network Physical Destruction.

    Information Assurance.

    Physical Security.

    Counterintelligence.

    Counter-deception.

    Counterpropaganda
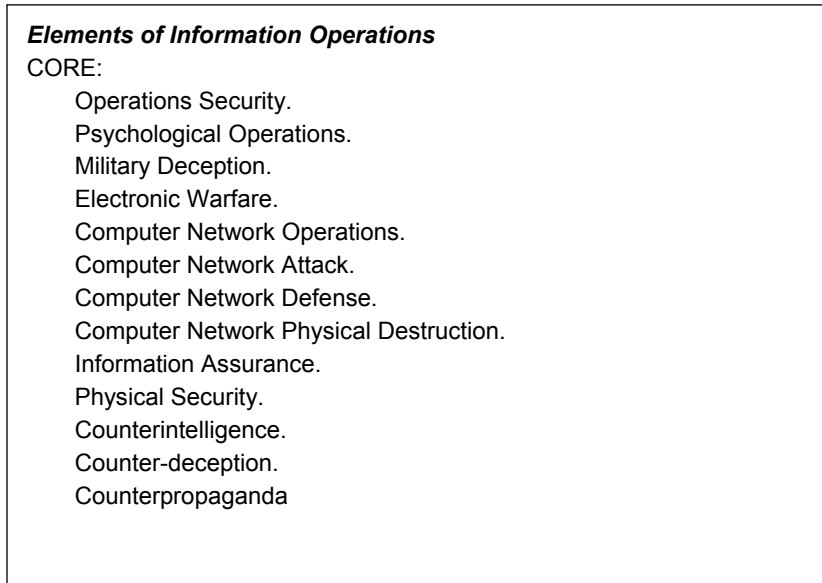
Figure 7-1, Elements of IO

7-61. The core and supporting elements of IO are not organizations; however PSYOP, CA, and PA bring both capabilities and assets to the HBCT commander. They are independent activities that, when taken together and synchronized, constitute IO. With the possible exceptions of computer network attack (CNA), computer network defense (CND), and computer network exploitation (CNE) none are new. What is new is bringing these elements/related activities together as components of the information element of combat power. The IO concept focuses efforts that before were diffuse. The IO concept also includes assigning authority and responsibility for these previously disparate activities to a single staff officer. Within the HBCT, this staff officer is the ECOORD. The IO Element of the FEC assists the ECOORD in planning and executing IO operations to achieve the nonlethal effect desired by the commander. The FEC IO Element integrates IO into all HBCT operations based upon METT-TC. The reach-back capabilities inherent in the HBCT organization present the commander the ability to draw on Army wide assets in the orchestration and implementation of IO.

OPERATIONS SECURITY

7-62. Operations security is the process of identifying essential elements of friendly information (EEFI) and subsequently analyzing friendly actions attendant to military operations and other activities to:

- Identify those actions that can be observed by adversary intelligence systems.
- Determine indicators hostile intelligence systems might obtain that could be interpreted or pieced together to derive essential friendly information in time to be useful.
- Select and execute measures that eliminate or reduce to an acceptable level the vulnerabilities of friendly actions to adversary exploitation.

PSYCHOLOGICAL OPERATIONS (PSYOP)

7-63. Psychological operations (PSYOP) are planned operations conducted to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately to influence the behavior of foreign governments, organizations, groups, and individuals. Psychological operations induce or reinforce foreign behavior favorable to the originator's objectives.

7-64. The HBCT conducts PSYOP in concert with higher headquarters programs. Without SECDEF approval PSYOP product approval authority can be no lower than the commander of joint task force (CJTF). When authorized by the SECDEF the CJTF may approve PSYOP series (products and actions). PSYACTS are operations carried out by forces or agencies other than PSYOP personnel. They are conducted specifically for their psychological impact. They may include combat actions or civil actions (i.e. a host nation (HN) police raid). They require early inclusion into the planning process and must be considered for both their lethal and nonlethal effects. In addition to specifically planned PSYACTS, the PSYOP staff NCO can advise the commander on the psychological effects of all operations.

7-65. The PSYOP staff NCO in the IO Element of the FEC coordinates the use of PSYOP within the HBCT. PSYOP augmentation to the HBCT may include a PSYOP support element (PSE), and a task organized element tailored to meet the needs of the commander. Typically this includes tactical PSYOP teams (TPT) equipped with vehicle and man pack loudspeakers that support the HBCT at the battalion level during high-intensity conflicts and at the company level during stability operations and support operations. The PSYOP staff NCO in the IO element integrates and coordinates with the PSE or task organized PSYOP element.

MILITARY DECEPTION

7-66. Military deception is actions executed to deliberately mislead adversary military decision makers on friendly military capabilities, intentions, and operations, thereby causing the adversary to take specific actions (or inactions) that will contribute to the accomplishment of the friendly mission. Deception is used to make an adversary more vulnerable to the effects of friendly force weapons, maneuver, and operations.

7-67. The IOCOORD within the FEC identifies lucrative targets for military deception during the planning process. He plans deception operations to support the HBCT's chosen COA.

ELECTRONIC WARFARE (EW)

7-68. Electronic warfare is any military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy.

7-69. The three major components of EW are electronic protection (EP), electronic warfare support (ES), and electronic attack (EA).

7-70. **Electronic protection (EP).** Electronic protection is that division of electronic warfare involving passive and active means taken to protect personnel, facilities, and equipment from any effects of friendly or enemy employment of electronic warfare that

degrade, neutralize, or destroy friendly combat capability. Friendly forces use emission control and other anti-jamming measures to perform EP

- **Electronic warfare support.** (ES) Electronic warfare support is that division of electronic warfare involving actions tasked by, or under direct control of, an operational commander to search for, intercept, identify, and locate or localize radiated electromagnetic energy for the purpose of immediate threat recognition, targeting, planning and conduct of future operations. This electronic warfare support provides information required for decisions involving electronic warfare operations and other tactical actions such as threat avoidance, targeting, and homing. Electronic warfare support data can be used to produce signal intelligence, provide targeting for electronic or destructive attack, and produce measurement and signature intelligence. ES supports both offensive and defensive IO. It identifies, locates and exploits adversary emitters (signals). It helps commanders achieve understanding and assess damage. It protects the force by producing detailed information on adversary information systems (INFOSYS). Information produced by ES operations supports intelligence, surveillance, and reconnaissance operations. It gathers technical information that supports the development and maintenance of the electronic order of battle database used by EA and other ES operations.

- **Electronic attack (EA).** Electronic attack is that division of electronic warfare involving the use of electromagnetic energy, directed energy, or anti-radiation weapons to attack personnel, facilities, or equipment with the intent of degrading, neutralizing, or destroying enemy combat capability and is considered a form of fires. Electronic attack includes:
  - Actions taken to prevent or reduce an enemy's effective use of the electromagnetic spectrum, such as jamming and electromagnetic deception.
  - Employment of weapons that use either electromagnetic or directed energy as their primary destructive mechanism (lasers, radio frequency weapons, particle beams).
  - EA deceives adversaries, denies them information, and disrupts their C2 systems. When synchronized and integrated with lethal fires, EA becomes a combat multiplier. EA can be used against a computer, but it is not computer network attack (CNA). CNA relies on the data stream to execute the attack while EA relies on the electromagnetic spectrum. In future operations, EA will use precision jamming aimed at specific targets rather than broadband barrage jamming. The EA officer of the IO Element plans EA to support HBCT operations. His plans must be coordinated with the MICO commander whose Soldiers will implement the plans.

COMPUTER NETWORK OPERATIONS (CNO)

7-71. Computer network operations (CNO) comprise computer network attack (CNA), computer network defense (CND), and related computer network exploitation (CNE) enabling operations. CNO is not totally applicable at the HBCT level. CND is done at all army echelons. CAN and CNE are conducted at echelons above UEx, but may affect HBCT operations.

- Computer network attack. CNA is operations to disrupt, deny, degrade, or destroy information resident in computers and computer networks, or the computers and networks themselves. CNA gives commanders with CNA release authority a non-kinetic strike option to enhance the effects of other lethal and non-lethal capabilities. The HBCT IOCOORD requests CNA from higher headquarters.
- Computer network defense (CND). CND consist of defensive measures designed to protect and defend information, computers, and networks from disruption, denial,

degradation, or destruction. It includes all measures to detect unauthorized network activity and adversary CNA and defend computers and networks against it. Such measures include access controls, malicious computer code and program detection, and intrusion-detection tools. CND is enabled by information assurance. CND is done at all echelons. The IOCOORD and HBCT signal company commander coordinate their activities to develop procedures for CND.

● Computer network exploitation (CNE). CNE is an intelligence function conducted at echelons above UEx to gather data from target or adversary automated information systems or networks.

PHYSICAL DESTRUCTION

7-72. Physical destruction is the application of combat power to destroy or degrade adversary forces, sources of information, C2 systems, and installations. It includes direct and indirect fires from ground, sea, and air forces. The FEC synchronizes execution of IO-related physical destruction with other IO elements. Physical destruction is tied to critical events and decision points in the adversary decision-making processes or their underlying infrastructures. Field artillery is a major, but not the only, contributor to this IO element. The targeting team assigns IO targets to the air and ground systems best able to attack them.

INFORMATION ASSURANCE (IA)

7-73. Information assurance (IA) is actions that protect and defend information and information systems by ensuring their availability, integrity, authentication, confidentiality, and non-repudiation. This includes providing for restoration of information systems by incorporating protection, detection, and reaction capabilities. Within the HBCT, the S6 and the signal company commander are responsible for IA.

PHYSICAL SECURITY

7-74. Physical security is that part of security concerned with physical measures designed to safeguard personnel; to prevent unauthorized access to equipment, installations, material, and documents; and to safeguard them against espionage, sabotage, damage, and theft. Effective physical security ensures the availability of INFOSYS used to conduct operations. The military police officer in the maneuver support cell is responsible for overseeing physical security within the HBCT.

COUNTERINTELLIGENCE

7-75. Counterintelligence is information gathered and activities conducted to protect against espionage, other intelligence activities, sabotage, or assassinations conducted by or on behalf of foreign governments or elements thereof, foreign organizations, or foreign persons, or international terrorist activities. The HBCT S2, the S2X, and the MICO commanders all have responsibilities regarding counterintelligence.

COUNTERPROPAGANDA

7-76. Counterpropaganda consists of programs, products and actions designed to nullify propaganda or mitigate its effects. It is directed toward the target of adversary propaganda. Counterpropaganda degrades any harmful influence adversary PSYOP have on friendly forces and other audiences. The PSYOP NCO in the IO element of the FEC coordinates counterpropaganda.

INFORMATION OPERATIONS RELATED ACTIVITIES

7-77. Public affairs (PA) and civil military operations (CMO) create conditions that contribute to information superiority. They sustain support of Army operations by American and international audiences, and maintain relations with the civilian populace in the AO.

PUBLIC AFFAIRS (PA)

7-78. Public affairs are those public information, internal information (formerly command information), and community relations activities directed toward both the external and internal publics with interest in the HBCT operations. PA tells the truth. PA makes available timely and accurate information so that the public, local leaders and governments and news media may assess and understand the facts about HBCT operations in their area. Effective PA enhances confidence in the HBCT and its operation. The HBCT S1 section is responsible for coordinating PA activities in support of the HBCT.

CIVIL-MILITARY OPERATIONS (CMO)

7-79. Civil-military operations (CMO) are the activities of a commander that establish, maintain, influence, or exploit relations between military forces, governmental and non-governmental civilian organizations and authorities, and the civilian populace in a friendly, neutral, or hostile operational area in order to facilitate military operations, to consolidate and achieve operational objectives. Civil-military operations may include performance by military forces or activities and functions normally the responsibility of the local, regional, or national government. These activities may occur prior to, during, or subsequent to other military actions. They may also occur, if directed, in the absence of other military operations. Civil-military operations may be performed by designated civil affairs, by other military forces, or by a combination of civil affairs and other forces.

7-80. The CA officer assigned to the IO Element of the FEC coordinates CA activities in support of the HBCT. In stability operations and support operations, CA teams may augment the HBCT.

OFFENSIVE INFORMATION OPERATIONS

7-81. Offensive information operations are the integrated use of assigned and supporting capabilities and activities, mutually supported by intelligence, to affect enemy decision makers or to influence others to achieve or promote specific objectives. Army doctrine allows commanders to use all IO elements offensively.

7-82. Commanders conduct offensive IO across the range of military operations and across the spectrum of conflict. The rules of engagement affect the means used and the effects sought in any given situation. Offensive IO facilitates seizing and retaining the initiative by creating a disparity between the quality of information available to friendly forces and that available to adversaries. The following effects create this information advantage.

DESTROY

7-83. Destroy is to damage a combat system so badly that it cannot perform any function or be restored to a usable condition without being entirely rebuilt. Destruction is most often the use of lethal and non-lethal means to physically render adversary information or INFOSYS ineffective unless reconstituted. It is most effective when timed to occur just before the adversary needs to execute a C2 function or when focused on a resource-intensive target that is hard to reconstitute.

DISRUPT

7-84. Disrupt is a tactical mission task in which a commander integrates direct and indirect fires, terrain, and obstacles to upset an enemy's formation or tempo, interrupt his timetable, or cause his forces to commit prematurely or attack in a piecemeal fashion. For IO, disruption involves breaking or interrupting the flow of information between selected C2 nodes. It may be desired when attack resources are limited, to comply with rules of engagement, or to create certain effects. Electronic attack is a common means of disrupting adversary C2 systems.

DEGRADE

7-85. Degrade in IO is using lethal or temporary means to reduce the effectiveness or efficiency of adversary command and control systems and information collection efforts or means. Offensive IO can also degrade the morale of a unit, reduce the target's value, or reduce the quality of adversary decisions and actions.

DENY

7-86. Deny in IO entails withholding information about Army force capabilities and intentions that adversaries need for effective and timely decision-making. Effective denial leaves opponents vulnerable to offensive capabilities. Operations security (OPSEC) is the primary non-lethal means of denial. It applies throughout the spectrum of conflict.

DECEIVE

7-87. Deceive is to cause a person to believe what is not true. Military deception seeks to mislead adversary decision-makers by manipulating their understanding of reality. Successful deception causes them to believe what is not true.

EXPLOIT

7-88. Exploitation in IO is covertly gaining access to adversary C2 systems to collect information or to plant false or misleading information.

INFLUENCE

7-89. Influence causes adversaries or others to behave in a manner favorable to friendly forces. It results from applying perception management to affect the target's emotions, motives, and reasoning. Perception management also seeks to influence the target's perceptions, plans, actions, and will to oppose friendly forces. Targets may include noncombatants and others in the HBCT AO whom the commander wants to support friendly force missions or not resist friendly force activities. Perception management accomplishes the influence mission by conveying or denying selected information to targets.

DEFENSIVE INFORMATION OPERATIONS

7-90. Defensive IO are defined as the integration and coordination of policies and procedures, operations, personnel, and technology to protect and defend friendly information and information systems. Defensive IO ensures timely, accurate, and relevant information access while denying adversaries the opportunity to exploit friendly information and information systems for their own purposes. Army doctrine allows commanders to use all IO elements defensively.

7-91. Defensive IO uses technical and non-technical activities to limit the vulnerability of friendly C2 systems to hostile IO. It also seeks to prevent adversaries from tampering with friendly force information or interfering with friendly C2 systems. Defensive IO supports

efforts to maintain effective C2 by countering or turning to friendly advantage adversary IO efforts. Timely, accurate intelligence—some of which is based on information collected during offensive IO—is essential to defensive IO. Forces conducting defensive IO require information about adversary attack methods, tools, capabilities, weapons; and means of operation—that ISR produces.

RELATIONSHIP OF OFFENSIVE AND DEFENSIVE INFORMATION OPERATIONS

7-92. Commanders synchronize IO by coordinating offensive and defensive IO to produce complementary and reinforcing effects. Conducting offensive and defensive IO independently detracts from the efficient employment of the IO elements. At best, it expends more resources than would be required if the two were done in concert. At worst, uncoordinated efforts increase conflicts and mutual interference. In the extreme, they may compromise friendly intentions or result in information fratricide. Fully integrating offensive and defensive IO requires planners to treat IO as a single function. The HBCT commander, assisted by the FEC, integrates offensive and defensive IO, synchronized with ISR, to gain and maintain information superiority. The HBCT commander should avoid concentrating on offensive IO to the exclusion of defensive IO. The commander's intent and desired effects determine whether an information operation is offensive or defensive.

7-93. Commanders at all levels integrate offensive and defensive IO. Tactical-level IO contributes to achieving strategic and operational objectives. Operational and strategic level IO facilitates tactical operations. IO can be a potent force multiplier during offensive, defensive, and support operations, and may be the decisive operation during stability operations.

7-94. The complexities and scope of the information environment make it difficult to achieve the desired effects with a single IO element. Effective integration and synchronization of all IO elements is necessary to achieve mutual support. Likewise, protecting friendly C2 systems and their components requires careful integration and synchronization of IO elements. Two ways of integrating are deconflicting and coordinating.

7-95. Synchronizing offensive and defensive IO is more effective than conducting them independently. Activities of all IO elements occur simultaneously. Synchronizing offensive and defensive IO operations results in complementary and reinforcing effects. It also decreases the probability of conflicts and interference that may compromise friendly intentions.

Chapter 8

Fires and Effects Planning, Coordination and Synchronization

Fires and effects planning, coordination, and synchronization ensure that all available fire support, information operations (IO), civil military operations (CMO), and public affairs activities are employed in accordance with the commander's concept of operations. The ultimate purpose of fires and effects planning, coordination, and synchronization is to optimize the use of heavy brigade combat team (HBCT) fire support system and related IO, CMO, PA activities to accomplish the mission. This includes integration of other supporting elements not organic to the brigade. The HBCT has limited organic fire support assets and relies heavily on joint fires and reinforcing fires provided by a fires brigade when available. The key to effective integration of fires is thorough consideration of all the HBCT's capabilities and limitations plus the full application of joint or nonorganic resources. All lethal and nonlethal capabilities, organic and external, must be considered and applied in all aspects of the planning and decision-making processes. This chapter has three sections: Section I, Fires and Effects Planning; Section II, Fires and Effects Coordination; and Section III Fires and Effects Synchronization.

SECTION I – FIRES AND EFFECTS PLANNING

PLANNING AND THE MILITARY DECISION-MAKING PROCESS

8-1. HBCT tactical operations focus on accomplishing the mission. This includes influencing or changing the behavior or capabilities of enemy formations or selected civilian audiences using the application of selected elements of lethal and nonlethal combat power to achieve desired effects. An effect is defined as a physical, functional, or psychological outcome that results from specific military or nonmilitary action(s) at the tactical, operational, or strategic level.

MILITARY DECISION-MAKING PROCESS

8-2. The MDMP is a single, established, and proven analytical process. It is an adaptation of the Army's analytical approach to problem solving that assists the brigade commander and his staff, in describing the commander's visualization and expressing his directives in the form of an OPLAN or OPORD. The MDMP is a seven-step process as depicted in Figure 8-1.
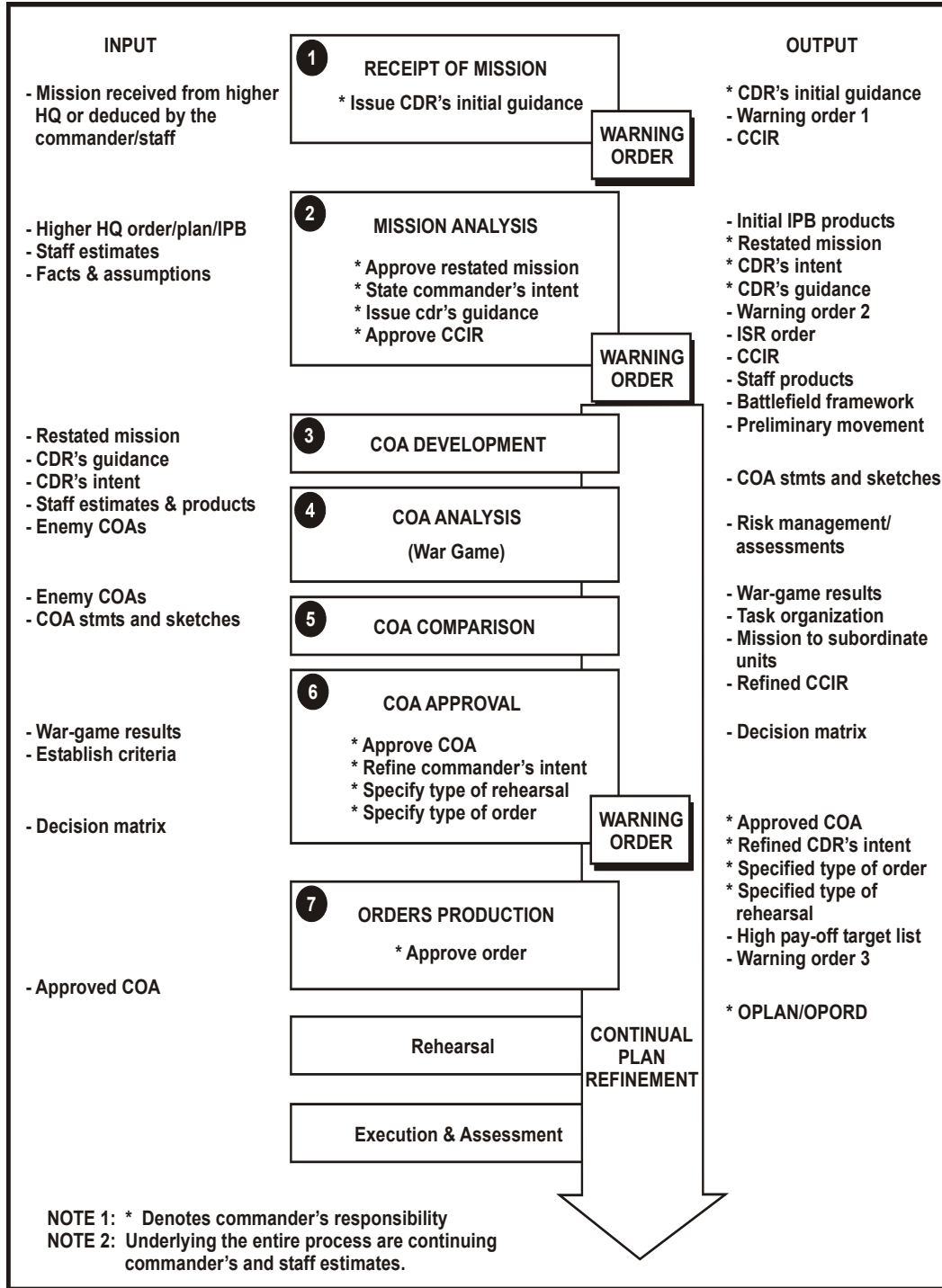
Figure 8-1, The Military Decision-Making Process

8-3. Utilizing the MDMP process to plan operations involving both the effects of lethal and nonlethal combat power is not new to Army planners. The application of fires (lethal and nonlethal) against enemy formations, to reduce or defeat their combat capability is a long standing and much used technique. In today's contemporary operating environment (COE), what has emerged is a new point of emphasis for the application of nonlethal means and the target set against which these means may be directed. Across the operational spectrum,

nonlethal means may be focused on various segments of the population in an attempt to achieve the commander's long-term desired end-state. For example, part of the commander's endstate may be that basic services are restored to pre-combat levels in the area of operations. Activities and projects are planned to accomplish the commander's intent. Numerous agencies may be available to assist the HBCT in achieving this endstate. Non-governmental agencies (NGO), international organizations IO, and local governments must be considered when planning operations. The application of all aspects of lethal and nonlethal combat power must be fully integrated and coordinated during the conduct of MDMP.

8-4. The HBCT commander and his staff conduct the MDMP, ensuring that all desired and undesired effects are considered. Desired effects are a set of defined conditions that must be created to achieve the commander's intent and unit mission. These desired effects may be identified within the commander's intent and planning guidance. These desired effects may be achieved by various means to include indirect fires, direct fires, maneuver, PSYCOP, and CMO.

INTEGRATING IO AND FS INTO PLANNING

8-5. The HBCT XO leads the staff through the MDMP and ensures all the BOS is synchronized and integrated into the brigade's plan. In his absences, the S3 performs this function. The ECOORD is the primary staff officer responsible for the development, integration and synchronization of the fire support plan. As supervisor of the FEC, the ECOORD also ensures that IO, CMO, and PA activities are synchronized with the fire support plan and with the brigade's concept of operation. He is supported and assisted in this task by the IOCOORD, PSYOP, and CA planners. The resulting integrated fires, IO, and CMO concepts, is presented to the commander as part of the COA decision briefing. After commander approval and orders production, the ECOORD ensures proper dissemination of applicable synchronization documents and guidance to supporting fire support, IO, and CMO organizations. These products guide the synchronization, coordination, and execution of fire support, IO, and CMO for HBCT operations.

INTEGRATING EFFECTS IN THE MDMP PROCESS

8-6. As described earlier, the HBCT XO leads the MDMP and is charged with the responsibility of ensuring that all fires are fully considered throughout the process. The following section presents the seven steps of the MDMP integrating both lethal and nonlethal fires and other means of effects planning considerations.

STEP 1. Receipt of Mission

8-7. The staff receives a new mission in the form of an OPORD from higher headquarters, or the commander recognizes the need or an opportunity that requires a significant change to current operations. The staff begins to refine their running estimates to identity the data and resources necessary to conduct mission analysis. The XO develops the timeline to structure the staffs efforts, and the HBCT commander issues initial guidance to his staff that focuses them on developing initial CCIR, authorized movement, level of detail required in the MDMP, and initial reconnaissance requirements.

8-8. During this step, all staff elements update their staff estimates to ensure they have an adequate knowledge base from which to plan. The knowledge base is made up of many parts, including staff estimates, news reports, historical research and the results of intelligence preparation of the battlefield (IPB). At the HBCT level, this knowledge base provides a holistic and dynamic understanding of requirements and end state envisioned or directed by higher headquarters (joint task force (JTF), UEy, UEx). Requirements and end state from higher headquarters are usually promulgated in a campaign plan at the joint level and in the

OPORD at the UEx level. Long term requirements or elements of the desired end state may be expressed as goals and objectives. The HBCT commander subsequently bases his shaping operations, decisive operations and key tasks on these goals and objectives, ensuring his operations are nested and in compliance with the desired end state of higher headquarters.

8-9. IPB products from the UEx or higher joint headquarters serve as the basis of the IPB process by the HBCT S2. The S2, supported by the staff, continues the process, focusing on the HBCT area of operation (AO). The staff should identify and develop requests for information (RFI) to higher headquarters for information that is lacking. Through use of these products and through staff preparation, the HBCT commander and his staff gain situational understanding (SU) of the operational environment based on the factors of METT-TC. The knowledge base is used to gain SU of all relevant actors in the tactical environment from all appropriate perspectives. The knowledge base does not remain constant but is updated and revised as future assessments and intelligence activities are conducted as part of ongoing tactical operations. In short, the HBCT knowledge base consists of the higher headquarters operation order (OPORD), with the mission possibly expressed in goals and objectives, current and expanded staff estimates and IPB from higher headquarters, reinforced by the HBCT's IPB products.

STEP 2. Mission Analysis

8-10. Mission analysis defines the tactical problem and begins the process of determining feasible solutions. Analysis of the higher headquarters mission is the start point that generates the intelligence preparation of the battlefield (IPB). During this step, the staff identifies specified, implied, and essential tasks laid out in the higher headquarters' order. Endstate analysis is conducted during this step by the staff. The purpose of end state analysis is to examine the higher headquarters OPORD to:

- Define the nature and scope of the problem.
- Identify goals and objectives for the operation in the context of higher and subordinate commands.

8-11. During endstate analysis, the commander and his staff seek to understand the situation and the role they are to play. They gain an understanding of the environment through a holistic examination of the knowledge base and put that knowledge into context through an appreciation of the higher commander's intent and guidance. The operational commander's initial guidance provides the starting point for the HBCT staff's consideration of the problem.

8-12. The aim of this activity is to determine a tactical level end state that is nested in the higher headquarters commander's intent and end state. The objective is a more refined understanding of the higher commander's intent, and the role that the HBCT will play in achieving this intent. It includes the development of constraints and restraints, as well as, the construction of necessary assumptions to allow planning to begin. It concludes with an approved restated mission, an expression of the HBCT commander's intent, his planning guidance, approved CCIR, and desired end state.

8-13. The primary goals for HBCT operations are described in the HBCT commander's intent. Commander's intent is a concise expression of the purpose of the operation, key tasks, and the desired end state. It is the most important and enduring element of the planning process. This guidance provides information for the remainder of the process and provides direction to the staff for execution of the next step, development of desired effects.

8-14. Effects development is performed by the staff under the direction of the S3. The goal of effects development is to use the results from the end state analysis as input in accomplishing the following:

- Describe the changes to the tactical environment that are required to progress from the current situation to the desired end state. These desired changes are called desired effects.
- Describe the changes to the tactical environment that should not be created as they may block or impede progress toward the desired end state. These undesired changes are called undesired effects.
- Determine the relative priority (in terms of importance) and relative sequencing (in terms of time) of desired effects to enable the HBCT staff in the development and sequencing of appropriate COAs.

8-15. The S3, supported by the staff develops a series of desired effects, which, once achieved, will lead to the HBCT commander's end state. These desired effects form the basis for subsequent staff planning. Concurrently, the staff identifies a list of undesired effects that may hinder progress toward achieving the HBCT end state. These undesired effects serve as constraints on the ways in which future plans can be developed.

8-16. During this step the FEC also develops the initial high value target list (HVTL) and the initial fire and effects tasks. These tasks, both lethal and nonlethal, must be performed to ensure HBCT operational success.

8-17. These tasks are defined as an application of fires and the effects required to support a combined arms COA. A complete fires and effects task consists of a task, purpose, method, endstate and assessment.

8-18. The task is the action (what) that is desired to be applied against the target (i.e., suppress and obscure the southern motorized rifle company). The purpose (why) is the combined arms outcome desired as a result of applying the effect (i.e., enable the breach force to reduce the obstacle and establish far side security). The method consists of acquisition/tracking, delivery of fires (lethal/nonlethal) and restrictions. Assessment is the determination if the desired effect was created and the purpose of the attack was achieved. Achievement of the purpose equals end state for each individual fire and effects task.

STEP 3. COA Development

8-19. COA development is executed by the HBCT staff based on the higher order, the commander's refined guidance, a set of desired effects described in terms of relative priority and relative sequence, and a set of undesired effects. The plans section follows normal COA development, focused on developing a COA that incorporates desired effects as a major consideration in determining the HBCT's tactical objectives. A mixture of lethal and nonlethal means are recommended and integrated by the FEC and IO staff elements in an attempt to achieve the desired effects. Initial fires and effects tasks that were developed during mission analysis are refined during COA development, and will be finalized after COA wargaming. Lethal fires may be employed more in mid- or high-intensity conflicts, and nonlethal activities are more prevalent in low-intensity or in stability and support operations. In all types of operations, HBCT planners must integrate and coordinate lethal and nonlethal effects to achieve the commander's intent. The HBCT must plan to transition from high-intensity operations to support operations and back to high-intensity operations, all within the same tactical operation.

STEP 4. COA Analysis (War Game)

8-20. The staff should test the validity of the list of potential effects in the COA analysis or wargame. The wargame will be led by the XO or S3 with selected staff participating as directed. The ECOORD is responsible for ensuring that all fires and their effects, lethal and nonlethal are fully applied and analyzed during the wargame. The ECOORD, assisted by the IOCOORD and the information operations (IO) staff sections, coordinate CA, PAO, staff

judge advocate (SJA), and PSYOP. The neutral side should represent and provide input from NGOs, IOs, and political or civilian organizations found in the HBCT AO. The enemy side (S2) and the friendly teams examine in detail the goals, motivations, actions, and potential impacts the various actors in the HBCT's AO will have on planned operations.

8-21. This wargame examines all desired and undesired effects (friendly, enemy and neutral), balances them against each other, and determines which friendly effects are most likely to achieve the commander's endstate. The desired effects derived from this wargame may then be listed in order of relative importance in the priority effects list (PEL) and sequenced in terms of time. The products developed by the staff during this step are briefed to the HBCT commander for approval. On commander approval, the approved COA is published in the HBCT OPORD/FRAGO.

8-22. Traditionally, battlefield damage assessment (BDA) is a requirement in all tactical operations. BDA is used to determine if the operation was successful, to determine if the designated targets need to be reattacked, or to plan future operations. Assessing nonlethal effects conducted during operations requires methods by which nonlethal effects can be measured and assessed. The ECOORD is responsible for the development of these methods or tools during this step of the planning process. The entire staff participates and provides input to the development of these procedures, with the FEC and IO staffs taking the lead. The methods and tools developed for assessment of nonlethal effects may include measures of effectiveness (MOE), measures of effectiveness indicators (MOEI), measures of performance (MOP), and associated matrices. Traditional BDA techniques are also incorporated into the plan, with designated observers (FIST, COLT, Scouts, TUAVs) assigned accordingly. These products provide a means to assess progress toward the desired end state and enable the identification of decision points that may cause development of new desired effects or adjustment to current operations.

- MOE are the way points that indicate progress toward the attainment of each desired effect or indicate the avoidance of an undesired effect. MOE describe the intended or desired adversary responses to be generated by executed actions. MOE lead to an understanding of decision points as they describe major expected events in the tactical environment.

- MOEI are the observable aspects of MOE that indicate the probability of the MOE occurring. In some cases, the events described by MOE do not occur until some time after HBCT actions have been taken. This could lead to a situation where the HBCT is forced to take on a reactive stance—waiting for the MOE event to occur. In these cases, it may be useful to develop a set of MOEI for each MOE that describes events which, if created by additional HBCT actions and then considered cumulatively, may help to trigger the MOE event.

- MOP are criteria used to evaluate the accomplishment of specific actions executed by the HBCT in tactical operations. MOP assist the HBCT commander and staff in evaluating specific actions directed at a specific target. For example, how effective was the leaflet drop, the filling of potholes in a particular neighborhood, or providing potable water to the village. Would some other action have been more effective in accomplishing the desired effect on the target? MOP assist the HBCT commander and his planners in determining what worked best against a particular sector of the populace or against a particular target set.

- During the COA analysis step, the staff, led by the ECOORD and IOCOORD, develop and recommend the methods to be used both for letal and nonlethal BDA

STEP 5. COA Comparison

8-23. The staff evaluates each COA and compares them against the others to determine which COA best accomplishes the mission without undue risk. Each COA is briefed to the commander, and the staff makes its recommendation on the most preferred option.

STEP 6. COA Approval

8-24. The HBCT commander selects a COA, modifies it as required to better meet his intent, or rejects them all and has the staff develop new ones. He finalizes his intent, CCIR, gives guidance to the staff on order production and rehearsals. Once the COA is approved, the staff resynchronizes and makes modifications to the plan before the plan is produced.

STEP 7. Orders Production

8-25. The staff finalizes the plan based on the commander's approval guidance, and prepares to publish a written order, brief an oral order, transmit a digital order, or a combination thereof. The order includes graphical overlays and staff annexes. When the HBCT is conducting continuous operations, the OPORD is the document that synchronizes the brigade's combat power in time and space to achieve short- and/or long-term objectives. It will be supplemented by numerous day-to-day FRAGOs that alter or change the base order as required. The objective is to capitalize on positive events and eliminate and/or mitigate identified problem areas as they occur. Many tasks given to subordinate units may be long term in nature and covers weeks or months for execution.

8-26. The current operations section is responsible for ensuring subordinate units are executing assigned actions or tasks. During the daily battle update briefings (BUBs), current operations personnel report to the commander the status of ongoing operations.

8-27. During execution, the FEC constantly monitors and measures the effects of the operation as it is conducted. It uses the effects focused assessment tools (BDA, MOE, MOEI, MOP) developed during the planning phase to assist in this task. The ECOORD synchronizes, coordinates, and measures effects throughout the execution of operations for the commander and conducts an assessment. The entire staff also plays an important role in this assessment process and maintains running estimates and assessments in their respective areas of responsibility. The current operations section is responsible for consolidating all subordinate unit and HBCT staff assessments concerning desired effects and presenting the results to the HBCT commander. The results of the assessment become the basis for adjusting current tactical operations or developing new plans. The HBCT commander determines the battle rhythm he desires to use and establishes the cycle for assessing, planning, rehearsing and executing continuous operations. During continuous operations, adjustments, refinements or required changes to the OPORD (to include desired changes to the effects taskings to subordinate units) will be published in the periodic/daily FRAGO. The cycle will continue until the commander's end state is achieved or operations cease.

8-28. Table 8-1 further outlines and defines the steps, inputs, actions, and outputs required by the fire support and information operations staff elements during the MDMP process.

Table 8-1, Fires and Effects MDMP

MDMP STEP	INPUTS	ACTIONS	OUTPUTS
Receipt of Mission and Mission Analysis	Higher HQ WARNO or OPORD. Facts from higher, lower, and adjacent FEC's. Higher HQ IPB and staff IPB products. Enemy COA from S2. High value targets. (HVTs) by phase or critical event. Facts from F&E assets. CDR's initial IO guidance Staff estimates Constraints and ROE	Understand higher maneuver FSP and IO Plan. Conduct F&E staff estimate -organize and analyze facts. Identify specified/implied tasks Determine and portray friendly and threat INFOSYS capabilities and vulnerabilities. Translate status of F&E assets into capabilities/limitations. Analyze effects of IPB on F&E. Develop draft EFETs. Identify F&E related CCIR. Identify F&E constraints/ restrictions. Obtain Cdr's initial targeting guidance. Develop desired/undesired effects	Initial WARNO upon mission receipt. F&E portion of mission analysis brief. (End State Analysis, Effects Development) Draft RFIs Recommend EFETs and FS/ROE guidance. F&E CCIR inputs. Threat IO models Initial HVTL Initial F&E rehearsal guidance. CDR: approves initial EFETs or modifies. CDR gives other F&E guidance. WARNO after mission analysis brief.
COA Development	See outputs from previous step.	Determine EFETs for each COA Determine where to find and attack EFET formations. Identify HPTs in those formations. Quantify the effects for EFETs. Plan methods for EFETs. Develop FSCMs. Allocate assets to acquire. Allocate assets to attack. Allocate forces to each IO task Identify requirements for additional resources Integrate triggers with maneuver COA. Analyze relative FS combat power. Use battle calculus. Assist S2 in ISR plan development to support F&E. Develop IO assessment plans Prepare F&E portion of COA/ sketch.	For each COA developed: Concept of fires and effects Initial FSCMs Draft HPTL Draft AGM Draft TSS - Draft Target (TGT) List/overlay -ISR Plan Effects Assessment/MOE/MOEI/MOP/BDA IO execution timelines IO risk management plan Input to defensive IO protect plan IO assessment plan Refined EFETs

Table 8-1, Fires and Effects MDMP

MDMP STEP	INPUTS	ACTIONS	OUTPUTS
COA Analysis and COA Comparison	See outputs from previous step.	Targeting decisions: finalize HPTL. Wargame the brigade COA & integrated F&E plans vs. enemy COAs. ID coordination requirements to produce synchronization matrix. Synchronize lethal & nonlethal effects Finalize EFETs Modify/refine inputs as required. Refine and test F&E plans.	Final Drafts: Fires & effects paragraph and annexes F&E Annex: FEEM TGT List - TGT Overlay TSM EFETs
COA Approval and Orders Production Staff Supervision	See outputs from previous step.	Approval briefing. F&E plan briefed as part of each COA. ECOORD presents fires and effects analysis.	Commander: Selects, modifies or approves COA. ECOORD: Issue WARNO as required. Finalize F&E products. Issue F&E plan and annexes with OPORD. F& E back brief. Manage refinement. Rehearsals.

PLANNING WITH AFATDS

8-29. The FEC must optimize the use of Advanced Field Artillery Tactical Data System (AFATDS) throughout the planning process. AFATDS software supports both the development of plans at the outset of an operation and the execution of current operations. However, planning and execution cannot be accomplished simultaneously on the same machine. AFATDS also facilitates the rapid horizontal and vertical dissemination of plans and orders during the parallel and collaborative planning processes.

8-30. Plans can be developed fully considering changes in commander's guidance based on future mission requirements. Guidance and other planning factors can be stored in the AFATDS database and retrieved during the development of subsequent plans.

8-31. In planning situations, a fires and effects plan can be written and transmitted to the fires battalion and reinforcing battalions, which can then add their own field artillery (FA) support plan and digitally transmit the plan back to the FEC. Targets can be developed into target lists that can be transmitted during planning and refined by subordinate fire cells (FCs). On-call graphic control measures can also be built during planning and subsequently implemented when needed.

8-32. As a result of the wargaming process and briefings to the HBCT commander, a maneuver COA is selected. The corresponding fires and effects plan is then refined in detail. The AFATDS plan also contains the information and tools used to develop the field artillery support plan. Each plan has an associated written plan in the form of an OPORD, F&E annex, and FA support plan appendix.

8-33. After selecting a COA for each phase, the draft plan can be the final plan or sent to subordinates for their input. The subordinates may develop annexes, comment on those provided, or develop their own supporting plans. Once all the input is collected and incorporated the final plan can be distributed.

8-34. This written plan may be edited at any time during and after the planning cycle. It is used to provide greater detail, clarification, and justification to the decisions made in the planning process and to record this information for others. The construction of a written plan is simplified by the ability to copy large sections from previously established written plans. The plan can be edited based on METT-TC and guidance, or estimate results can also be inserted into the plan in written form so it can then be edited and tailored for future use.

8-35. The ECOORD coordinates with the HBCT operations officer and directs the necessary FEC staff to prepare the fires and effects portions of the concept of operations subparagraph of the OPORD. He also coordinates the preparation of the fires and effects (F&E) subparagraph that constitutes the F&E plan. The F&E plan includes a subparagraph for each F&E agency involved in the operation. The appropriate F&E representatives prepare input for these subparagraphs. If the F&E subparagraphs need amplification, the ECOORD may prepare an F&E annex.

8-36. Fire support related plans are disseminated through the AFATDS fire support network. The system allows the FEC to post its written orders digitally on a web site and transmit graphics with plans to all AFATDS across the HBCT.

SECTION II – FIRES AND EFFECTS COORDINATION

8-37. Fires and effects coordination is the continuous process of planning, integrating, and orchestrating fires to support combined arms operations. This process includes the management of delivery assets and sensors and direct coordination with the combined arms commander. It results in the execution of fires and their effects to achieve the commander's desired end state. Operational, tactical, and technical coordination provides a way to deconflict attacks, reduce duplication of effort, facilitate shaping of the battlefield, and avoid fratricide. Flexibility and responsiveness to change, with simplified arrangements for approval and concurrence, must characterize coordination procedures. Inherent is a common understanding of the HBCT commander's intent by all fires and effects personnel.

8-38. The HBCT focuses on achieving the required effects against high-payoff targets (HPTs) in accordance with the commander's intent and concepts for shaping, counterstrike, and decisive operations. Thus, the application of fires and their effects must be fully nested within the HBCT's concept of operations.

8-39. During execution of the HBCT tactical plan, the digitized command and control (C2) information systems (INFOSYS) is essential to provide responsive and precise effects that serve as a cornerstone of effects-based fires.

- The HBCT INFOSYS provides the commander and staff the ability to plan, prepare, and execute using voice and data communications networks to enable effective C2 on the battlefield. This capability includes the conduct of operations from alert through redeployment. It also includes conduct of counterintelligence operations to deny the adversary's ability to do the same. The INFOSYS supports maneuver, fires, logistics, force protection, IO, and intelligence.
- The HBCT's INFOSYS is organized to leverage fully the opportunities presented by near-real-time access to all RFI and a common operational picture (COP). The INFOSYS and ISR assets provide all commanders in the HBCT with the capability to see and better understand all dimensions of their battlespace. This capability allows the HBCT to locate and track critical targets, synchronize lethal and

nonlethal fires with simultaneous operations, and operate with joint and multinational forces. This capability allows significantly enhanced synchronization of widely dispersed, highly mobile forces in execution as well as in planning to mass effects

LETHAL EFFECTS COORDINATION

8-40. Fires and effects coordination ensures the synchronization of all available fires and effects assets to match the right attack means with the correct target at the precise time. To achieve the best possible synchronization of all fires and their effects, particularly in joint operations, the following guidelines for coordination are recommended:

- Position fire delivery units effectively.
- Coordinate use of naval surface fire support (NSFS) and close air support (CAS) to support the commander's intent.
- Ensure that the ECOORDs and observers know the exact locations of maneuver boundaries and other fire support coordinating measures (FSCM).
- Position observers in redundancy where they can see their assigned targets and trigger points, communicate with fire support assets, and respond to their maneuver commander.
- Establish FA final protective fire (FPF) or priority targets.

- Plan FA illumination to facilitate firing during limited visibility.
- Provide common survey to mortars.
- Provide meteorological data to mortars.
- Use the fires and effects execution matrix (FEEM) to execute fire support while remaining flexible to branches or sequels to the current plan.
- Coordinate with the fires battalion tactical operations center (TOC) to develop the attack guidance matrix (AGM) using the munitions effects database in AFATDS. Compute ammunition requirements to destroy, neutralize, or suppress expected enemy target categories and provide this assessment to the commander so that he can formulate his attack guidance.
- Disseminate target priorities to lowest levels of maneuver force, FS organizations, and mortars.
- State the commander's attack guidance by defining how, when, and with what restrictions the commander wants to attack different targets and in what priority. This data should be put into AFATDS.
- Require refinement by lower echelons to be completed by an established cut-off time.
- Recommend the risk the commander is willing to accept concerning delivery of indirect fires with maneuver units in close contact.
- Verify or correct target locations and trigger points during refinement.
- During the combined arms rehearsal, rehearse the fires and effects portion of the OPORD directly from the FEEM.
- Conduct rehearsals with the actual soldiers who will execute essential tasks (i.e., the FO who will initiate fires on a critical target rather than his FIST leader).
- Ensure methods for battle tracking and clearance of indirect fires are clearly understood by fire support organizations and maneuver commanders.
- Verify ranges of Q-36 and Q-37 radar, FA, and mortar coverage based on the effects desired (i.e., shell/fuze combinations).

● Explain fire support combat power in terms of the effects required for the operation. The maneuver commander then better understands the fire support and effects contributions to the COA and scheme of maneuver. Useful information may also include the number and types of missions available/possible, battery/battalion/mortar volleys by type of ammunition and the effects expected, minutes of smoke and allocation, minutes of illumination and allocation, and numbers of available family of scatterable mines (FASCAM) by type, size, density, and safety zone

CLEARANCE OF FIRES

8-41. The brigade commander is responsible for the clearance of fires. However, he normally delegates coordination responsibility to the ECOORD. Clearance of fires ensures fires attack enemy capabilities without casualties to friendly forces and noncombatants. Clearance of fires may be accomplished through a staff process, control measures embedded in automated battle command systems, and active or passive recognition systems. During planning and execution, the commander may use all of these means in various combinations to set the conditions for clearance of fires. Even with automated systems, clearance of fires remains a command responsibility at every level. The brigade commander must assess the risks and decide to what extent he will rely on automated systems to assist in the clearance of fires.

MANEUVER CONTROL MEASURES

8-42. The first step in clearance of fires is the use of maneuver control measures. Boundaries serve as both a permissive and restrictive measure. Whenever possible, boundaries should be used because they allow the unit that owns the ground to engage targets quickly, requiring coordination and clearance only within that organization. Boundaries divide up areas of operation and define responsibility for clearance of fires. When developing boundaries, consideration should be given to the targets units will be assigned to execute and the clearance requirements for them. Targets and their triggers should be kept within the same unit's boundary without overriding other tactical or doctrinal considerations.

FIRE SUPPORT COORDINATING MEASURES (FSCM)

8-43. The next step in effective clearance of fires is to properly use FSCM. Permissive FSCM should be established to maximize the portion of the AO in which targets can be engaged with minimal clearance. Measures like the coordination fire line (CFL) should be established far enough out, but only far enough out to protect ground forces. Restrictive measures, such as a no-fire area (NFA), should be established to protect forces, facilities, and civilians. They should not remain in effect for the entire operation without being checked and updated. Restrictive measures should be established with an effective date time group (DTG) and a projected cancellation DTG. NFAs should be kept as small as possible to avoid creating safe havens for enemy forces. During the MDMP, specific criteria should be developed to trigger the changing of FSCM.

PRECLEARANCE

8-44. The next step is to determine which fires will be considered precleared. In some specific instances, fires can be cleared during the planning phase:

● Fires into a planned call for fire zone (CFFZ) resulting from a radar acquisition in that planned CFFZ.
● Fires on a preplanned target, with a definable trigger, against a specific enemy, and according to the concept of fires.

CLEARANCE OF FIRES DRILL

8-45. Clearance of fires should be a drill in all CPs and operations centers. The best method is a redundant drill where a call for clearance is transmitted over two nets: the fire support net and a maneuver net. Internal to all TOCs should also be an established clearance of fires drill. Initiating the drill is the responsibility of the FEC. Staff members that may be required to participate in the clearance of fires drill may include the S3, lawyer, IOCOORD, and area denial artillery munition (ADAM) cell. Clearance of fires in an urban environment is complicated, and the rules of engagement (ROE) must be adhered to and collateral damage considered. The staff sections required to participate in the clearance of fires drill depend on the operational environment within which the HBCT is operating and should be included in the tactical standing operating procedures (TSOP).

8-46. Positive clearance of fires is normally facilitated through prior planning, rehearsals, and careful placement of FSCM. However, the clearance of targets of opportunity often presents challenges. Fires on targets of opportunity must be delivered on short notice without undue delay and without jeopardizing friendly force security. For positive clearance of fires, the following should be obtained:

- Best available method of target location.
- Positive identification of a target as enemy.
- Eyes on target if at all possible.
- Clearances from appropriate external elements if target is outside unit boundaries.

AFATDS AND CLEARANCE OF FIRES

8-47. Coordination to clear fires is required when the effected area around the target violates one or more FSCM or zones of responsibility (ZORs). When coordination is required before firing a mission, the unit establishing the FSCM or the unit responsible for the ZOR must approve a coordination request.

8-48. Even with enhanced situational understanding offered by automated systems and the automated checks and warnings of AFATDS, there may still be instances where fires require voice coordination before clearance.

TARGET PROCESSING GUIDANCE'S AFFECTING COORDINATION

8-49. The fire support effects buffer distance is used to add a buffer to a FSCM to account for the effects of fires near the FSCM. AFATDS has a default buffer distance built in for each munition; however, the distances may be adjusted based on maneuver or FA commander's guidance. The buffer distance is usually outlined in the unit SOP. The operator sets the fire support effects buffer distance during setup or modifies it during operations. AFATDS looks at FSCM in the database and adds the buffer distance to the aim point of a mission to determine if a violation has occurred and thus if coordination is required.

PRECLEARANCE

8-50. During the planning process, commanders should consider the fires that can be precleared. Using digital fire support C2 systems, the commander can set the conditions for the execution of certain fire missions without clearance confirmation at the time of execution. Some examples of conditions that a commander can set follow:

- Fires do not violate established maneuver control measure or FSCM.
- The observer executing the fires must have positive identification of the target, and it must meet the established engagement criteria.
- The observer executing the fire mission must meet target location accuracy criteria.

NONLETHAL FIRES AND EFFECTS COORDINATION

8-51. Coordination of nonlethal fires and other nonlethal means is the responsibility of the IO element of the FEC. The major focus of this coordination process is the deconfliction of nonlethal fires and IO/nonlethal staff sections and their effects. Some examples follow:

- It may be necessary to deconflict an EW attack against specific frequencies and bands within the electromagnetic spectrum. In this case, conflicts can arise between IO planners who want to electronically attack a target and communicators (primarily PSYOP nonlethal effects) who need to use the frequency band or intelligence operators who are exploiting information derived from the adversary target in question.
- It may be necessary to resolve issues with an EW attack for its potential residual effects on our own information systems that may be in the target area of interest.
- Conflicts between intelligence collection and attacks against critical adversary information nodes are another example. When a C2 target scheduled for attack represents a valuable source of intelligence, the commander will need to decide if the tactical and operational advantage achieved through attacking it is worth the probable loss of intelligence.
- Conflicts between targeting media infrastructure and its post combat operations value to PSYOP, PA and CA must be weighed as well. Frequently, internal media within the AO my be producing propaganda that is either ineffectual or even counterproductive to their efforts. In this case the commander may wish to safeguard such assets for possible use during stability operations and support operations.

8-52. The principal coordination process for IO is the targeting meeting. The targeting meetings, led and supervised by the HBCT XO, determine which targets are to be attacked and by what means. The IO officer attends these meetings and nominates targets that should be the focus of IO and nonlethal attack options.

8-53. IO coordination may extend to a broader audience of external agencies supporting the HBCT for which extensive liaison is required. PSYOP personnel address local populations and enemy forces. The IO element may have to coordinate essential IO tasks with its higher headquarters or next higher PSYOP headquarters, CMO tasks with a joint civil military operations task force (JCMOTF), or EW and deception with higher headquarters and sister services. The HBCT may also be required to coordinate IO with government agencies, NGOs, and local assets.

SECTION III – FIRES AND EFFECTS SYNCHRONIZATION

SYNCHRONIZATION TOOLS

8-54. Fires planning and coordination leads to execution and synchronization. As discussed previously, for fires and their effects to be synchronized into the combined arms commander's plan, they must initially be integrated into the MDMP. Fires and effects are kept in synch through the targeting meetings and the other battle updates processes of the HBCT staff. The FEC develops and presents consolidated products that outline essential fire and effects tasks, both lethal and nonlethal.

8-55. The targeting and synchronization tools that are outlined in existing doctrinal publications are adaptable for both lethal and nonlethal fires planning. The FEC can strive to achieve a common ground for synchronizing effects by making multiple use of the same tools. Three of the products resulting from the initial targeting process during the MDMP may be used in their traditional format to synchronize fires and their effects.

8-56. The high-payoff target list (HPTL) (Figure 8-3) is a prioritized list of HPTs. During COA development, an initial HPTL is created for each friendly COA. The HPTL is refined as the staff wargames the various COAs. To construct the HPTL, potential targets are selected from the S2's high-value target list and assessed for their payoff to the operation. HPTs are targets that are critical to both the adversary's needs and the friendly concept of the operation. The commander approves the HPTL during COA approval. The HPTL is revisited at each targeting meeting and usually changes as an operation progresses.

EVENT OR PHASE: Phase I (Battle for Fustina Airfield)				
PRIORITY	CATEGORY	TARGET	CATEGORY	TARGET
1	FS	Parump Mortars	FS	Parump Mortars
2	MVR	Parump SPF	MVR	Parump SPF
3	C2	Cell Phone C2	C2	Cell Phone C2
4	C2	FM Radio C2	C2	FM Radio C2
5	* Civilians	Hostile Crowds-see note	*Civilians	Hostile Crowds–see note
*Hostile crowd defined as 25 or more people with leadership interfering or capable of interfering with HBCT operations				

Figure 8-2, High-Payoff Target List

8-57. Target selection standards (TSS) (Figure 8-3) are necessary to provide guidance to the targeting team, collection assets, and attack systems as to what constitutes a valid target. The guidance is given in the form of target criteria that are the conditions that a potential target must meet to be a valid, engageable HPT. The criteria are generally quantifiable measures of target location accuracy and timeliness of the information. For nonlethal attacks, descriptive criteria may have to be developed to supplement or replace the normal criteria of accuracy and timeliness. For example, nonlethal TSS criteria may be required to describe what constitutes a hostile crowd (a group larger than 25 people with sticks or other weapons, leaders directing the crowd, the presence of radios or cellular telephones for C2, etc.).

HPT	TIMELINES	ACCURACY	TIMELINESS	ACCURACY
Parump Mortars	10 minutes	100 meters	10 minutes	100 Meters
Parump SPF	30 minutes	100 meters	30 minutes	100 Meters
Cell Phone C2	Within 2 hours of H-hour	Placed/received within 12 Km of Fustina Airfield	Within 2 hours of H-hour	Placed/received within12 Km of Fustina Airfield
FM Radio C2	30 minutes	150 meters	30 minutes	150 Meters
Hostile Crowds	Within 6 hours of H-hour	Within 12 Km of Fustina	Within 6 hours of H-hour	Within 12 Km of Fustina

Figure 8-3, Example Target Selection Standards

8-58. The attack guidance matrix (AGM) (Table 8-2) is a list of targets which will be attacked during the operation. The AGM directs responsibility for the attack of each HPT by providing the who, what, when, how, and desired effect. The planners to provide detailed guidance or any necessary special instructions can use the remarks section. Only one AGM is produced for execution at any one time in an operation, although each phase of the operation may have its own AGM. All lethal and nonlethal attack systems used to direct specific decide, detect, deliver, and assess responsibilities to every planned HPT. The TSM combines data from the HPTL, AGM, and intelligence collection plan. A completed TSM allows planners to verify that assets have been assigned to each targeting process task for each target. See Tables 8-3 and 8-4 provide example TSMs. A TSM may be used to direct specific decide, detect, deliver, and assess responsibilities to every planned HPT.

Table 8-2, Example Attack Guidance Matrix

HPTL	*WHEN*	*HOW*	*EFFECT*	*REMARKS*
Parumps Mortars	I	FA	D	Use search and attack teams in restricted areas.
Parumps SPF	I	FA	N	Destroy C2
Cell Phone C2	A	EA	EW	Disrupt service starting H-2
FM Radio C2	A	EA	EW	No Jamming until H-5 to preserve intelligence
Hostile Crowds	A	CA/MP	Dispersed	25 or more constitute crowd
LEGEND:				
WHEN (I) = IMMEDIATE WHEN (A)= AS REQUIRED WHEN (P) = PLANNED		EFFECTS (S)=SUPPRESS EFFECTS (N)=NEUTRALIZE EFFECTS (D)=DESTROY EFFECTS (EW)=JAMMING OR OTHER OFFENSIVE EW		

Table 8-3, Example Lethal Targeting Synchronization Matrix

Targeting Objectives: 1. Destroy Parump SPF teams/mortars within Kazar. 2. Disrupt Parump SPF C3 capability within Kazar. 3. Provide force protection for HBCT while promoting regional stability.							
Decide			**Detect and Deliver**				**Assess**
Target Set	**Targets**	**NAI (NAI Grid)**	**Asset**	**How**	**When**	**Effects**	**Purpose / Assessment**
FS#	Parump Mortars x 6 (60mm)	NAI 110 (EN0436) NAI 111 (EN2329) NAI 112 (EN1516) NAI 128 (DN972410)	UAV Q-36/37 MVR RS CA PSYOP MP HUMINT	FA CAS MVR	A	Destroy 50%	Purpose: Force protection and destruction of SPF mortars to maintain regional stability. Assessment: Mortars seized/destroyed; no longer pose threat to HBCT forces. (MVR, MP, Radar)
MVR	SPF Teams (16 man teams)	NAI 110 (EN0436) NAI 111 (EN2329) NAI 112 (EN1516) NAI 128 (DN972410)	UAV Prophet MVR RS CA PSYOP MP HUMINT	MVR	A	Destroy	Purpose: Force protection and destruction of SPF teams to maintain regional stability. Assessment: Teams detained/destroyed; no longer pose threat to HBCT forces. (MVR, UAV, Prophet, MP)
C3	SPF C3 Nodes	NAI 110 (EN0436) NAI 111 (EN2329) NAI 112 (EN1516) NAI 128 (DN972410)	UAV Prophet MVR RS CA PSYOP MP EA HUMINT	Prophet MVR	A	Destroy	Purpose: Force protection and destruction of C3 nodes to maintain regional stability. Assessment: Teams detained/destroyed; no longer pose threat to HBCT forces. (MVR, UAV, Prophet, EA)

Table 8-4, Example Nonlethal Targeting Synchronization Matrix

Targeting Objectives:	1. Disrupt SPF and Fustina C2. 2. Limit civilian interference during offensive operations within sector. 3. Deny enemy Information Operations. 4. Reduce SPF/Terrorist Support in AOR. 5. Increase cooperation with US Forces.						
DECIDE			*DETECT & DELIVER*				*ASSESS*
TGT SET	*TARGET*	*NAI NAI Grid*	*ASSET*	*HOW*	*WHEN*	*EFFECTS*	*ENDSTATE / ASSESSMENT*
Fustina Leaders	Fustina Mayor ERDEKIC, Enes	EN1323	TF 1-23 IN 931 PSYOP CAT A 1 THT	MSGs: 1-5 FTF	NLT D+5	Influence	Purpose: Limit civilian interference & gain cooperation. Assessment: Response to messages. Collection method: Civil Affairs, PSYOP & THT
	Fustina Political Leaders: LENDO, Ljubko RASIC, Enis	EN1323	TF 1-23 IN 931 PSYOP CAT A 1 THT	MSGs: 1-5 FTF	NLT D+5	Influence	Purpose: Limit civilian interference & gain cooperation. Assessment: Response to messages. Collection method: Civil Affairs, PSYOP, OSINT, & THT
	Fustina Ethnic Leaders: GOUJAN, Sead	EN1323	TF 1-23 IN 931 PSYOP CAT A 1	MSGs: 1-5 FTF	NLT D+5	Influence	Purpose: Limit civilian interference & gain cooperation. Assessment: Response to messages. Collection method: Civil Affairs & PSYOP
PDK Leaders	FDK Leaders: MUDIC, Esad JAJUPI, Sadik LENDO, Milaim MITIC, Bozhe	FDK Political Offices	PSYOP CAT A 1 TF 1-23 TF 2-3 TF 5-20 THT	MSGs: 29-34	NLT D+5	Influence	Purpose: Limit civilian interference & gain cooperation to stop support to terrorists. Assessment: Response to messages. Collection method: Civil Affairs, PSYOP & THT.

8-59. There is no set format for the TSM. Units will adjust formats to meet their operational requirements. Though targets selected for lethal and nonlethal attack are developed through the same targeting process, the presentation of the resulting decisions may or may not be suitable for combining on a single TSM. The sometime longer time period of execution of IO operations may necessitate a separate TSM.

Chapter 9

Army Echelons Above the HBCT and Joint Fires and Effects Planning and Coordination

All heavy brigade combat team (HBCT) operations are planned and executed as part of an integrated joint operation. The HBCT must plan to employ US Air Force, US Navy, and Army aviation assets in tactical combinations that will confront an enemy with overwhelming effects. The tactical combination that causes the greatest dilemma for the enemy is firepower; intelligence, surveillance, and reconnaissance (ISR); and maneuver. For the enemy to mass sufficient combat power, he must maneuver, and when he maneuvers, he exposes himself to concentrated firepower delivered by the fires brigade, the HBCT, and joint fires. The HBCT enabled with joint combat power can rapidly shift from shaping operations to decisive operations, exploiting the enemy's vulnerabilities. Additionally, the tactical agility of the HBCT allows it to destroy enemy formations disrupted by joint effects and exposed to rapid maneuver. Joint capabilities combined with HBCT capabilities provide an effective counter to the array of conventional threats posed to the HBCT.

This chapter discusses concepts and procedures for planning and coordinating joint and combined fires and effects. It provides joint tactics, techniques, and procedures (JTTP) for joint fires and effects and Army aviation planning, coordination, and execution. The chapter consists of three sections: Section I, Close Air Support (CAS); Section II, Naval Surface Fire Support (NSFS), Section III, Army Aviation, Air-Ground Integration; and Section IV, Joint Air Attack Team (JAAT).

SECTION I – CLOSE AIR SUPPORT (CAS)

CAS ORGANIZATION AND KEY PERSONNEL RESPONSIBILITIES

9-1.   CAS is air action by fixed-wing and rotary-wing aircraft against hostile targets that are in close proximity to friendly forces and that require detailed integration of each air mission with the fire and movement of those forces. It requires detailed integration of each air mission with the fire and movement of maneuver forces. The HBCT commander establishes the priority, timing, and desired effects of CAS within his area of operation (AO). CAS is an external enabler that provides the commander with flexible and responsive fires and effects. Using CAS effectively, the commander can take full advantage of battlefield opportunities by massing effects to maintain the momentum of the offense or to reduce tactical risk. The mobility and speed of aircraft provides the HBCT commander with a means to strike the enemy swiftly and unexpectedly.

9-2.   The tactical air control party (TACP) is the principal US Air Force liaison element aligned with the HBCT. The TACP advises the commander on the capabilities and limitations of airpower and assists the ground commander in planning, requesting, and

coordinating CAS. The TACP provides the primary terminal attack control of CAS in support of ground forces.

9-3. The air liaison officer (ALO) is the senior TACP member attached to the HBCT who functions as the primary advisor to the HBCT commander on air operations. At the HBCT level, the ALO is an aeronautically rated officer and is an expert in the capabilities and limitations of airpower. The ALO plans and executes CAS in accordance with the HBCT commander's guidance and intent. At the maneuver battalion level, an ALO is an Air Force officer or specially qualified enlisted TACP member who provides the commander direct CAS support.

9-4. Terminal attack controllers (TACs) are the forward ground commander's fixed-wing air employment experts. Currently, the majority of the TACs are enlisted airmen and are called ETACs. The ETACs provide the maneuver ground commander recommendations on the use of CAS and its integration with ground maneuver. They are members of the TACPs and perform terminal attack control of individual CAS missions. The ETAC must:

- Know the enemy situation, selected targets, and location of friendly units.
- Know the supported units plans, position, and desired effects.
- Validate targets of opportunity.
- Advise the commander on proper employment of air assets.
- Submit immediate requests for CAS.
- Control CAS with supported commander's approval.
- Perform battle damage assessment (BDA).

9-5. The forward air controller (airborne) (FAC(A)) is a specially trained and qualified aviation officer who exercises control from aircraft engaged in CAS missions in support of ground troops. The FAC(A) is normally an Air Force officer and platform that serves as an airborne extension of the TACP.

9-6. The fire support team (FIST) chief is the ground commander's fire support officer at the company level. This team's primary mission is to provide field artillery and mortar effects to the company. In the absence of a TACP, the company commander may use his FIST to coordinate CAS and naval resources through appropriate agencies. Non-TAC-qualified personnel providing terminal attack control of a CAS mission may increase the risk of fratricide. The decision to use non-TAC-qualified personnel for terminal attack control of CAS must be balanced against potential loss of friendly forces to enemy action. Regardless, FIST personnel provide expert targeting information that other CAS personnel can use.

9-7. Qualified helicopter aircrews can also function as a FAC (A) providing the ground commander with an additional capability for terminal attack control of CAS. A heliborne ETAC may also direct the terminal attack control of CAS. This technique provides the ground commander flexible and responsive terminal attack control across a wider area of operation and is especially useful when ETACs are limited and Army aviation support is available.

CONDITIONS FOR EFFECTIVE CAS

9-8. The conditions for effective CAS are thoroughly trained personnel with well-developed skills; effective planning and integration; effective command, control, communications, and computer (C4) systems; air superiority (especially suppression of enemy air defense (SEAD)); target marking and acquisition: streamlined and flexible procedures: and appropriate ordnance. Although not a requirement for CAS employment, favorable weather improves CAS effectiveness.

9-9. Effective CAS relies on thorough, coherent planning and detailed integration of air support into HBCT operations. The ability to mass joint effects at a decisive point and to

achieve the commander's intent for CAS is made possible through detailed integration with ground forces. From a planner's perspective, the preferred use of a CAS asset is to have it preplanned and prebriefed. Rehearsals provide an opportunity to walk through the operation; to achieve familiarity with terrain, airspace restrictions and procedures; and to identify shortfalls.

9-10. The commander employing CAS can improve its effectiveness by providing timely and accurate target marks. Target marking builds situational understanding (SU), identifies specific targets in an array, reduces the possibility of fratricide, and facilitates terminal attack control. When the HBCT commander foresees a shortfall in the ability to mark for CAS, he should request that capability be provided or authorize non-ETAC personnel to perform terminal control. As mentioned earlier, there is a higher risk of fratricide in the latter case, and this must be considered.

9-11. To achieve the commander's intent and effects for CAS, planners, ETACs, and aircrews must tailor the weapons and fuse settings to provide the appropriate ordnance. For example, cluster and general-purpose munitions are effective against area targets, such as troops and vehicles in the open, but not against hardened targets and are not advisable for targets where friendly troops may be affected by the immediate strike or by unexploded ordnance. Cluster munitions that dud may affect the mobility of certain units. In all cases, the HBCT commander must know the type of ordnance expended and its possible impact on the unit's current and subsequent mission.

CAS PLANNING AND COORDINATION

9-12. At the HBCT level, the joint fires planning team consists of TACP personnel, the ALO and the fires and effects cell (FEC), specifically the effects coordinator (ECOORD). The joint fires team is the primary tactical staff agency responsible for CAS planning. The planning phase begins when the HBCT receives the order from higher headquarters.

9-13. CAS planning is an integral part of the military decision-making process (MDMP) and is crucial in developing the overall HBCT fires and effects plan. A major challenge in the process is integrating and coordinating air support with surface fires. The overarching goal is integrating fires and effects assets and maneuver to achieve the desired effects from the air attack without suspending the use of the other supporting arms or unnecessarily delaying the scheme of maneuver. An additional goal is to offer a reasonable measure of protection to the aircraft from friendly surface fires and enemy fires.

9-14. The CAS decision-making process is a tool that assists the HBCT commander and staff in developing a fully integrated fires and effects plan. The HBCT commander must identify and articulate the effects he desires from CAS, with specifics concerning time, place, and end state. Planners must understand the commander's desired effects for CAS and how the commander envisions the use of CAS to best support the overall mission. The following five steps outline the requirements for CAS planners during the MDMP.

STEP 1. RECEIPT OF MISSION

9-15. During this step, the ALO should be prepared to provide the following:
- Air order of battle (apportionment, allocation, and distribution decision).
- Input to the HBCT commander's initial guidance.
- Estimated air capability to support the operation.
- Capabilities and limitations of assigned personnel and equipment.

STEP 2. MISSION ANALYSIS

9-16. During this phase, CAS planners perform the following actions:

- Determine specified, implied, and mission-essential tasks.
- Consider mission, enemy, terrain and weather, troops and support available, and civilian constraints (METT-TC).
- Assist in developing the mission statement.
- Anticipate airpower required to support the mission based on:
  - HBCT commander's priority of fires.
  - Facts and assumptions.
  - Weighting the main effort.
- Provide the following products:
  - Available CAS assets.
  - CAS constraints.
  - CAS risk assessment (type of terminal attack control required)
  - Use of available time.
  - Warning orders (WOs) to subordinate units
  - Verification that subordinate TACP elements understand the mission and the ability of CAS to support the mission.

9-17. Once CAS planners have analyzed the mission and are familiar with CAS requirements, initial CAS requests should be drafted and submitted. Further refinements to these initial requests can be forwarded as details become available. It is critical to adhere to time constraints relative to the air tasking order (ATO) cycle.

STEP 3. COA DEVELOPMENT

9-18. After receiving guidance, the staff develops COAs for analysis and comparison. Guidance and intent focus staff creativity toward producing a comprehensive, flexible plan within available time constraints. During this step, CAS planners perform the following:

- Analyze relative combat power (air platforms against anticipated enemy surface forces, including air defense threats).
- Generate options used to develop possible COAs.
- Array initial forces to determine CAS requirements.
- Develop CAS scheme of maneuver (includes best use of CAS and placement of TACPs)
- Have assistance from the ALO in developing engagement areas, target areas of interest (TAIs), triggers, objective areas, obstacle plan, and movement plan.
- Prepare COA statements and sketches (battle graphics).

9-19. Key considerations during this step are commander's intent and desired CAS effects, which unit has priority for CAS, positioning of terminal controllers, and whether the plan promotes simultaneous engagement of targets by CAS and surface fires.

STEP 4. COA ANALYSIS/WARGAMING

9-20. The joint fires and effects planning team follows eight steps during the wargaming process. Specific CAS-related considerations follow:

- Gather the tools:
  - ATO/SPINS (special instructions) information.
  - Decision-making matrices/devices.
  - Briefing cards/CAS briefs (nine lines).

- Standard conventional loads (SCLs) listings.
- Aircraft and weapons capabilities information.
- List all friendly forces:
  - CAS aircraft.
  - FAC (A).
  - Airborne C2.
  - Ground forces, including fires and effects assets.
  - ETACs.
  - Other observers/ISR assets.
  - Other aviation and support assets.
- List assumptions:
  - Aircraft operation altitudes.
  - Enemy surface-to-air threat posture.
  - CAS tactics.
  - ETAC procedures in effect.
  - Terrain/weather effects on CAS.
- List known critical events and decision points:
  - Line of departure or defend no later than times.
  - CAS triggers (named areas of interest (NAIs)/TAIs).
  - Airspace coordinating measures (ACMs) and fire support coordinating measures (FSCMs).
  - SEAD/marking round requirements.
- Determine evaluation criteria:
  - Timeliness.
  - Accuracy.
  - Flexibility.
  - Mass.
  - Desired effects.
- Select the wargame method:
  - Rock drill.
  - Terrain model/sand table.
  - Map.
  - Radio.
  - Others.
- Select a method to record and display results:
  - Events logs.
  - Timetables.
  - Reaction times.

9-21. Key considerations during the wargame follow:

- Did CAS support the commander's desired effects?
- Was CAS effectively integrated with the ground scheme of maneuver?
- Was C2 of CAS reliable and effective?
- Were ACMs and FSCMs effective in the supporting the COA?

9-22. At this point in the process, the fires and effects planners begin to refine the fires and effects paragraph to the OPORD by further developing specific tasks, purpose, methods, and desired effects for lethal and nonlethal effects. The resulting lists of tasks for CAS become

the CAS essential fires and effects tasks (EFETs). EFETs have four distinct components: task, purpose, method, and effects.

- The task describes the targeting objectives/effects that CAS must achieve against a specific enemy formation or capability. Examples include:
  - Disrupt movement of 3d Guards Tank Regiment.
  - Delay advanced guard main body movement by 2 hours.
- The purpose describes the maneuver or operational purpose for the task. Examples include:
  - To allow 2d BN to advance to Phase Line Smith.
  - To seize and hold Objective Panther.
- The method describes how the task and purpose will be achieved. Examples include:
  - CAS available to engage targets of opportunity entering the main defensive belt.
  - CAS attacks defensive positions at point of penetration at 1300Z.
- Effects attempts to quantify the successful accomplishment of the task. Examples include:
  - CAS disables enemy engineer platoon at point of penetration; 2d BN advanced to Phase Line Smith, seized and held Objective Panther.
  - CAS destroys 8–10 armored vehicles vicinity Brown's pass; 2-69 Armor secured Brown's pass.

9-23. Fires and effects and CAS planners may also elect to produce a fires and effects annex. This annex may be necessary to expand on the fires and effects information in paragraph 3 of the OPORD. If the information in paragraph 3 is deemed adequate, then a fires and effects annex is not published.

STEP 5. ORDERS PRODUCTION

9-24. The staff prepares the order or plan to implement the selected COA by turning it into a clear, concise OPORD with a scheme of maneuver and a concept of fires and effects. Orders provide all the necessary information that subordinates require for execution but without unnecessary constraints that inhibit subordinate initiative.

9-25. The HBCT commander's intent and end state must be clearly understood, particularly the desired effects for CAS in relation to the overall mission objective. The commander must ensure CAS planners understand the effects he desires on the objective, scheme of maneuver, C2 requirements, and criteria for specific rules of engagement (ROE). While the joint forces air component commander (JFACC) determines the actual ordnance CAS aircraft will carry, the requesting commander should ensure the JFACC is provided sufficient information outlining his desired effects and also any external or self-initiated tactical restrictions or limitations. The HBCT commander must also provide the risk assessment determination identifying specific guidance for types of terminal attack control.

CAS EXECUTION

9-26. CAS execution begins with a target being identified, tracked, and nominated by a unit or agency within the HBCT. Two processes that are continuous and overlapping are involved in the successful attack of the target with CAS. They are joint tactical air controller (JTAC)/HBCT tactical operations center (TOC) coordination and CAS terminal control resulting in successful target engagement.

9-27. It is critical for JTACs and HBCT tactical operations center (TOC) elements, both at the brigade and battalion levels, to coordinate their efforts prior to each CAS engagement. Key issues, such as battle tracking; target nomination; airspace deconfliction; and

coordination, synchronization, weapons release authority, tactical risk assessment, types of terminal attack control, and which JTAC provides terminal attack control must be clearly understood. Only through effective coordination can the CAS team successfully achieve the HBCT commander's desired effects for CAS.

9-28. Once a target is identified, it is nominated to the ETAC to engage with CAS. Commanders nominate CAS targets based on previously planned target sets or from spot reports and targets of opportunity received during operations. The nomination can occur before or after the aircraft arrive at the checkpoint.

9-29. A target mark should be provided for CAS aircraft whenever possible. Target marks should be planned to include sufficient time before weapons employment to ensure target acquisition by the CAS aircrew. The target mark can be provided by direct or indirect fire weapons (heavy machinegun tracer, mortars, artillery, or naval gunfire) or an airborne platform, such as an FAC(A). Standard marking procedures include the following:

- Indirect fire—artillery, mortars, NSFS, using white phosphorous (WP) or illumination.
- Direct Fire—primarily tracers, limited by range and visibility.
- Laser designators— ground or airborne.
- FAC(A)—WP/high explosive rockets, infrared pointer, and/or laser.

9-30. Marking friendlies is the least desirable method of providing a target mark. Marking friendlies can be confusing and should be used cautiously and only when no other method is available.

9-31. There are three types of terminal control (Type 1-3). Each type follows a set of procedures with associated risks. The commander considers the situation and issues guidance to the ETAC based on recommendations from his staff and associated risks identified to the tactical risk assessment. The intent is to offer the lowest level supported commander within the constraints established during risk assessment, the latitude to determine which type of terminal attack control best accomplishes the mission. The three types of control are not ordnance specific.

Type 1

9-32. ETACs use Type 1 control when the risk assessment requires them to visually acquire the attacking aircraft and the target under attack. It may have been determined during the tactical risk assessment process; that analysis of attacking aircraft nose position and geometry is the best method of ensuring first pass success and fratricide mitigation under the existing conditions. Language barriers when controlling coalition aircraft, lack of confidence in a particular platform, ability to operate in adverse weather, aircrew capability, or troops in contact situations are examples where visual means of terminal attack control are the methods of choice.

Type 2

9-33. This type control will be used when the ETAC desires control of individual attacks but assesses that either visual acquisition of the attacking aircraft or target at weapons release is not possible or when attacking aircraft are not in a position to acquire the mark/target prior to weapons release/launch. Examples are night, adverse weather, high threat tactics, and high-altitude and standoff weapons employment. When employing unguided munitions using Type 2 control, consideration must be given to host aircraft navigation/weapons system accuracy. Inaccurate navigation/weapon systems can result in extensive miss distances. Detailed planning and preparation by both the ETAC and the aircrew are required to identify the situations and locations conducive to standoff weapons attacks and to address flight profile and deconfliction (aircraft/weapon/terrain) considerations.

Type 3

9-34. This type control may be used when the tactical risk assessment indicates that CAS attacks impose low risk of fratricide. When commanders authorize Type 3 control, ETACs grant a blanket weapons release clearance to an aircraft of flight attacking a target or targets that meet the prescribed restrictions set by the ETAC. Attack aircraft flight leaders may then initiate attacks within the parameters imposed by the ETAC. The ETAC monitors radio transmissions and other available digital information to maintain control of the attacks. The ETAC maintains abort authority throughout the attack.

9-35. Because there is no requirement for the ETAC to visually acquire the target or attack aircraft in Type 2 or 3 controls, ETACs may be required to coordinate CAS attacks using targeting information from an observer. An observer may be a scout, combat observation lasing team (COLT), fire support team (FIST), unmanned aerial vehicle (UAV), special operations forces (SOF), or other asset with real-time targeting information. The ETAC maintains control of the attacks, making clearance or abort calls based on the information provided by the other observers or targeting sensors. The ETAC must consider the timeliness and accuracy of targeting information when relying on any form of remote targeting.

9-36. ETACs will use a standardized briefing to pass information rapidly. The CAS brief, also known as the 9-Line Briefing, is the standard for use with fixed- and rotary-wing aircraft. The CAS briefing form helps aircrews in determining if they have the information required to perform the mission. The brief is used for all threat conditions and does not dictate the CAS aircraft tactics. The mission brief follows the numbered sequence (1–-9) of the CAS briefing form. The first 9 lines are understood, and line numbers do not need to be passed. All potential observers in the HBCT (scouts, COLTs, FISTs, for example) should be trained on the 9 line and prepared to provide the required information to facilitate their participation in Type 2 and 3 terminal attack controls.

9-37. Battle damage assessment (BDA) is the final step in determining if the HBCT commander's desired effects have been achieved by CAS. Whenever possible, the ETACs provide attack flights with the BDA of their attacks as they egress. The ETAC gives BDA for the flight, not for individual aircraft in the flight. The ETAC should not assume the target is completely destroyed since the enemy may employ deception. BDA must also be passed to the supported commander and entered into the intelligence system as soon as possible. This assists the HBCT commander and his subordinate commanders in determining if the target requires restriking with CAS or some other effects-producing system.

SECTION II – NAVAL SURFACE FIRE SUPPORT (NSFS)

GENERAL MISSION

9-38. The general mission of NSFS is to assist the HBCT by destroying neutralizing, suppressing, or harassing targets that oppose the brigade. NSFS is especially critical during forced entry operations and subsequent operations when the HBCT is within range of naval support. NSFS can play a vital role in reducing enemy capabilities by destroying enemy installations before the initial entry, protecting and covering the initial entry, and supporting land force offensive or defensive actions during subsequent operations. NSFS provides close supporting, deep supporting, preparation, counterstrike, reconnaissance, SEAD, defensive, protective, obscuration screening, and countermechanized/armor fires.

TACTICAL MISSIONS

9-39. NSFS ships may be assigned one of two missions direct support (DS) or general support (GS) to the HBCT in much the same way that field artillery (FA) is organized for combat.

DIRECT SUPPORT

9-40. A ship in the DS role may be made available to support the HBCT and can deliver both planned and call fires. Call (on-call) fires are normally requested and adjusted by the firepower control team of the supported unit or by an air spotter. Naval gunfire (NGF) DS is not the same as FA DS. A DS ship will respond to calls for fire from units other than the supported unit when ordered to do so by the fire support group commander, the UEx NGF officer, or the HBCT naval gunfire liaison officer (NGLO).

GENERAL SUPPORT

9-41. A ship is usually placed in GS of committed brigade combat teams (BCTs) and UExs. The NGF officer of the unit being supported directs the fires for a GS ship. The primary purpose of a GS ship is to allow the supported commander to add depth to the fires of the DS ships without the necessity for requests to higher echelons. An understanding of the capabilities and limitations of NSFS facilitates its use in the ground support role.

NAVAL GUNFIRE SUPPORT PERSONNEL

9-42. Members of the air and naval gunfire liaison company (ANGLICO) are specially trained in conducting naval gunfire. However, the procedures are simplified and standardized so that any trained HBCT observer (COLT, FIST) can effectively adjust the fire of a ship.

9-43. The ANGLICO personnel are available to advise unit commanders from company through HBCT levels on how to best use the naval air and gunfire support available to them. Liaison personnel can give unit commanders and the fire support personnel information on weapon ranges, ammunition effects, and all-weather bombing capabilities. For maximum effectiveness, ANGLICO support should begin during the planning phase of an operation. The ANGLICO task-organized teams should be attached to the units they will support as soon as possible. ANGLICO personnel at all levels, company thorough HBCT, are trained as NGF spotters and/or forward air controllers and can request and control missions for the units they support.

NAVAL GUNFIRE CAPABILITIES

9-44. Ammunition variety, combined with high rates of fire, high muzzle velocity, and precision fire control equipment make naval surface fires particularly suited for attacking targets that present a vertical face on the forward slopes of hills and for direct fire or assault fire, particularly against reinforced targets such as bunkers and hardened positions. The variety and quantity of ammunition carried aboard naval vessels depend on the class of the ship. Some naval guns have a rapid rate of fire.

9-45. The normal NGF dispersion pattern is elliptical—narrow in deflection and long in range. It permits effective coverage of such targets as roads and runways when the gun-target (GT) line coincides with the long axis of the target. Close supporting fire can be delivered when the GT line is parallel to the front line of troops.

9-46. Within the limits imposed by hydrographic conditions, the NSFS ship may be positioned for the best support of the ground force. The ability of the ship to maneuver is an important factor in planning for support of maneuver forces. It also allows selection of the most favorable GT line. Precision fire control equipment permits accurate direct and indirect fires while the ship is underway or at anchor.

NAVAL GUNFIRE LIMITATIONS

9-47. The flat trajectory of naval gun projectiles causes a relatively large probable error. These factors and the elliptical dispersion pattern must be considered by the ECOORD in

considering NSFS as a fire support means. The GT line and its relation to the forward line of troops (FLOT) is especially important. If possible, the GT line should be parallel to the FLOT. If the ship must move during firing, the GT line in relation to the FLOT may change. This can cause cancellation of the fire mission as the large range probable errors may cause rounds to endanger friendly forces.

9-48. The hydrographic conditions of the sea area in which the NSFS ship must operate may be unfavorable. They may cause undesirable firing positions or require firing at longer ranges. Bad weather and poor visibility may limit the ability of NSFS ships to provide fire support and may even force the ships out to sea and out of range. If the NSFS ship comes under enemy surface, subsurface, and/or air attack, the ship may cancel its fire mission with the ground forces and try to counter this threat.

CONTROL MEASURES

9-49. Measures used by the US Navy for its operations are identical to those used by the ECOORD to control other surface-to-surface fires. Those peculiar to naval operations that limit ship movement or affect the fire support provided are discussed below.

ZONE OF FIRE

9-50. The objective area is divided into zones into which ships are assigned to coordinate their efforts. The zones depend on locations of boundaries, size, visibility, and accessibility to fire.

FIRE SUPPORT AREA (FSA)

9-51. An FSA is a definite sea area assigned to an individual fire support ship/unit (more than one ship). These areas are selected on the basis of factors such as hydrographic conditions; minefields; antiaircraft and antisubmarine disposition; other naval activity; and the best position based on GT line, range, and observation.

FIRE SUPPORT (FS) STATION

9-52. An FS station is a specific location within which ships may be placed and maintained while providing FS.

SECTION III – ARMY AVIATION, AIR-GROUND INTEGRATION

9-53. Army aviation operations must be integrated with HBCT ground operations so that air and ground forces can simultaneously work in the same battlespace to achieve a common objective and desired effect. Integration maximizes combat power through synergy of both forces. The synchronization of Army aviation operations into the ground commander's scheme of maneuver may require the integration of other services or coalition partners. It may also require integration of attack reconnaissance, assault, and cargo helicopters.

9-54. When units have not been able to create the desired habitual relationship in home station training, the planning and coordination processes will be longer and more detailed. Rehearsals will be essential for success. In-country training exercises should be accomplished whenever possible. The probability of mistakes is increased unless coordination, planning, rehearsals, and training are conducted. Commanders must apply risk-management procedures throughout planning and execution.

9-55. .Attack reconnaissance battalions (ARBs) often engage targets near friendly forces and noncombatants. This situation may occur during various types of operations—shaping,

decisive, and sustaining. Aircrews must have knowledge of friendly force and noncombatant locations. Procedures for positive identification of enemy forces are required.

9-56. The main reason for using several weapons systems at once is to overwhelm the enemy with more than it can counter. When possible, units sequence the employment of CAS, indirect fires, direct fires, and armed helicopters so closely as to seem simultaneous in fires and effects. Fires are lifted or shifted at the most advantageous time for ground elements to overwhelm the objective before the enemy can offer effective opposition.

9-57. Army aviators may be the key in controlling the employment of multiple weapons systems because of their vantage point on the battlefield and their ability to quickly relocate. Aviation units must routinely train with ground units so that they can effectively employ other Army and joint weapons systems.

MISSION PLANNING

9-58. Mission planning encompasses mission training, mission rehearsal, and mission execution. During planning, the HBCT commander and staff visualize how the battlefield will look at various stages. The brigade aviation element (BAE) assists in wargaming the scheme of maneuver, anticipating enemy COAs at critical points, and integrating air. It plans friendly integrated aviation-ground COAs necessary to maintain the initiative. It also determines branches and sequels to exploit enemy actions, reactions, and weaknesses.

9-59. Rehearsal validates planning and training for the mission. Minor planning adjustments may be made as a result of the validation provided during mission rehearsal. Optimal rehearsal includes integration of all mission participants. In combat, this integration allows the organization to operate as a whole, forming the combined arms or joint teams that will culminate in a synergistic air-ground effect.

AIR-GROUND INTEGRATION COORDINATION PROCEDURES

9-60. Although integrated missions are conducted with or under the control of the HBCT or maneuver battalion commander, they usually require direct coordination between aircrews and ground platoons or squads. Therefore, the aviation commander, his staff, and subordinate commanders and staffs typically coordinate directly with the supported unit throughout the planning process.

9-61. Listed below are the minimum information requirements the Army aviation team must be provided by the supported unit to ensure accurate and timely support. Digital transmission of information, such as coordinates, is faster and more accurate if that method is available. Voice communications are necessary to verify information and to clarify needs and intentions:

- Situation including friendly forces' location, enemy situation highlighting known air defense artillery (ADA) threat in the AO, mission request, and tentative engagement area (EA) coordinates.
- HBCT and maneuver battalion graphics update via Maneuver Control System (MCS) or Aviation Mission Planning System (AMPS) or via radio communications update critical items—such as limit of advance (LOA), fire control measures, and maneuver graphics—to better integrate into the friendly scheme of maneuver.
- Fire support coordination information: location of DS artillery and organic mortars, and call signs and frequencies.
- Ingress/egress routes into the AO: this includes passage points into sector or zone and air routes to the holding area (HA) or landing zone (LZ).

● Call signs and frequencies of the battalion in contact, down to the company in contact so air-ground coordination can be done on command frequencies to provide situational understanding (SU) for all elements involved.

● Global Positioning System (GPS) and Single-Channel Ground and Air Radio System (SINCGARS) time coordination: care must be taken to ensure that all units are operating on the same time.

9-62. In addition to the personal involvement of the aviation commander and staff, the aviation commander, as the supporting commander, provides a liaison officer (LNO) or a liaison team to the HBCT. The LNO interacts with the HBCT staff and other unit LNOs to ensure cross coordination at all levels. Depending on the mission, the aviation commander should also ask for a ground LNO from the HBCT. LNOs are vital for the coordination and deconfliction of the various elements that affect the scheme of maneuver and air-ground integration.

9-63. Deconfliction is a continual process for ground, aviation, and other supporting units. During planning and execution, aviation units must deconflict their operations with friendly units:

● Indirect fires, including mortars.

● CAS.

● UAVs.

● Air defenses.

● Smoke operations.

● Other internal aviation operations.

● Nonorganic aviation operations.

● Other services' delivery systems such as supply drops.

● Maneuver/movements for combat, combat support (CS), and combat service support (CSS) units.

9-64. The HBCT headquarters informs its maneuver battalions in contact when aircraft are inbound. En route to the HA, the air mission commander (AMC) contacts the ground maneuver element on its FM command network for a situation report (SITREP) on the enemy and friendly forces. A battalion close fight SITREP consists of the following:

● Type and center of mass of enemy vehicles and equipment position and direction of movement; if dispersed, provide front-line trace. Ground elements may not have a clear picture of the ADA threat.

● Location of friendly elements in contact, mission assigned to them, method of marking their position, and location of flanking units.

● Call sign/frequency verification and method of contact.

9-65. It is essential to positively identify locations of friendly units and supporting aircraft. Aircrews confirm with each other or wingmen their positive location. Ground elements must be extremely careful to verify any position information.

9-66. The aviation team usually checks in on the command net of the unit that has the element in contact or as directed in the mission briefing. On initial radio contact, the aviation team leader executes a check-in as shown in Figure 9-1.

> 1. Initial contact.
> 2. Team composition, altitude, and location.
> 3. Munitions available.
> 4. Station time.
> 5. Night vision capabilities and type: image intensification, thermal, or both.

Figure 9-1, Aviation Team Check-In

9-67. The aviation team, if required, selects and occupies a holding or orbit area within FM communications range until required coordination is complete. High altitudes and high-density altitudes may preclude hovering by a fully loaded aircraft. The aviation team may need to establish a racetrack orbit oriented behind the LZ, battle position (BP), attack by fire (ABF), or suppress by fire (SBF) position. The AMC informs the ground unit leader of the orbiting pattern or the series of positions that his team will occupy.

9-68. The BP, ABF, or SBF is normally offset from the flank of the friendly ground position but close enough to facilitate efficient target handoffs. This ensures that rotor wash, back blast, ammunition casing expenditure, and the general signature of aircraft do not interfere with operations on the ground or reveal ground unit positions. The offset position also allows aircraft to engage the enemy on its flanks rather than its front and lessens the risk of fratricide along the helicopter gun-target line. The company commander or other friendly forces must clear any positions over which helicopters may hover or orbit to preclude engagement by hidden enemy forces.

9-69. The AMC provides the ground maneuver unit leader with his concept for the operation. This briefing may be as simple as relaying the direction of aircraft approach or attack route and time required to move to the recommended BP. On completion of coordination with the lowest unit in contact, the flight departs the holding or orbit area.

9-70. Anything that kills the enemy for the ground force should be used. Hellfire is the preferred system for armor or hardened targets; however, Hellfire may be appropriate for use against a machinegun position, bunker, or even an individual if that is what is required to assist the ground unit. Area fire weapons, such as gun systems and 2.75-inch rockets, are preferred for engaging troops in the open and other soft targets such as trucks and trench works. A Hellfire does not usually destroy the bunker unless it detonates ammunition or explosives stored in the bunker. It is important to note that the machinegun crew may have been killed although the bunker appears undamaged.

CLOSE COMBAT

9-71. Close combat is inherent in maneuver and has one purpose—to decide the outcome of battles and engagements. It is carried out with direct fire weapons and supported by indirect fire, CAS, and nonlethal engagement means. Close combat defeats or destroys enemy forces or seizes and retains ground. The range between combatants may vary from several thousand meters to hand-to-hand combat. During close combat, attack reconnaissance aircraft may engage targets that are near friendly forces, thereby requiring detailed integration of fire and maneuver of ground and aviation forces. To achieve the desired effects and reduce the risk of fratricide, air-ground integration must take place down to company, platoon, and team levels.

CLOSE COMBAT ATTACK

9-72. For aviation units, close combat attack (CCA) is defined as a hasty or deliberate attack in support of units engaged in close combat. During CCA, armed helicopters engage enemy units with direct fires that impact near friendly forces. Targets may range from a few hundred meters to a few thousand meters. CCA is coordinated and directed by a team, platoon, or company-level ground unit using standardized CCA procedures in unit SOPs.

9-73. Effective planning, coordination, and training between ground units and armed aircraft maximize the capabilities of the combined arms team while minimizing the risk of fratricide. The key to success for enhancing air-ground coordination and the subsequent execution of the tasks involved begins with standardizing techniques and procedures. The end state is a detailed SOP between air and ground maneuver units that addresses the CCA situation. This procedure is best suited for units that maintain a habitual combined arms relationship during training and war.

DIRECT FIRES CALLED BY THE GROUND COMMANDER IN CLOSE COMBAT

9-74. The AMC and ground unit key leaders must consider the risk to friendly forces before weapon selection and engagement. If friendly forces may be in the lethality zone, the ground leader must be precise in describing the target that he wants aircraft to engage and should warn aircrews of the proximity of those forces. The aviation leader must be aware of his aircrews' skills in delivering fires near friendly forces.

9-75. Danger close ranges for armed helicopter weapons are shown in Figure 9-2. Engagements at ranges danger close or short of danger close require extreme close coordination and positive identification. Aircrews and ground commanders must take special precautions when delivering direct fires on targets within these ranges but are not prohibited from delivering at ranges short of danger close

9-76. Time is a primary constraining factor for coordinating direct fires in close combat. Pre-execution planning and coordination can reduce the complexity of the air/ground integration. METT-TC dictates how coordination between the commander in contact and the AMC is accomplished. Face-to-face coordination is preferred but is rarely possible in CCA situations.

9-77. In the hasty CCA—to take advantage of targets of opportunity or assist ground units under pressure—coordination is usually accomplished by radio. Ground commanders and their observers (FIST, COLT) must be trained to use the standard CCA briefing, which is a modified 9-line message, similar to that used by the ETAC to brief CAS crews, to coordinate any aviation fires in support of ground combat operations.

Table 9-1, Helicopter Engagement

WEAPON	*DESCRIPTION*	*DANGER CLOSE IN METERS*
2.75" rockets	Rocket with various warheads. Area weapon.	200
Hellfire	Precision-guided. Point weapon.	75
20 mm 25 mm 30 mm	Guns. Area weapons.	150

CLOSE COMBAT ATTACK BRIEFING

9-78. The CCA briefing follows the joint standard 9-line format with minor modifications for Army helicopters. The briefing provides clear and concise information in a logical sequence that enables aircrews to employ their weapons systems. It also provides appropriate control to reduce the risk of fratricide. Figure 9-2 depicts an example of a briefing.

CLOSE COMBAT ATTACK BRIEFING

(Omit data not required. Do not transmit line numbers. Units of measure are standard unless otherwise specified. *Denotes minimum essential in limited communications environment. BOLD denotes readback items when requested.)

Terminal controller: _____ This is _____
(Aircraft call sign)   (Terminal controller)

*1. IP/BP/ABF or friendly location: _____
(Grid, known point or terrain feature)

*2. Heading to target: _____ (magnetic)
(Specify from IP/BP/ABF or friendly location)

*3. Distance to target: _____ (meters)
(Specify from IP/BP/ABF or friendly location)

4. Target elevation: _____ (feet mean sea level)

*5. Target description: _____
_____

*6. Target location: _____
(Grid, known point or terrain feature)

7. Type of target mark: _____ Code: _____ (day/night)
(WP, laser, IR, beacon)   (Actual code)

Laser to Target Line: _____ degrees

*8. Location of friendlies: _____
(Omit if previously given--grid, known point, or terrain feature)

Position Marked By: _____

9. Egress direction: _____
(Cardinal direction not over threats)

Remarks (as appropriate): _____
_____
(Threats, restrictions, danger close, attack clearance, SEAD, abort codes, hazards)

Time on target (TOT): _____

or time to target (TTT): Standby _____ plus _____ hack.

Note: When identifying position coordinates for joint operations, include the map datum data. DESERT STORM operations have shown that simple conversion to latitude/longitude is not sufficient. The location may be referenced on several different databases; for example, land-based versus sea-based data.

Figure 9-2, Modified 9-Line Message/Format

ENGAGEMENT

9-79. During engagement, open communications and continuous coordination with friendly ground elements are required to ensure the desired effect. Coordination of the direct and indirect fires from all participants produces the most efficient results in the least amount of time with the least risk to all. This coordination includes CAS and any nonlethal methods that may be employed.

BATTLE DAMAGE ASSESSMENT/REATTACK

9-80. The AMC provides a BDA to the ground commander who determines if a reattack is required to achieve his desired end state. Support continues until the desired effect is achieved.

TARGET IDENTIFICATION AND MARKING

9-81. Positive target identification and location are essential in achieving the desired effect on the target and in reducing the risk of fratricide. Listed below are C2 techniques that can be effective during air-ground operations with Army aircraft:

- Bull's-eye technique—uses a known point or an easily recognizable terrain feature.
- Grid technique—uses grid coordinates to define the point.
- Sector/terrain technique—uses terrain and graphics available to both air and ground units.

9-82. There are various ways to mark a location or target. The effectiveness of vision systems on helicopters compares to those found on ground vehicles. During the day, the vision systems of the AH-64 and the OH-58D allow accurate identification of targets. During periods of reduced visibility, resolution is greatly degraded, requiring additional methods of verification. This situation requires extra efforts from both the ground unit and aviation element.

9-83. Some aviation weapons can kill targets beyond the ranges that thermal, optical, and radar acquisition devices can provide positive identification. Therefore, simple, positive identification procedures must be established between aviation and ground elements to ensure positive identification prior to engagement, thus reducing the risk of fratricide.

9-84. A method of target identification is direction and distance from friendly forces. Friendly forces can mark their own positions with IR strobes, IR tape, night-vision goggle (NVG) lights, smoke, signal panels, body position, meals ready to eat (MRE) heaters, chemical lights, and mirrors. Marking friendly positions is the least desirable method of target location information and should be used with extreme caution. Marking friendly positions can be a more time-consuming process than directly marking a target and can reveal friendly positions to the enemy.

9-85. Target marking aids aircrews in locating the target that the unit in contact desires them to attack. Ground commanders should provide the target mark whenever possible. To be effective, the mark must be timely, accurate, and easily identifiable. Target marks may be confused with other fires on the battlefield, suppression rounds, detonations, and marks on other targets. Although a mark is not mandatory, it assists in aircrew accuracy, enhances SU, and reduces the risk of fratricide.

MARKING BY DIRECT-FIRE

9-86. Direct-fire weapons can deliver a mark. Although this method may be more accurate and timely than an indirect-fire mark, its use may be limited by range and the visibility of

the weapon's burst effect. Ground units may mark targets with direct-fire using tracers or M203 smoke rounds.

9-87. In some situations, the best direct-fire marking technique is to use an aircraft to deliver a mark. The preferred method is for the aircraft to mark with phosphorous, high-explosive rockets, illumination, or lasers. A burst of cannon fire or a single rocket fired to the left or right of the target as a marking round may be an option. This method may alert the enemy but is a good way to verify the target with reduced risk of friendly casualties.

INFRARED MARKING

9-88. IR pointers and other IR devices can be used to mark targets at night for aircrews using NVGs; however, aircrews using other night-vision devices—such as forward looking infrared (FLIR) or thermal imaging sensor (TIS)—may not be able to see the mark. Unlike laser designators, these IR devices cannot be used to guide or improve the accuracy of aircraft ordnance. IR pointers may expose friendly units to an enemy with night-vision capability and should be used with caution. Ground units should initiate IR marks requested by the aircrew and continue until the aircrew transmits TERMINATE or the weapon hits the target.

MARKING BY INDIRECT FIRE

9-89. Artillery or mortar fires are effective means of assisting aircrews in visually acquiring targets. Before choosing to mark by artillery or mortars, observers should consider the danger of exposing these supporting arms to enemy indirect-fire acquisition systems and the additional coordination required. Marking rounds should be delivered as close to the target as possible with smoke being the last round. Marking rounds are most effective when delivered within 100 meters of the target, but those within 300 meters are generally effective enough to direct-armed aircraft. If the situation requires a precise mark, observers or spotters can adjust marking rounds early to ensure that an accurate mark is delivered. This action may, however, alert the enemy to an imminent attack.

BACKUP MARKS

9-90. Whenever a mark is provided, a plan for a backup mark should be considered. For example, direct-fire may be tasked to deliver the primary mark, while a mortar may be assigned responsibility for the backup mark.

SECTION IV – JOINT AIR ATTACK TEAM (JAAT)

9-91. The joint air attack team (JAAT) is a coordinated attack by rotary- and fixed-wing aircraft, normally supported by FA or NSFS. Ground or airborne electronic warfare (EW) systems may also support the JAAT. The JAAT may operate either with or independently from ground units. The JAAT is most effective against moving targets in open areas. It is least effective when attacking targets that are in camouflaged, dug-in positions.

PLANNING CONSIDERATIONS

9-92. The HBCT staff identifies the requirement for JAAT planning through their IPB. Through this analytical approach, appropriate targets and target areas for employment by a JAAT are nominated. The identification of key intelligence trigger events, which signal the buildup of a likely enemy target, is essential to effective JAAT employment. JAAT mission assignment considerations include the following:
- Massed enemy armored and/or mechanized vehicles.
- Whether the enemy is on the move.
- Availability of JAAT assets.

- Whether the enemy can be flanked.
- Whether local air superiority can be seized.
- Whether enemy helicopters can be suppressed.
- Likely offensive operations:
  - Enemy counterattacks.
  - Exploitations.
  - Pursuits.
- Likely defensive operations:
  - Reinforcement of committed ground maneuver units.
  - Destruction of enemy penetrations.
- Mobile strike operations to attack follow-on elements.

9-93. The HBCT should be the lowest level at which a joint air attack is planned. Coordination with the appropriate maneuver battalion is required if the JAAT is to be employed in the battalion sector; execution may be handed off to the battalion.

9-94. The mission commander is responsible for planning, coordinating, and employing the JAAT. The plan to employ the JAAT should allow for multidirectional attack. This enhances the survivability and success of the JAAT by denying the ability of the enemy air defense systems and maneuver forces to focus or orient in one direction.

9-95. The key staff members who plan and coordinate for the JAAT on the basis of the HBCT commander's guidance are discussed below. The coordination process takes place in the FEC under the supervision of the ECOORD, the ALO, and the brigade aviation officer (BAO). The BAO plans for and requests the use of CAS and attack helicopters to support the commander's concept of the operation.

9-96. The S2 provides information on the avenues of approach, target array, terrain, and weather as it applies to the time and location of the JAAT operation. The ECOORD in coordination with the information operations coordinator (IOCOORD) plans and coordinates the use of nonlethal attack assets to complement the JAAT.

9-97. The attack helicopter LNO provides status of Army aviation assets available. In coordination with the BAO he begins planning the air corridors and air battle positions to support the operation. He also coordinates for planned airspace coordination areas (ACAs) to be used during the operation.

9-98. The ECOORD determines the need, availability, and positioning of artillery, commensurate with the enemy update, to support the JAAT. He coordinates with the BAO to provide call signs and frequencies to the fires battalion. He assists the ALO and BAO in deconflicting aviation and CAS initial positions (IPs) from artillery positions and the development of ACAs to support the mission. The ECOORD is also responsible for coordinating the following requirements:

- Determines the requirement for SEAD.
- Coordinates for marking rounds in the target area with the JAAT commander and forward air controller.
- Considers the use of Firefinder critical friendly zones (CFZs) to protect attack helicopters in their battle positions.
- Considers use of precision/guided/smart munitions to minimize target obscuration that might adversely impact pilot view of the target.
- Determines when and how priorities of fires shift.
- Recommends and integrates FSCMs to enhance the success of the mission.
- Determines and disseminates pulse repetition frequency codes.

● Establishes a quick fire channel if necessary.

9-99. The ADO coordinates to ensure that the ADA assets know the location of air corridors, battle positions, IPs, and ACAs. He also ensures these assets are informed of friendly air operations and their integration into the battle.

9-100. The ALO is responsible for the following coordination:

● Develops contact points and/or initial points and ACAs in coordination with the ECOORD and the air defense officer (ADO).
● Disseminates contact points and/or IP and ACA information to the air support operations center (ASOC) for dissemination to the ground LNO and wing operations center for preflight briefing.
● Helps coordinate aircraft forward to the appropriate contact point or IP and then hand them off to the aviation commander conducting the JAAT operation.

PREPARATION

9-101. The preparation phase includes briefing the plan, ensuring dissemination of the plan to subordinate units that may have an impact on the mission, reconnaissance, and rehearsal.

9-102. Reconnaissance by the aviation commander is critical to the success of the JAAT. It allows him to see the terrain and determine if the battle positions need to be adjusted because of dust signature, survivability, or communications and/or to facilitate control of the JAAT. On completion of the reconnaissance, the aviation commander provides feedback to the ECOORD and the BAO. If refinements to the plan are needed, they are made and disseminated expeditiously.

9-103. Rehearsals are crucial to check communications channels, routes, and battle positions; time required to move assets forward, graphical control measures; and the fire plan. The JAAT rehearsal participants should be as follows:

● Aviation commander (JAAT commander).
● Attack helicopter unit leader.
● HBCT ECOORD (may require the maneuver battalion ECOORD).
● HBCT ALO.
● Aviation LNO to the HBCT.
● Fires battalion and/or battery FDC.
● Aerial observer (if available).

EXECUTION

9-104. During the execution phase, the aviation commander is the director and coordinator of the total team effort. The CAS flight leader and aviation platoon leaders manage their own individual elements. The aviation commander does not dictate their attack methods.

9-105. En route to the target or EA, the aviation commander contacts the ground commander for a tactical update. The aviation commander should talk directly to all fires and effects assets involved in the JAAT operation. However, the ground commander's staff monitors the appropriate nets to keep abreast of the JAAT operation and to help the aviation commander as needed.

9-106. Applying indirect effects, joint effects, and Army aviation against the same target set cannot be accomplished without a detailed Army airspace command and control (A2C2) plan. A2C2 requirements to execute a JAAT are complicated and must be fully developed, distributed, and rehearsed. Air corridors, ACAs, IPs, and battle positions must all be included in the A2C2 plan. Rehearsing this plan is essential to a successful JAAT operation.

This page intentionally left blank.

Chapter 10

Fires and Effects in Stability Operations and Support Operations

The heavy brigade combat team (HBCT) is to fight and win tactical engagements, however, the brigade is designed and organized with the versatility and flexibility to transition into stability and support missions when augmented with required capabilities. The HBCT can operate in environments that may not involve traditional high-intensity combat. When assigned a stability or support mission, the HBCT may operate as part of a UEx or operate independently, working directly for a joint task force (JTF) commander. In almost every stability operation and support operation, the HBCT works with multinational and joint forces.

SECTION I – GENERAL GUIDELINES

10-1. In stability operations and support operation, the rules of engagement (ROE) contain the general guidelines by which the HBCT must operate. ROE are defined as directives issued by competent military authority that delineate the circumstances and limitations under which the HBCT will initiate and/or continue combat operations with other forces encountered. Because of the nature of stability operations and support operations and the usually attendant political considerations, the ROE and any actual use of force often receive more intense, higher level overwatch than in combat operations. Fires and effects planners must thoroughly understand the ROE to adequately develop fires and effects plans that comply with the ROE while still achieving the HBCT commander's end state. The ROE, especially in an urban environment, may require special clearance of fire procedures and FSCMs that comply with ROE restrictions. Additionally, ROE must be fully understood and applied in an effort to provide the maximum force protection possible for HBCT Soldiers.

10-2. An additional fires and effects factor unique to stability operations and support operations involves targeting. A clearly defined enemy force may not be defined as in normal combat operations. The HBCT may face a multifaceted potential threat from any of the various groups and forces located in the area of operations (AO). Targeting may require the HBCT commander and staff to focus on the using nonlethal systems to influence, inform, or disrupt selected targets. Fires and effects planners rely heavily on intelligence, civil affairs, and information operations (IO) for information necessary to identify and classify targets. Lethal as well as nonlethal fires and effects may be employed by fires and effects planners to deal with these targets within the bounds of the ROE. The HBCT targeting process is the same as in a high-intensity environment but is required to focus on target sets that may require attack by more nonlethal means than lethal.

SECTION II – STABILITY OPERATIONS

10-3. Stability operations apply military power to influence the political environment, facilitate diplomacy, and disrupt specified illegal activities. They include both developmental and coercive actions. Developmental actions enhance a government's willingness and ability to care for its people. Coercive actions apply carefully prescribed limited force and the threat

of force to achieve objectives and to provide a secure and stable environment within which the legitimate civilian and government agencies can operate.

DESCRIPTION

10-4. Stability operations may be undertaken to complement and reinforce offensive, defensive, and support operations, or they may be the main effort. They may occur before, during, or after offensive, defensive, and support actions. The HBCT commander and staff must be prepared to transition from combat operations to stability operations and back to combat operations on a continuous basis. Stability operations typically fall into 10 broad categories:

- Peace operations.
- Combating terrorism.
- Counterdrug operations.
- Noncombatant evacuation.
- Arms control.
- Nation assistance.
- Support to insurgencies.
- Support to counterinsurgencies.
- Show of force.
- Civil disturbance.

10-5. Forces conduct stability operations to accomplish one or more of the following:

- Deter or thwart aggression.
- Reassure allies, friendly governments, and agencies.
- Encourage a weak or faltering government.
- Stabilize a restless area.
- Maintain or restore order.
- Enforce agreements and policies.

STABILITY IMPERATIVES

10-6. While each operation is unique, seven broad imperatives help forces develop concepts and schemes for executing stability operations:

- Stress force protection.
- Emphasize information operations.
- Maximize interagency, joint, and multinational cooperation.
- Display the capability to apply force in a nonthreatening manner. The intent is to demonstrate strength without provoking a potential adversary to act.
- Understand the potential for disproportionate consequence of individual and small unit actions.
- Apply force selectively and discriminately.
- Act decisively to prevent escalation.

FIRE SUPPORT CONSIDERATIONS

10-7. Within the HBCT the fires battalion and the fires and effects structure can contribute in nontraditional ways during stability operations. The equipment and organizations available to the HBCT can provide effective command and control (C2), observation posts (including Firefinder radars), convoy operations, local security, sustainment operations, and liaison to assist civil-military affairs.

10-8. The HBCT may use lethal and/or nonlethal fires in stability operations. The political nature of and need to maintain legitimacy for stability operations requires detailed mission analysis and the precise use of any effects.

10-9. When the HBCT plans to use lethal effects in stability operations, the effects coordinator (ECOORD) should:

- Use offensive lethal fires strictly in accordance with the ROE.
- Use defensive fires to protect the force and plan fires for forward operating base defense.
- Ensure that the fires battalion has adequate lethal fires available 24/7 to respond to any contingency throughout the entire range of the AO.
- Distribute the fire support (FS) plan down to task force, company, platoon, checkpoint, patrol, and logistics convoy levels.
- Participate in the development of an HBCT observation plan and consider using fire support teams (FISTs), combat observation lasing teams (COLTs), tactical unmanned aerial vehicles (TUAVs), OH-58Ds, and AH-64s as the first choice to identify targets.
- Establish FSCMs to minimize collateral damage, plan for no-fire areas (NFAs) or restrictive fire areas (RFAs) since the restricted target list will be extensive, and synchronize other, both restrictive and permissive, FSCMs with the ROE.
- Plan and rehearse a clearance of fires drill since clearance of fires may include coordination with designated civilian organizations.
- Establish liaison with allied field artillery (FA) organizations to facilitate calls for fire and clearance of fires (liaison teams may have to train allies in these procedures).
- Plan for the use of Firefinder radars for counterstrike operations and as intelligence gathers to assist in developing the overall enemy situation.
- Coordinate and synchronize pattern analysis and predictive analysis operations within the HBCT as part of the counterstrike program. (Crater analysis is a key element of this program.)
- Consider presence missions as a show or demonstration of force.
- Consider nonstandard tactical missions.

10-10. Nonlethal effects may be the primary means of attack in stability operations. The ECOORD coordinates with the IOCOORD for nonlethal effects to limit, disrupt, delay, influence, persuade, or divert the opposition.

OTHER CONSIDERATIONS

10-11. Because of the political nature of stability operations, ROE may restrict the use of certain or all lethal fires. Planning and delivery of fires must preclude fires on protected targets, unwanted collateral damage, political ramifications, or perceived excessive force. Precision fires may be critical. Fire support assets may provide fires to demonstrate deterrent capability, support friendly fire base security, or support patrolling maneuver forces. The HBCT may rely heavily on joint fires and effects and precision munitions, using systems such as fixed- and rotary-winged aircraft when increased power is required to respond to a significant change in the situation. The US Air Force AC-130 is an example of a fixed-wing asset that may be capable of providing the necessary precision strike capability (best used at night in low antiair threat situations).

10-12. The use of IO can help achieve both the political and military objectives. Psychological operations (PSYOP), civil affairs, and public affairs are the primary means of communicating the intent of actions to local, foreign, and international audiences. PSYOP

and civil affairs are well suited for both long- and short-term stability operations. The HBCT ECOORD is responsible for planning, coordinating, synchronizing and monitoring information operations within the HBCT. The IOCOORD works for the ECOORD to provide advice and expertise in each of the areas of nonlethal effects.

SECTION III – SUPPORT OPERATIONS

10-13. Support operations provide essential supplies and services to assist designated groups. They are conducted mainly to relieve suffering and assist civil authorities to respond to crises. Support operations are normally characterized by lack of an active opponent. In most cases, forces achieve success by overcoming conditions created by manmade or natural disasters. The ultimate goal of support operations is to meet the immediate needs of designated groups and transfer responsibility quickly and efficiently to appropriate civilian authorities. The HBCT must also be prepared to execute support operations as part of normal combat operations. Support operations accomplish one or more of the following:

- Save lives.
- Reduce suffering.
- Recover essential infrastructure.
- Improve quality of life.
- Restore situations to normal.

DESCRIPTION

10-14. Support operations generally fall into two broad categories:

- Humanitarian assistance in dealing with starvation, epidemics, and similar emergencies.
- Environmental assistance in responding to floods, earthquakes, and other natural or manmade disasters or to disasters created by military operations.

10-15. Generally, support operations follow the following sequence:

- Movement into the AO.
- Establishment of a base of operations.
- Maintain support.
- Termination of operations.

10-16. Domestic support operations are always conducted in support of local, state, and federal civil authorities. Overseas support operations are normally conducted in support of and in concert with other agencies.

SUPPORT IMPERATIVES

10-17. Although each support operation is unique, it is generally guided by seven broad imperatives:

- Secure the force.
- Provide essential support to the largest number of people.
- Coordinate actions with other agencies.
- Hand over assistance operations to civilian agencies as soon as feasible.
- Establish measures of success.
- Conduct robust information operations.
- Ensure operations conform to legal requirements.

FIRE SUPPORT CONSIDERATIONS

10-18. As in stability operations, the fires battalion and the HBCT fires and effects structure can contribute in nontraditional ways during support operations. The equipment and organizations available to the HBCT can provide effective C2, observation posts, convoy operations, local security, sustainment operations, and liaison to assist civil-military affairs.

10-19. The fires and effects team organization, density of radios, and FIST/COLT vehicles make fire support personnel ideal as liaison teams. Fire support personnel can serve in C2 nodes, augment or work closely with civil affairs teams, and support civilian liaison and information centers. FIST personnel can deploy throughout an area to identify locations of significant damage; trapped, stranded, or injured survivors; blocked roads; downed power lines or broken gas mains; looting; or riots. The FIST's ability to operate a radio and report accurate locations and their observation and reporting skills make them an effective asset for these types of functions. Their efforts can facilitate rapid response by medical, police, utility, engineer, and other support teams.

10-20. The fires battalion can provide C2, security, medical, food service, transportation, ministry, maintenance, and general manpower support in accordance with the missions given by the HBCT commander. The fires battalion may be given an AO to work, or it may directly support civilian authorities or agencies or support other military units involved in the operation.

10-21. While support operations focus on alleviating human suffering, force protection, and the prevention from looting, protection of supplies may also be necessary. Fires battalion personnel may assist the HBCT commander in obtaining and/or developing specific ROE based on higher headquarters guidance and mission, enemy, terrain and weather, troops and support available, time available, and civil considerations (METT-TC) and in disseminating ROE to all elements under the brigade's control.

This page intentionally left blank.

Appendix A

Field Processing Detainees

PURPOSE

A-1. This appendix provides guidance on field processing detainees.

GENERAL

A-2. There will be times when US forces capture and detain detainees or other individuals who may pose a threat to US personnel or security.

A-3. Detainee is a term used to refer to any person captured or otherwise detained by an armed force (JP 1-02AR 190-8, FM 3-19.40, and international law (including the Law of War and the Geneva Conventions) address legal requirements, policy, procedures, planning factors, and responsibilities for handling detainees. The Geneva Conventions Relative to the Treatment of Prisoners of War and Relative to the Protection of Civilian Persons in Time of War are the Geneva Conventions most applicable in detainee operations.

A-4. Detaining personnel carries with it the responsibility to guard, protect, and account for them. All persons captured, detained, or otherwise held in US armed forces custody must receive humane care and treatment. Further, to the extent permitted by the military situation, all detainees must be afforded protection from the effects of the conflict. US forces are obligated to protect detainees against all acts of violence to include murder, rape, forced prostitution, assault, theft, insults, public curiosity, photographing, filming/videotaping for other than administrative purposes, bodily injury, and reprisals of any kind. The inhumane treatment of detainees is prohibited and is not justified by the stress of combat or by deep provocation.

A-5. Any act or allegations of inhumane treatment by US or Coalition/Allied personnel or by other persons must be promptly reported through the chain of command to HQDA as a serious incident report, thoroughly investigated, and where appropriate, remedied by corrective action. Inhumane treatment is punishable under the Uniform Code of Military Justice. Abuse detracts from mission accomplishment and intelligence collection efforts.

PLANNING FOR DETAINEE OPERATIONS

A-6. Detainee operations are resource intensive and highly sensitive. Holding detainees longer than a few hours requires detailed planning to address the extensive requirements of the Geneva Conventions for proper administration, treatment, protection, security, and transfer of custody of detainees. CJTF/Division level commanders may authorize holding detainees at the point of capture for extended periods that exceed evacuation standards outlined in JP 3-63 and FM 3-19.40. In cases where detainees are held at the point of capture, for reasons other than exigent circumstances, the custodial unit will provide the same standards of protection and care as a designated internment facility per AR 190-8. Commanders responsible for handling detainees should—

- Include military police in their task organization (DoD 2310.1 states that detainees shall be turned over to military police as soon as possible).
- Ensure clear delineation of the interdependent and independent roles of those Soldiers responsible for custody of the detainees and those responsible for any interrogation mission.

- Ensure resources necessary to provide the support required by regulation and law.
- Routinely consult their supporting Brigade Operational Law Team (BOLT) during the planning and execution of detainee operations.
- Additional planning considerations may include: site selection of collection point/holding area, construction materials (engineer support), sanitation requirements, medical support, transportation considerations, public affairs, and legal support.

FIELD PROCESSING DETAINEES

A-7. Provided necessary resources are available, MP will normally operate a Detainee Initial Collection Point (DICP) or a Detainee Holding Area (DHA) from which hold to detainees. Detainees are held at the DICP for no more than 24 hours and held at the DHA for no more than 72 hours. Subsequently, detainees are transported to a Strategic Internment Facility (SIF) where they are given an internment serial number (ISN).

A-8. Processing begins when US forces take custody of an individual whose liberty has been deprived for any reason (capture, internment, temporary restriction). The term, point of capture, refers to the location where US forces first take custody of an individual. Field processing is accomplished at the point of capture and aids in security, control, initial information collection, and in providing for the welfare of detainees.

A-9. Capturing units field process detainees using the method outlined in Table A-1.

Table A-1, 5 Ss and T Method of Detainee Field Processing

Action	*Description*
Search	Search each captive for weapons, items of intelligence value, and items that would make escape easier or compromise US security interests. Confiscate these items. Prepare a receipt when taking property. **Note**: When possible, conduct same gender searches. When not possible, perform mixed gender searches in a respectful manner. Leaders must carefully supervise Soldiers to prevent allegations of sexual misconduct. Captives may keep the following items found in a search: • Protective clothing and equipment that cannot be used as a weapon (such as helmets, protective masks and clothing) for use during evacuation from the combat zone. • Retained property, such as ID cards or tags, personal property having no intelligence value and no potential value to others (such as photos, mementos, etc.), clothing, mess equipment (except knives and forks), badges of rank and nationality, decorations, religious literature, and jewelry. (Personal items, such as diaries, letters, and family pictures may be taken by MI teams for review, but are later returned to the proper owner). • Private rations of the detainee. Confiscate currency only on the order of a commissioned officer (AR 190-8) and provide a receipt and establish a chain of custody using DA Form 4137 (*Evidence/Property Custody Document*) or any other field expedient substitute.
Silence	Silence the detainees by directing them not to talk. Gags may be employed if necessary (ensure detainee can breath after application).
Segregate	Segregate detainees based on perceived status and positions of authority. Segregate leaders from the remainder of the population. Segregate hostile elements such as religious, political, or ethnic groups hostile to one another. For their protection, normally segregate minor and female detainees from adult male detainees.
Safeguard	Safeguard the detainees. Ensure detainees are provided adequate food, potable water, clothing, shelter, and medical attention. Ensure detainees are not exposed to unnecessary danger and are protected (afforded the same protective measures as the capturing force) while awaiting evacuation. Do not use coercion to obtain information from the captives.

	Provide medical care to wounded and/or sick detainees equal in quality to that provided to US forces. Report acts or allegations of abuse through command channels, to the supporting judge advocate, and to the US Army Criminal Investigation Command.
Speed to a Safe Area/Rear	Evacuate detainees from the battlefield as quickly as possible, ideally to a collection point where military police take custody of the detainees. Transfer custody of all captured documents and other property to the US forces assuming responsibility for the detainees.
Tag	Use DD Form 2745 (*Enemy Prisoner of War (EPW) Capture Tag*) or a field expedient alternative and include the following information: • Date and time of the capture. • Location of the capture (grid coordinates). • Capturing unit. • Circumstances of capture. Indicate specifically why the person has been detained. Use additional documentation when necessary and feasible to elaborate on the details of capture: • Documentation should answer the five Ws –who, what, where, why, and witnesses. • Use a form, such as a DA Form 2823 (*Sworn Statement*) or an appropriate field expedient, to document this information. • List all documents and items of significance found on the detainee. Attach Part A, DD Form 2745, or an appropriate field expedient capture card to the detainee's clothing with wire, string, or another type of durable material. Instruct the captive not to remove or alter the tag. Maintain a written record of the date, time, location, and personal data related to the detention. Attach a separate identification tag to confiscated property that clearly links the property with the detainee from whom it was seized.

RESOURCES FOR FIELD PROCESSING OF DETAINEES

A-10. Documenting details surrounding the detention and preserving evidence aid in determining if further detention is warranted, in classifying the detainee, in developing intelligence, and in prosecuting detainees suspected of committing criminal acts. Record these details on the DD Form 2745 (Figure A-3), DA Form 2823, DA Form 4137 (Figure A-1) locally developed forms, or other appropriate field expedient substitutes. When the detaining units suspects a detainee may be responsible for a war crime or some other inhumane act, document the following information—

- Full name, rank, and unit of the Soldier who captured the detainee.
- Circumstances surrounding the detention.
- Indicate and describe any apparent injuries (photograph if feasible). Explain how injuries occurred.
- Thorough description of victims and witnesses. Take statements from these individuals to document their observations and knowledge of the incident.
- Descriptive information for all vehicles or other equipment related to the detention.
- Thorough description of any contraband. Ensure all seized items are recorded on a DA Form 4137 or appropriate field expedient substitute and that a chain of custody is maintained as property is transferred. Photograph contraband if it cannot accompany the detainee, e.g. an improvised explosive device destroyed on site.
- Full name, rank, unit or organization, phone number, and other contact information for any interpreter or other person present during the detention.
- Any information the detainee volunteers.

PERSONNEL

A-11. MP Soldiers shall be in the task organization for a mission likely to result in detaining personnel.

A-12. Consider including interpreters or linguists to support the operation. These assets can assist greatly in tactical questioning and screening of detainees.

A-13. Ensure Soldiers know to consult with their supporting Brigade Operational Law Team (BOLT) for advice on compliance with legal requirements. Detainees at all times shall be treated in a humane manner, regardless of the circumstances or environment.

SUPPLIES AND EQUIPMENT

A-14. The following items may be helpful in searching and securing detainees, safeguarding their property, and ensuring the safety of Soldiers:

- Plastic bags may be used to segregate, store, and protect a detainee's property.
- Permanent markers may be used to annotate identifying information on containers of detainee property.
- Flexi-cuffs (national stock number 8465-0007-2673) may be used to restrain detainees. Employ restraints in a humane manner.
- Flexi-cuff cutters should be used to cut flexi-cuffs. Do not use knives or other cutting devices. Flexi-cuff cutters are designed to prevent injury.
- Latex or rubber gloves should be provided to Soldiers for their protection.
- Goggles with lenses blackened or cloth may be used to blindfold detainees for security reasons and not for punishment.
- Still and video cameras may be used to document the scenes where individuals were detained, detainee injuries, and evidence.

REFERENCES AND FORMS

A-15. A few references and forms will aid in maintaining required information about the detainees, accountability of property, and proper treatment of detainees. The most important of these items are DD Form 2745 (Figure A-3 and A-4), DA Form 2823, DA Form 4137 (Figures A-1 and A-2), and AR 190-8. Chapter 7, Internment and Resettlement, of FM 3-19.40 also provides information useful to any Soldiers capturing or handling detainees. Army forms can be accessed at the Army Publishing Directorate website (http://www.apd.army.mil/). Because access to such forms may not be feasible at the point of capture in an operational environment, leaders must ensure they are familiar with the essential information that must be documented and be prepared to use appropriate field expedient substitutes to record such information.

Figure A-1, DA Form 4137, Evidence/property Custody Document (Front)

Figure A-2, DA Form 4137, Evidence/property Custody Document (Back)

Figure A-3, DD Form 2745, Enemy Prisoner of War (EPW) Capture Tag (Front)

**ENEMY PRISONER OF WAR (EPW)
CAPTURE TAG (PART A)**

For use of this form, see AR 190-8.
The proponent agency is DCSOPS.

Attach this part of tag to EPW. *(Do not remove
from EPW.)*
1. **Search** - For weapons, military documents, or
    special equipment.
2. **Silence** - Prohibit talking among EPWs for ease
    of control.
3. **Segregate** - By rank, sex, and nationality.
4. **Safeguard** - To prevent harm or escape.
5. **Speed** - Evacuate from the combat zone.
6. **Tag** - Prisoners and documents or special
    equipment.

DD FORM 2745 (BACK), MAY 96

UNIT RECORD CARD (PART B)

Forward to Unit.
(Capturing unit retains for records.)

**Use string, wire, or other durable material
to attach the appropriate section of this
form to the EPW's equipment or property.**

Sample

DD FORM 2745 (BACK), MAY 96

**DOCUMENT/SPECIAL EQUIPMENT
WEAPONS CARD (PART C)**

Attach this part of tag to property taken. *(Do not
remove from property.)*

**As a minimum, the tag must include the following
information:**

Item 1. Date and time of capture *(YYYYMMDD).*
Item 8. Capturing unit.
Item 9. Place of capture *(grid coordinates).*
Item 10. Circumstances of capture *(how the EPW
was captured).*

DD FORM 2745 (BACK), MAY 96

Figure A-4, DD Form 2745, Enemy Prisoner of War (EPW) Capture Tag (Back)

Appendix B

Media on the Battlefield

PRACTICAL CONSIDERATIONS

B-1. Commanders must plan on the media being present throughout their operational area and embedded in unit operations. Modern news reporting provides instant coverage of military operations and can turn minor tactical events into international events with strategic implications. National and international media coverage will result in defense policy decisions at the highest level, profoundly influence external public support, and impact the behavior of all audiences – military and civilian—within the operation's area of interest. Effectively planned, resourced and executed, media activities can be a force multiplier, leveraging global influence, and enhancing command credibility. Media operations also can be a disaster if they are not planned, resourced or executed properly. Engaging the media serves the best interests of the Army, your soldiers and their families as you share the story of the mission you are executing. Media operations is a related activity to information operations (IO) and therefore media coverage and IO plans must be mutually coordinated and synchronized to ensure that they are complementary and do not result in IO Fratricide—where one message kills another message.

FUNDAMENTALS OF DEALING WITH THE MEDIA

B-2. Supporting media operations fulfills the Army's obligation to keep the American people and the Army family informed. It helps establish confidence in America's Army and its readiness to conduct operations in peacetime and war. Newspapers, magazines, radio, television and electronic media are independent conduits of information to the world. They provide news, analysis, interpretation and commentary and serve as a forum for ideas, opinions and public debate. What appears in the media shapes perceptions, attitudes and opinions, and can have a direct impact on mission success.

B-3. The vast majority of both civilian and military media representatives are committed to providing responsible, accurate, balanced coverage. Although there are exceptions, most media representatives are focused on achieving a credible information presentation. To accomplish this, media representatives investigate issues, ask tough, challenging questions, and pursue verifiable answers. They seek information, interpretation and perspective on operations. The level of knowledge of military operations will vary among the media and it will take patience and maturity to share the confidence of your unit operations while ensuring OPSEC and translating operational details into a form that is understandable by the media and their audience. Army leaders at all levels need to educate media representatives and support their efforts to provide an accurate, balanced and credible presentation of timely information.

B-4. The challenge for commanders, and personnel supporting media at unit level, is to plan and execute tactical operations, safeguard friendly forces while ensuring that the media have the opportunity to get their message out. The need to plan for media coverage in tactical operations derives from the fact that in most situations media representatives will be present in an area of operations before the arrival of Army forces and will not leave until the mission is complete. The media will know the area of operations, key personalities and opinion leaders and because they are covering the story as it evolves, will have an understanding of, and opinion about, the military, political, and social situation. You can work with the media

or have them work against the command message and suffer the consequences. Not engaging the media means that they will tell their story without your input.

B-5. Media representatives will cover the deployment of Army forces, their arrival in the area and their initial conduct, and remain as long as the story is of interest. Some home station media will be interested in deploying with local units and being embedded with them. Commanders should refer all media requests to the BCT and UEx Public Affairs sections with the full understanding that accredited media will probably be escorted down to Battalion level to get the Soldier's story. The UEx commander will only allow embedded media in units that he has confidence will take care of the media and stay on the command message (Public Affairs Guidance (PAG)). Media may build long term relationships with units and their leaders that endure past current circumstances. Joe Galloway's (United Press International) close ties to 1st Squadron 7th Cavalry from their action in the Ia Drang Valley in Vietnam continues forty years after the battle.

B-6. There are three types of media that a Battalion commander may engage in the operational area.

- **Embedded**. They reside with a unit for an extended period (defined in Operation Iraqi Freedom as 72 hours or more). Embedded media are governed by ground rules that define working relationships.
- **Accredited/registered.** They have been vetted by the PA staff at brigade level or above, and are normally issued written credentials reflecting coordination to cover units within the command.
- **Unilateral.** They are media that do not seek military public affairs credentials or registration. Absent credentials, unilaterals are only accorded the access granted to local nationals.

PUBLIC AFFAIRS ELEMENTS

B-7. The austerely staffed PA sections organic to BCT and UEx headquarters will nearly always be overwhelmed trying to meet media requirements. More than 65 percent of the total public affairs force and 85 percent of the deployable PA TOE unit structure is positioned in the U.S. Army Reserve and Army National Guard. These reservists must be seamlessly integrated with the active component and focused on supporting the overall Army goals and objectives. Media operations, therefore, rely on augmentation from units in the field to accomplish the Army battlefield PA mission.

B-8. In headquarters without organic PA sections (Battalions and some Brigades), the commander is responsible for PA and must plan as well as execute PA operations. The appointment of the right officer or senior NCO to plan for and supervise the execution of the battalion public affairs program is critical to the success of the Information Operations Plan. The DoD Media Guidelines below lay out in general terms the command responsibilities for media operations in the unit area. Regardless of the echelon, the PA section's primary responsibility is to assist the commander in accomplishing his mission.

PUBLIC AFFAIRS GUIDANCE (PAG)

B-9. PAG is the operational tool that guides unit commanders regarding IO plans and policy as well as the command message during major military operations, exercises, and contingencies. Upon receipt of the warning order, the commander should request PAG from higher headquarters. PAG may be included in alert notification or operational orders. Commanders must insure that they understand PAG and adhere to the UExs Information Plan.

B-10. The essential elements of PAG for operational commanders are:

- **References.** List the essential documents, messages, or policies on which the PAG is based.
- **Information.** This paragraph should describe significant or anticipated problems associated with the operation. The information in this paragraph is not for release and will remain classified.
- **Public Affairs Approach.** The PAG will recommend the PA approach–either passive or active–the UEx commander will usually make the final decision on the command PA approach.
  - Active Approach. This involves efforts made to stimulate public or press interest, such as distributing press releases and advisories. This paragraph also states who will make the initial announcement of the operation, the preferred method, and the preferred time and date. The active approach is recommended whenever media coverage of units is desired (e.g., major training exercises).
  - Passive Approach. No action is taken to generate media and/or public interest in an issue or activity, except in response to specific inquiries. If a passive approach is desired, the PAG will specify that the guidance is for response to query (RTQ) only. The PAG also specifies who is authorized to respond for the command. For example, only a commanding general may RTQ. To de-emphasize an event, it is best to authorize release or RTQ at the lowest possible level.
- **Questions and Answers.** This paragraph contains a list of probable Q&As that enable the user to respond to the majority of anticipated questions. They should not be given to media as handouts in their entirety and should be tailored to the situation and unit activities (if they apply).
- **Contingency Statement.** This paragraph contains a statement to be used before the release of the final PAG. For example, As a matter of policy, we do not discuss troop movements or operations until they have been formally announced.

DOD MEDIA GUIDELINES

B-11. The DoD Media Guidelines, issued as Change 3 to DoD Directive 5122.5, provide the following guidelines for coverage of DoD combat operations:

- Open and independent reporting will be the principal means of coverage of U.S. military operations.
- Pools are not to serve as the standard means of covering U.S. military operations. But pools may sometimes provide the only feasible means of early access to a military operation (based on the ability to move and safeguard the media). Pools should be as large as possible and disbanded at the earliest opportunity—within 24 to 36 hours when possible. The arrival of early access pools will not cancel the principle of independent coverage for journalists already in the area.
- Even under conditions of open coverage, pools may be appropriate for specific events, such as those at extremely remote locations or where space is limited.
- Journalists in a combat zone will be credentialed by the U.S. military and will be required to abide by a clear set of military security ground rules that protect U.S. forces and their operations. Violation of the ground rules can result in suspension of credentials and expulsion from the combat zone of the journalists involved. News organizations will make their best efforts to assign experienced journalists to combat operations and then make them familiar with U.S. military operations.
- Journalists will be provided access to all major military units. Special operations restriction may limit access in some cases.
- Military public affairs officers should act as liaisons but should not interfere with the reporting process.

- Under conditions of open coverage, field commanders will permit journalists to ride on military vehicles and aircraft whenever feasible. The military will be responsible for the transportation of pools.
- Consistent with its capabilities, the military will supply PAOs with facilities to enable timely, secure compatible transmission of pool material and will make these facilities available whenever possible for filing independent coverage. In cases when government facilities are unavailable, journalists will, as always, file by any other means available. The military will not ban communications systems operated by news media organizations, but electromagnetic operational security in battlefield situations may require limited restrictions on the use of such systems.

OPERATIONAL GUIDELINES

B-12. Before accepting media into the operational area, the commander must insure that:

- Media are not exposed to classified information. If media will accompany units on combat operations there must be agreement on the restriction on the release of operational information. Commanders must consider the FFIR as a baseline of what is not releasable.
- Know the definitions:
  - On the record–reporter uses everything you say and attributes it to you by name and title.
  - Off the record–reporter should not use any thing you say. Go off the record only if the information is vital to the reporters understanding of the situation. However, some media consider nothing to be off the record.
  - Background—the reporter will use the information but will not attribute it to you. The term An Army spokesman may be used based upon agreement between you and the reporter.
- Media must agree not to release casualty information and comply with the directives and timelines associated with the release of casualty information (24 hours following the confirmed notification of Next of Kin).
- Media are safeguarded and not allowed to constitute an operational risk to friendly forces.
- Media understand that violation of the operational guidelines may result in the loss of accreditation and military support (only General Court-Martial Authority can withdraw accreditation).
- Media are de-briefed with the reminder of the operational sensitivity of the information that they have been exposed to based on their association with the unit.
- Media Do's—
  - Take every opportunity to tell your units story.
  - Set the ground rules for the interview and terminate the interview if you feel that the ground rules have been violated.
  - Be ready to answer the questions (who; what; when; where; and why).
  - Discuss only matters of which you have personal knowledge. You may talk about individual responsibility, expertise, and personal experiences. You may also discuss unclassified information about general missions, training, weapons and equipment and transportation. You may use your name and hometown in interviews, but you also have the option to use only your first or last name or refuse to be identified at all.
  - Approximate numbers of vehicles, aircraft, equipment, and personnel involved in operations. Specific numbers are not authorized for release at unit level.

- If you can not answer a question explain why, (I don't know….I won't speculate …. I can't answer that because of security concerns).
- Remember that everything you say is on the record. Once the words leave your mouth there is no way to get them back in your control.
- Verify the media' identity and credentials before talking to them.
- Be cautious about what you say to ensure that your words can not be twisted into a sound bite or taken out of context.
- Be ready to report to your higher headquarters the questions asked and the answers provided.
- Immediately report to higher headquarters any unregistered media you encounter.
- Stay in your lane. Which really means only discuss what you have direct personal knowledge of, don't speculate, and make sure that you stay on message as stated in the PAG.

- Media Don'ts—
  - Do not lie or attempt to use the media as part of a deception plan.
  - Do not discuss political or foreign policy matters.
  - Do not discuss the rules of engagement (ROE) or rules on use of deadly force.
  - Do not discuss operational capabilities; exact numbers; troop strength; size; location and unit disposition; or future operations.
  - Do not speculate, repeat rumors, or answer hypothetical questions.
  - Do not confiscate camera or sound equipment, film or recording medium, notebook or videotapes from the media. If you believe that media has captured a sensitive event, immediately report that belief to your commander.
  - Do not allow the media to be armed. It is a violation of The Hague and Geneva Conventions and media lose their status as non-combatants if armed. Protective body armor is encouraged so that they gain appreciation for what Soldiers are equipped with.
  - Do not allow the media to photograph or interview detainees or prisoners.
  - Do not allow the media to photograph special operations or intelligence personnel or equipment due to OPSEC.
  - Do not allow media to report on ongoing rescue or recovery operations for missing personnel.
  - Do not allow the media to violate operational noise or light discipline (including smoking).

EMBEDDED MEDIA

B-13. Embedding media at battalion level is now routine, so coverage of your operations can be a force multiplier as you gain positive coverage for your community, strengthen local media relations and improve morale for your soldiers and their families. Before accepting embedded media, commanders need to know the rules to stay out of trouble.

EMBEDDING RULES

B-14. **Transportation**. Congress gave DOD very stringent guidance on using government aircraft to fly media anywhere. Here are some of the important points from AR 360-1, *Army Public Affairs Program*. Take a moment to review them before making any commitments to local media:

- Military transportation will not compete with commercial carriers when the public affairs objectives of the proposed travel can be accomplished through the use of commercial carriers.
- Travel or transportation may be authorized in connection with an assignment to cover an Army program or operation when travel is an integral part of the story and is provided on a space-available basis.
- Non-local travel by all news media representatives must be approved by OASD-PA.
- All local travel or transportation requests for national media must be brought to the attention of HQDA OCPA.
- Travel or transportation for public affairs purposes must be primarily in the interest of DA or the DoD.
- No commitment of military transportation for public affairs purposes will be made until the request has been coordinated and approved.
- Invitational Travel Orders covering transportation will be issued by the command with primary interest.

B-15. If you prepare each news media travel request, (local or non-local) in accordance with AR 360-1, it will stand up to both congressional and public scrutiny.

B-16. **Support.** Keep these points in mind as you develop your planning and coordination checklist:

- The deploying unit must agree to sponsor the media when they deploy and while they are in country.
- The deploying unit must agree to provide aircraft seats on the unit's flight to the area of operations in coordination with the supporting USAF command.
- The deploying unit agrees to provide media escorts (to go with them and stay with them). Accredited media will be accorded all courtesies and privileges as equivalent grade of O-4 for messing and billeting. However media will carry their own bags and provide all of their professional materials and supplies.
- The UEx and UEy headquarters must agree to support the media and coordinate approval from the joint task force public affairs.
- Before any warning or execute orders are ever issued, survey your media and find out who may be interested in going with your unit should they be deployed. Let them know in advance what will be required.
  - Up-to-date visa and passport.
  - Immunizations and statement of medial health.
  - Basic military training (first aid and actions under direct/indirect fire).
  - Personal and professional equipment.
  - Approximate costs, to include a return commercial flight if military flights are not available.
  - Signing Hold Harmless and Not to Sue Agreements as well as agreement to reimburse for any lost or damaged government issued equipment (helmet, body armor, protective mask, etc).
  - Signing release from responsibility agreement with each service that provides transportation (Army helicopters, Air Force, Marine Corps and Navy transports).
- Once theater requirements have been confirmed, the UEx should prepare Invitational Travel Orders (ITO) for media who will likely be embedded.
- Have a plan that will ensure coverage of your unit from your embedded media and work with your higher headquarters to market products coming out of theater insuring that the media messages support the UEx information plan.

● All unit members must be familiar with PAG, embedding ground rules, the role of embedded media, and what actions to take if classified or sensitive information is disclosed.

B-17. The sample request below for embedded media lays out much of the coordination and support agreements required to gain approval from Department of the Army.

SAMPLE REQUEST

FROM CDR THIRD INF DIV FT STEWART GA//PAO//

HQ DA WASHINGTON DC//SAPA-POPD//

INFO JCS/SECDEF WASHINGTON DC//OASD/PA/DPL//

USCINCCENT MACDILL AFB FL//PAO//

COMUSARCENT-CDRUSATHIRD FT MCPHERSON GA//PA//

USCINCTRANSCOM SCOTT AFB IL//TCPA//

USACOM NORFOLK VA//JO1PA//

UNCLAS

SUBJ: REQUEST FOR APPROVAL OF NON-LOCAL MEDIA TRAVEL TO SWA AND TRAVEL CLEARANCES RMKS/1. THIS HQ PROPOSES TO EMBED MEDIA WITH A DEPLOYMENT OF THE 3D ID SCHEDULED TO DEPLOY TO THE SWA THEATER OF OPERATIONS ON APPROXIMATELY XX MAR ON AN AIR FORCE CRAFT. REQUEST APPROVAL AND THEATER AND COUNTRY CLEARANCES FOR THE NON LOCAL TRAVEL OF THE FOLLOWING NEWS MEDIA FROM FORT STEWART TO SWA AND POTENTIAL RETURN. REQUEST THEATER CLEARANCE FOR NEWS MEDIA REPRESENTATIVES (NMRs) AND MEDIA TRAVEL IN AND OUT OF THE OPERATION SOUTHERN WATCH AREA OF OPERATION.

PERTINENT INFORMATION IS IN NAME/ORGAN/SSN/PASSPORT NUMBER FORMAT.

Jim Doe COLUMBUS (GA) LEDGER-ENQUIRER/SSN 000-00-000 US PASSPORT 111-11-98

Susan Doe/SAVANNAH (GA) SAVANNAH TIMES/SSN OO1-01-001

US PASSPORT 111-12-98

Steve Smith/CPT/HQ, 2^D BDE, 3 ID/ESCORT OFFICER

SSN 234-23-2345

2. MEDIA HAVE AGREED TO REMAIN WITH THE UNIT FOR APPROXIMATELY TEN DAYS AND WILL PROVIDE CRITICALLY NEEDED HOMETOWN, FORT STEWART AND ARMYWIDE COVERAGE OF 3D ID TO FAMILIES, THE FORT STEWART CIVILIAN WORK FORCE AND THE AMERICAN PUBLIC. REPORTERS HAVE AGREED TO COVER PORTIONS OF AIR FORCE SUPPORT TO 3D ID UNITS WHILE IN TRANSIT. REPORTERS WILL TRAVEL ON A USAF C5 FROM HUNTER ARMY AIRFIELD

TO SWA. REPORTERS WILL STAY WITH THE 3D ID IN BASE CAMP. 3D ID PAO HAS AGREED TO SUPPORT MEDIA TRANSPORT IN AND OUT OF THE BASE CAMP TO COVER FIELD TRAINING AND UNIT OPERATIONS IN THEATER.

3. UNIT COMMANDER AND THE ASSIGNED ESCORT OFFICER HAS ENSURED REPORTERS WILL COMPLETE THEATER SPECIFIC IRT PRIOR TO DEPARTURE. REPORTERS HAVE PASSPORTS, VISAS, ACCREDITATION, IMMUNIZATIONS AND APPROPRIATE CLOTHING AND EQUIPMENT. FORT STEWART PAO WILL PREPARE INVITATIONAL TRAVEL ORDERS UPON RECEIPT OF TRAVEL APPROVAL. MAJ XXXX, 3D ID PAO, WILL ESCORT MEDIA IN TRANSIT. REPORTERS WILL ACCOMPANY AN MP COMPANY IN TRANSIT.

4. REPORTERS HAVE BEEN BRIEFED THAT DEPLOYMENT DATE MAY FLUCTUATE AND RETURN FLIGHTS ON MILITARY AIRCRAFT MAY NOT BE FEASIBLE. REPORTERS HAVE AGREED TO PAY IN FULL FOR TRANSPORTATION BACK TO THE UNITED STATES.

5. WHEN MEDIA FLIGHT IS APPROVED AND TRAVEL CLEARANCES GRANTED, REQUEST THAT AMC PA GRANT MMO/MEGP STATUS, INCLUDING AUTHORIZATION FOR REPORTERS TO GATHER MATERIAL, FILM, VIDEO AND/OR STILL PHOTO COVERAGE ON AMC MISSIONS IN SUPPORT OF OPERATION XXXXXX. REPORTERS WILL OBSERVE ALL USAF SAFETY REGULATIONS PER DOD INST. 4515.3r. TRAVEL IS ON A NON-REIMBURSABLE, NON-INTERFERENCE WITH MISSION BASIS. MEDIA WILL NOT BE GIVEN ACCESS TO CLASSIFIED INFORMATION OR MATERIALS.

6. FOCUS OF MISSION REMAINS REGIONAL/HOMETOWN NEWS COVERAGE OF 3D ID SOLDIERS PARTICIPATING IN OPERATION XXXXXX WHILE PROVIDING REPORTERS WITH A COMPLETE ORIENTATION ON THE COMPLEXITIES OF MILITARY DEPLOYMENTS, INCLUDING THE TRANSCOM/AMC MISSION. TRAVEL BY MILITARY AIRCRAFT IS AN INTEGRAL PART OF THE STORY AND REPORTERS INTEND TO INTERVIEW CREWMEMBERS, PILOTS, FLIGHT ENGINEERS, AND LOADMASTERS DURING FLIGHTS, AND ALCC GROUND STAFF AT ENROUTE STATIONS. ESCORT OFFICER WILL BRIEF AIRCREW MEMBERS THAT REPORTERS ARE PRESENT AND THAT CONVERSATIONS OR ACTIONS OF THE CREW MAY RESULT IN ARTICLES, PHOTOS OR VIDEO PRESENTATIONS.

7. ACCREDITED MEDIA WILL IS ACCORDED ALL COURTESIES AND PRIVILEGES AS EQUIVALENT GRADE OF O-4 FOR MESSING AND BILLETING.

8. POC AT THIS HQ IS MR XXXXXX, COMM (404) 464-5686 OR DSN 367-5686.

Appendix C

Digital Command and Control Rehearsal

BACKGROUND

C-1. An early lesson learned in the digitization of the Army is that the complex digital communications systems have to be checked for proper connectivity and functional integration throughout the entire digital architecture before the commander can digitally communicate with confidence. The digital command and control rehearsal (DC2R) was developed as a step-by-step check of the individual and collective functioning of the Army Battle Command Systems (ABCS) (the Force XXI Battle Command Brigade and Below (FBCB2) System through the Global Command and Control System (GCCS)) to validate the architecture, troubleshoot the system, and provide warm-up training for the digital operators. When the DC2R is not conducted and the digital system placed under load points, system failure will frustrate both the users and commanders.

WHAT IS A DC2R?

C-2. A DC2R is a deliberate step-by-step establishment and load test of the digital communications architecture that validates the systems in the architecture and the ability to correctly pass digital messages. The technique described is only one way to approach the problem, and all units should tailor the DC2R technique to meet their requirements.

PHASE 1. VALIDATE THE ARCHITECTURE

C-3. The first step in the DC2R is to verify the digital systems architecture to ensure that there is a plan to communicate with the units in the task organization and higher headquarters. Since our internet protocol, based unit addressing system does not allow for dynamic changes of units entering and leaving the task organization, the importance of validation of the digital architecture is the foundation for success. The architecture validation builds the rehearsal plan since the architecture drives the test load regarding the numbers and types of systems as well as the messaging interface required by the different ABCS (FBCB2 through GCCS). Part of the architecture validation is a system-by-system, platform-by-platform (vehicles) check to ensure that each individual system has all of the required component parts and they work. The digital architecture is a chain in that any missing link will cause the chain to fail. The diagram at Figure C-1 shows an example of the systems equipment checks that must be done to validate equipment in the architecture.

PHASE 2. CONNECTIVITY TESTING

C-4. Once the architecture has been validated, connectivity testing of the upper and lower tactical internet (TI) begins in each of the battlefield functional areas. The diagrams at Figures C-2, C-3, and C-4 show a standard TI test load of the messaging in each of the ABCS. In the course of load testing, the quality of the messages must be affirmed. Any problems that are discovered must be recorded and resolved before the system is declared to be functioning properly. Every problem that is resolved must be retested to ensure that the fix meets the architecture standards.

PHASE 3. FIX PROBLEMS AND RECHECK

C-5. The final phase of the DC2R is to recheck each fix and then to retest the system as a whole to ensure connectivity and stability. A fix plan must be developed to ensure that problems are solved in a fashion that strengthens the digital chain. When conducting exercises based on simulations, an integration plan of the simulation and simulation feeds into the digital communications systems must also be built into the test and fix plans for the simulation-based exercise to work.

Veh #	Unit	CPU	KB	DU	Cables	Drop	PLGR	ASIP	INC	ANT	EPLRS
HQ 3											
HQ 4											
HQ 5											
HQ6											
HQ7											
HQ71											
HQ73											
HQ75											
HQ 8											
HQ 80											
HQ 81											
HQ 82											
HQ 83					EVERY COMPONENT PART						
HQ 84					OF THE SYSTEM ARCHITECTURE						
HQ 85					MUST BE PRESENT AND FUNCTIONAL						
HQ 90					FOR THE DC2R TO WORK.						
HQ91											
HQ 92											
HQ 93											
HQ 94											
HQ 95											
JCF 23											
HQ 01											
JCF 21											
JCF 22											
A 11											
A 14											
A 21											
A 3											
A 31											
A 34		+	+	+	Plgr Cable		+	+		NU	+

Figure C-1, Example of Equipment Listing for DC2R Functions Check

Type of Task		Within	Within	Between	Both	Both	Both	Both	Within	Within	Within	
		#401 Connect to TOC Server	#402A Send Free Text Msg within TOC	#402B Send Free Text Msg to Another TOC	#403A Send Overlay	#403B Receive Overlay	#404A Send Order File via MCS-A	#404B Receive Order File via MCS-A	#405 Receive Red Picture from ASAS	#406 Live Feed from EBC	#407A Joint Units from GCCS-A	Comments
BDE TOC												
	MCS-A											
	MCS-L											
	CIC/LSD											
	ASAS											
	CSSCS											
	AMDWS											
	AFATDS											
	FBCB2											

Type of Task		Between		Between	Within	Within	Within	Between				
		#407B GCCS-A provided Joint Units from DACP	#410A Connect to Shared Directory within TOC	#410B Connect to Shared Directory in Another TOC	#411 Print Overlay to Plotter/ Laser Printer	#412 Overlay from MCS-L to LSD	#413A Move/ Copy Orders & Overlays to Shared Directory within TOC	#413B Move/ Copy Orders & Overlays to Shared Directory in Another TOC	#414 Transfer Orders and Overlays Via Net Meeting			
BDE TOC												
	MCS-A											
	MCS-L											
	CIC/LSD											
	ASAS											
	CSSCS											
	AMDWS											
	AFATDS											
	FBCB2											

Must be adopted to system architecture being used in the BCT

Type of Task		Within	Within	Within	Within	Within	Within	Within	Between	Between	Between	
		#415 Configure Stale, Old and Purge Thresholds	#416 Connect MCS L to MCS-H Server	#417 Red Icons on MCS-L	#418 Blue Icons on MCS-L	#419 Post Overlay from MCS-L to MCS-H	#420 Pull Overlay from MCS-H to MCS-L	#421A Conduct Colloborative Whiteboad Session within TOC	#421B Conduct Collaborative Session Between TOCs	#422 Access Log Info from CSSCS via web client application	JVMF K05.17 sent to FBCB2	
BDE TOC												
	MCS-A											
	MCS-L											
	CIC/LSD											
	ASAS											
	CSSCS											
	AMDWS											
	AFATDS											
	FBCB2											

Figure C-2, Example of ABCS Functions Check of Messages Between Systems

#	ACTION	FROM	TO	TIME	BN	HHC	A	B	C
201	SEND/RECEIVE W007 EDC MSG	ASAS	ASAS						
202	SEND/RECEIVE C111 TACREP	ASAS	ASAS						
203	SEND S305 TIDAT	ASAS	AFATDS						
204	SEND/RECEIVE S 303 EOBSREP (SALUTE)	ASAS	ASAS						
205	SEND/RECEIVE F002 GENADMIN	ASAS	ABCS						
206	SEND/RECEIVE K1.01 FREETEXT	ASAS	ASAS/ABCS						
207	RECEIVE K4.O1 SPOT/SALT	FBCB2	ASAS						
208	RECEIVE C241 MISSION FIRED REPORT, (MFR)	AFATDS	ASAS						
209	SEND RED SA TO JCDB/CTP	ASAS	ABCS						
210	CREATE HOME PAGE	ASAS	ASAS						
211	C203 GRAPHREP-OVERLAY	ASAS	ASAS						
212	CONDUCT COLLABORATION/NET MEETING	ASAS	ABCS						
213	SEND K5.17 OVERLAY MESSAGE TO FBCB2	ASAS	FBCB2						
214	SEND K5.19 ENTITY DATA MSG	ASAS	FBCB2						
215	DELETE RED SA FM JCDB	ASAS	FBCB3						
216	S201 SUPPORT BATTLEFIELD GEOMETRY (SPRT.GEOM)	ASAS	ASAS/ABCS						
217	S507 RESOURCES REPORT	ASAS	MCS						
218	F014 RI (REQUEST FOR EDC)	ASAS	ASAS						
219	C281 ARTILLERY TARGET REPORT	AFATDS	ASAS						
220	D281 ARTILLERY TARGET INTEL - TARGET CRITERIA	AFATDS	ASAS						
221	F015 RESPONSE TO REQUEST FOR INFORMATION (EDC)	ASAS	ASAS						
222	MAP COLLABORATIVE OVERLAY	ASAS	ASAS						
223	224 E500 AIR EARLY WARNING	AMDWS	ASAS						
224	BLUE SA FROM EBC	MCS	ASAS						
225	SEND ASAS OVERLAY VIA OVERLAY UI	ASAS	ASAS						
226	S308 ARTILLERY TARGET INTEL - IEW TARGET COORDINATION MESSAGE		ASAS/ABCS						
227	S309 ENEMY SITUATIONAL AWARENESS MESSAGE								
300	INITIALIZE, RECEIVE, COMMON TACTICAL Picture (CTP)								
301	SEND USMTF FREETEXT MESSAGE FROM AFATDS TO OTH								
302	VERIFY RECEIPT OF BLUE SA FROM MCS								
303	VERIFY RECEIPT OF RED SA FROM ASAS								
304	RECEIVE FRAGO FROM MCS								
305	RECEIVE / SEND FS Para, ANNEX TEMPLATE FROM MCS								
306	RECEIVE / SEND MISSION (FIRE SUPPORT) OVERLAY								
307	CREATE FIRE SUPPORT GEOMETRY IN AFATDS, VERIFY POST								
308	UPDATE FIRE UNIT LOCATION IN AFATDS, VERIFY POSTING T								
309	RECEIVE TIDAT FROM ASAS, PROCESS CFF								
312	SEND / RECEIVE FIRE SUPPORT PLAN								
313	SEND / RECEIVE FIRE PLAN								
401	Establish connectivity with TOC Server	Client	TOC Server						
402	Send USMTF FreeText Message from MCS-A to MCS-A/Other BFAs	MCS H	BFAs & 2d TOC MCS						
403	Send/Receive Overlay From MCS-H to MCS-H or other BFA	MCS H	BFAs & 2d TOC MCS						
404	Send Field Order(Word File) from MCS-H to another MCS-H or BFA	MCS H	BFAs & 2d TOC MCS						
405	Receive Red Correlated Picture from ASAS	ASAS	MCS H						
406	Establish Live feed on TOC Server from FBCB2	MCS H SERVER	FBCB2						
407	Receive Blue Location Data for Joint Units from GCCS-A via JCDB	GCCS-A	MCS H						
410	Connect to a Shared Directory within the TOC or in another TOC	MCS-L	MCS-L (Intra & Inter)						
411	Print Overlay to Plotter/Laser Jet	MCS-L	Plotter & Printers						
412	Display Overlay from MCS Light to LSD	MCS-L	LSD						
413	Copy Overlay and Orders to/from Shared Directory	MCS-L	MCS-L (Intra & Inter)						
414	Transfer Orders And Overlays Via Net Meeting FTP	MCS-L	MCS-L (Intra & Inter)						
415	Configure Stale, Old, and Purge Thresholds on MCS-Light	MCS-L	Configuration Settings						
416	Establish MCS Light connectivity to MCS-H Server	MCS-L	MCS H						
417	Receive Correlated Red From ASAS on MCS Light	MCS-L	MCS H						
418	Establish Blue Feed on MCS-Light	MCS-L	MCS H						
419	Post Overlay from MCS Light to MCS-H	MCS-L	MCS H						
420	Pull Overlay from MCS-H to MCS Light	MCS-L	MCS H						
421	Conduct Collaborative Whiteboard Session with other Workstations in Network	MCS-L	MCS-L						
422	Access Logistics Information from CSSCS via web client application	CSSCS	MCS-H						
423	Receive SIM/STIM Wraparound Blue Feed Via a S507L								
600	VERIFY DATAFLOW WITH ALL CSSCS NODES	CSSCS	CSSCS						
601	SEND FREE TEXT MESSAGE	CSSCS	CSSCS/BFAs						
602	RECEIVE FREE TEXT MESSAGE	CSSCS/BFAs	CSSCS						
603	VERIFY RECEIPT OF BLUE SA FROM MCS	MCS	CSSCS						
604	VERIFY RECEIPT OF RED SA FROM ASAS	ASAS	CSSCS						
605	RECEIVE ORDERS FROM MCS	MCS	CSSCS						
606	SEND UPDATEP	CSSCS	CSSCS						
607	RECEIVE UPDATEP	CSSCS	CSSCS						
608	SEND A UNIT SUPPLY UPDATE MESSAGE (Ex. CS1-001)	CSSCS	CSSCS						
609	RECEIVE A UNIT SUPPLY UPDATE MESSAGE (Ex. CS1-001)	CSSCS	CSSCS						

Example of ABCS system checks at the Battalion level

Figure C-3, Example of ABCS Checks at the Battalion Level

Glossary

A/EGM	attack/effects guidance matrix
A/L	administrative/logistical; administration and logistics
A/S3	assistant S3
A2C2	Army airspace command and control
AA	assembly area; avenue of approach
AAFES	Army and Air Force Exchange Service
AAIS	Army Automation Information System
AAR	after-action review
AATF	air assault/movement task force; air assault task force
AATFC	air assault task force commander
ABCS	Army Battle Command System
ABE	assistant brigade engineer
ABF	attack by fire
ABMOC	air battle management operations center
AC	active component
ACA	airspace coordination area
ACE	armored combat earthmover
ACIPS	Army Casualty Information Processing System
ACK	acknowledge
ACL	allowable cargo load
ACM	airspace coordination measure; aircraft control measure
ACP	air control point
ACT	analysis and control team
ACUS	Army Common User System
ADA	air defense artillery
ADACP	Alcohol and Drug Abuse Prevention Control
ADAM	area denial artillery munitions; area denial antipersonnel mine
ADAMS	Airborne Data Analysis and Monitoring System
ADAPC	alcohol and drug abuse prevention control
ADC	area damage control; analog-to-digital converter
ADCON	administrative control; advise all concerned
ADDS	Army Data Distribution System
ADO	air defense officer
ADP	Automated Data Processing
ADU	air defense unit
ADW	air defense warning

AECOORD	assistant effects coordinator
AFATDS	Advanced Field Artillery Tactical Data System
AFATDS- LCU	AFATDS-lightweight computer unit
AFCS	automatic fire control system
AFFS	Army Field Feeding System
AFSP	Army Food Service Program
AGCCS	Army Global Command and Control System
AGM	attack guidance matrix
AHB	assault helicopter battalion
AHD	antihandling device
AI	area of interest
AIMI	aviation intensively managed items
AIS	automation information system
AIT	automatic identification technology
ALO	air liaison officer
ALOC	administrative and logistics operations center; administrative/logistics operations center
AM	amplitude modulation
AMB	air mission brief
AMC	air mission commander; Aviation Maintenance Company; Army Materiel Command; Air Mobility Command
AMC-LSE	Army Materiel Command-Logistics Support Element
AMCM	air mission coordination meeting
AMD	air and missile defense
AMDO	air and missile defense officer
AMDWS	air and missile defense workstation
AMED	Army Medical Department
AMEDD	Army Medical Department
AMO	Automation Management Office
AMPS	Aviation Mission Planning System
AMSS	Army Materiel Status System
AMT	air movement table
ANCD	automated network control device
ANGLICO	air and naval gunfire liaison company
AO	area of operations
AOAP	Army Oil Analysis Program
AOE	Army of Excellence
AOI	area of interest
AOR	area of responsibility
APC	armored personnel carrier

APOD	aerial port of debarkation
APOE	aerial port of embarkation
AR	Army regulation; armor
ARB	attack reconnaissance battalion
ARC	attack reconnaissance company
ARFOR	Army forces
ARNG	Army National Guard
ARS	armed reconnaissance squadron
ARSOF	Army special operations forces
AS	autonomous system
ASAS	All Source Analysis System
ASAS-L	All Source Analysis System-Light
ASAS-RWS	All Source Analysis System-Remote Workstation
ASCC	Army service component command
ASL	authorized stockage list
ASOC	air support operations center
ASP	ammunition supply point
ASR	air support request; alternate supply route
ASWBL	Armed Services Whole Blood Processing Laboratory
AT	antitank; antiterrorism
ATCC	air traffic control center; airborne transmitter control center
ATCCS	Army Tactical Command and Control System
ATGM	antitank guided missile
ATHP	ammunition transfer holding point
ATI	artillery target intelligence
ATM	advanced trauma management
ATO	air tasking order
ATP	ammunition transfer point (graphics)
ATS	air traffic services
AUTL	Army Universal Task List
AVIM	aviation intermediate maintenance (graphics)
AVLB	armored launched bridge
AVN	aviation
AWACS	Airborne Warning and Control System
AXP	ambulance exchange point
B	bulk
BAE	brigade aviation element
BAO	brigade aviation officer
BAS	battalion aid station
BBDPICM	base-burn dual-purpose improved conventional munitions

BC	battle command
BCOC	base cluster operations center
BCOM	battle command on the move
BCIS	Battlefield Combat Identification System
BCOTM	battle command on the move
BCS3	Battle Command Sustainment Support System
BCT	brigade combat team
BD	battlefield distribution
BDA	battle damage assessment
BDAR	battle damage assessment and repair
BDE	brigade
BDO	battledress overgarment
BER	bit error rate; basic encoding rules; bit error ratio
BF	battle fatigue
BFA	battlefield functional area
BFC	battalion fire cell
BFT	binary file transfer; Blue Force Tracker
BFSB	battlefield surveillance brigade
BFV	Bradley fighting vehicle
BFVS	Bradley Fighting Vehicle System
BHL	battle handover line
BHOL	battle handover line
BICC	battlefield information control center
BIDS	Biological Identification Detection System
BII	basic issue items
BIT	built in test
BITE	built in test equipment
BJA	baseline jamming assets
BLAST	blocked asynchronous transmission
BLOS	beyond line of site
BMIS-T	Battlefield Medical Information System-Telemedical
BMNT	beginning morning nautical twilight
BMSO	brigade medical support office
BN	battalion
BNN	battalion network node
BOLT	brigade operations legal team; brigade operational law team
BOS	battlefield operating systems (now called warfighting functions)
BP	battle position
BRS	brigade reconnaissance squadron
BRT	brigade reconnaissance team

BSA	brigade support area
BSB	brigade support battalion
BSFV	Bradley Stinger fighting vehicle
BSMC	brigade support medical company
BSOC	battalion support operations center
BSS	brigade surgical section; brigade surgeon section
BTB	brigade troops battalion
BUB	battle update briefing
CofS	chief of staff
C2	command and control
C3	command, control, and communications
C3I	command, control, communications, and intelligence
C4	command, control, communications, and computers
C4I	command, control, communications, computers, and intelligence
C4ISR	command, control, communications, computers, intelligence, surveillance, reconnaissance
C4OPS	command, control, communications, and computers operations
CA	civil affairs
CAB	combined arms battalion
CABSA	combined arms battalion support area
CACOM	(theater) civil affairs command
CAFAD	combined arms for air defense
CAISI	CSS Automated Information System Interface
CAISI/VSAT	CSS Automated Information System Interface very small aperture terminal
CANTCO	can't comply
CAR	combined arms rehearsal
CAS	close air support
CASEVAC	casualty evacuation
CASI/NES	CSS Automated Information Management Interface/Network Encryption System
CATK	counterattack
CBRN	chemical, biological, radiological, and nuclear
CBRNE-CM	chemical, biological, radiological, and nuclear, and high-yield explosive consequence management
CBRNWRS	Chemical, Biological, Radiological, and Nuclear Warning and Reporting System
CBT	combat trains (graphics)
CBU	cluster bomb unit
CCA	close combat attack
CCCP	chemical casualty collection point

CCI	controlled cryptographic items
CCIR	commander's critical information requirements
CCL	combat configured load
CCP	casualty collection point
CD	Counterdrug
CDE	chemical defense equipment
CDR	commander
CE	communications electronics
CEB	clothing exchange and bath
CERP	commander's emergency response program
CFF	call for fire
CFFZ	call for fire zone
CFL	coordinated fire line; coordination fire line
CFS	call for support
CFV	cavalry fighting vehicle
CFZ	critical friendly zone; critical fire zone
CGS	common ground station
cGy	centigray—refers to levels of radiation (1cGy = 1 Rad) 1 unit of absorbed radiation. (NATO & DoD)
CHE	container handling equipment
CHEMO	**CHEMO** chemical officer
CHL	combat health logistics
CHS	combat health support
CHU	container handling unit
CI	counterintelligence
CIP	combat identification panel
CK	containerized kitchen
CL	closed loop; control language; computational linguistics; conversion loss; central line; chemical laser; chief of logistics; control level
CLS	combat lifesaver
CMO	civil-military operations
CMOC	civil-military operations center
CMT	common military training; career management training; critical military target
CNR	combat net radio
CNRI	combat net radio interface
Co	company (graphics)
COA	course of action
COCOM	combatant commander
COE	common operational environment
COLT	combat observation lazing team

COMMEL	communications/electronics
COMSEC	communications security
CONOPS	continuity of operations/contingency operations
CONUS	continental United States
COP	comman operating picture
COSC	combat operations stress control
COTS	commercial off the shelf
CP	command post
CP3	
CPHD	Copperhead
CPT	captain
CRO	combat replenishment operation
CROP	containerized roll-In/roll-out platform
CRP	common relevant picture
CS	combat support
CSM	command sergeant major
CSR	controlled supply rate
CSS	combat service support
CSSAMO	CSS automation management officer
CT	counterterrorism
CTA	common table of allowances
CTC	combat training center
CTCP	combat trains command post
CTD	charge transfer device; concealed target detection
CTIL	commander's tracked items list
CTOC	corps tactical operations center
CULT	common use land transportation
CZ	censor zone
D3A	decide, detect, deliver, and assess
DA PAM	Department of the Army Pamphlet
DA	battle damage assessment; Department of the Army
DAMMS-R	Department of the Army Movement Management
DART	disaster assistance response team (graphics)
DBSS	Defense Blood Standard System
DC	distribution company
DC2R	digital command and control rehearsal
DCO	deputy commander for operations; deputy commanding officer
DCPC	direct combat position code; direct combat probability code
DED	detailed equipment decontamination
DEPORD	deployment order

DIMHRS	Defense Integrated Military Human Resources System
DISN	Defense Information Systems Network
DLIC	detachment left in contact
DMC	distribution management center
DMLSS-AM	Defense Medical Logistic Standard-Assemblage Management
DMOS	duty military occupational specialty
DNBI	disease and nonbattle injuries
DNVT	digital, nonsecure voice telephone
DoD	Department of Defense
DOD	Department of Defense
DODAAC	Department of Defense Activity Address Code
DODAC	Department of Defense Ammunition Code
DODIC	Department of Defense Identification Code
DP	decision point
DPD	deployed personnel database
DPICM	dual-purpose improved conventional munitions
DPL	distribution platoon leader
DS	direct support
DSO	domestic support operation
DST	decision support template
DSVT	digital secure voice telephone
DTD	detailed troop decontamination
DTG	date time group
DTS	data transmission system; data transfer system
DTSS	Digital Terrain Support System
DVE	driver vision enhancer
DVNT	digital voice nonsecure telephone
DZ	drop zone
E	extremely high (risk)
EA	engagement area; electronic attack
EAB	echelons above brigade
EBA	engineer battlefield assessment
EBC	embedded battle command
EBO	effects based operations
ECCM	electronic counter measures
ECO	environmental compliance officer/emergency control officer
ECOA	enemy course of action
ECOORD	effects coordinator
EEFI	essential elements of friendly information
EEI	essential elements of information

EENT	ending evening nautical twilight
EFAT	essential field artillery task
EFET	essential fire effects task; essential fire and effects task
eMILPO	electronic military personnel operations; electronic military personnel office
EMST	essential mobility/survivability task
EMT	emergency medical treatment
ENY	enemy (graphic)
EO	electro-optical
EOD	explosive ordnance disposal
EOH	equipment on hand
EPLRS	Enhanced Position Location Reporting System
EPLRS/TI	Enhanced Position Location Reporting System/Tactical Internet
EPW	enemy prisoner of war
ERF	environment relative factors
ESSS	external stores support system
ETA	estimated time of arrival
ETAC	enlisted terminal air controller; enlisted tactical air controller
ETACCS	enlisted tactical air command and control specialist
ETM	Electronic Tech Manual
ETM-I	electronic technical manual-interface
ETOT	extended time over target
EVNT	ending evening nautical twilight
EW	electronic warfare
1SG	first sergeant
F&E	fires and effects
FA	field artillery
FAADC2	Forward Area Air Defense Command and Control (Systems)
FAADC3I	Forward Area Air Defense Command, Control, Communications, and Intelligence
FAASV	field artillery ammunition supply vehicle
FAC	forward air controller
FAC(A)	forward air controller (airborne)
FARE	forward area refueling equipment
FARP	forward arming and refueling point
FASCAM	family of scatterable mines
FASMS	Forecast/Allocation Submission Management System
FASP	field artillery support plan
FBCB2	Force XXI Battle Command Brigade and Below [System]
FBCB2/BFT	Force XXI Battle Command Brigade and Below System/Blue Force Tracker

FBI	Federal Bureau of Investigation
FBSA	fires battalion support area
FCR	fire control radar
FCS	fire control system
FD	functional description
FDC	fire direction center
FDMA	frequency division multiple access
FDO	fire direction officer
FDRP	first destination reporting point
FEBA	forward edge of the battle area
FEC	fires and effects cell
FECE	fires and effects coordination element
FED	forward entry device
FEEM	fires and effects execution matrix
FEMA	Federal Emergency Management Agency
FESP	fires and effects support plan
FFAR	folding-fin aerial rocket
FFE	fire for effect
FFIR	friendly forces information requirements
FHA	foreign humanitarian assistance
FHP	force health protection
FHPO	force health protection officer
FID	foreign internal defense
FIST	fire support team
FLD	field (graphics)
FLE	forward logistics element
FLIR	forward looking infrared
FLO	fighter liaison officer
FLOT	forward line of own troops
FM	field manual; frequency modulated
FMC	fully mission capable
FMI	field manual-interim
FMT	field maintenance team
FMTV	family of medium tactical vehicles
FO	forward observer
FOB	forward operations base
FOS	forward observer system
FP	force protection
FPF	final protective fires
FPL	final protective line

FPOL	forward passage of lines
FRAGO	fragmentary order
FRCP	flatrack collection point
FRG	family readiness group
FRIES	fast rope insertion extraction system
FRS	forward repair system
FS	fire support
FSB	forward support battalion
FSC	forward support company
FSCL	fire support coordination line
FSCM	fire support coordination measure; forward support medical company
FSCOORD	fire support coordinator
FSE	fire support element
FSMC	forward support medical company
FSMT	forward support medical evaluation team; forward support medical evacuation team
FSO	fire support officer
FSSP	fuel system supply point
FST	forward surgical team
FSV	fire support vehicle
FTL	far target locator
FU	firing unit
FWF	former warring factions
FXXI	Force XXI
G/VLLD	ground/vehicle vehicular laser locator designator
GBS	ground based sensor
GCCS-A	Global Command and Control System-Army
GEMSS	Ground Emplaced Mine Scattering System
GIG	global information grid
GMF	ground mobile forces
GOTS	government off the shelf
GPS	Global Positioning System
GRP	group
GRS	graves registration service; generalized retrieval system; general records schedules
GS	general support
GSAB	general support aviation battalion
GSAC	general support aviation company
GSE	ground support equipment
GSR	ground surveillance radar

GT	gun target
GTN	Global Transportation Network; Global Traffic Network
GTP	ground tactical plan
GWOT	global war on terrorism
H	high (risk)
HA	hasty attack; holding area
HAVECO	have complied
HAZMAT	hazardous materials
HBCT	heavy brigade combat team
HCA	humanitarian and civic assistance
HCLOS	high capacity line of sight
HCP	health care package
HE	high explosive
HEAT	high explosive, antitank
HEMTT	heavy expanded mobility tactical truck
HEP	high explosive, plastic
HERCULES	heavy equipment recovery combat utility lift and evacuation
HET	heavy equipment transport
HF	high frequency
HHB	headquarters and headquarters battery
HHC	headquarters and headquarters company
HHT	headquarters and headquarters troop
HIMAD	high-to-medium-altitude air defense
HIMARS	High Mobility Artillery Rocket System
HM	hazardous materials
HMMWV	high mobility, multipurpose wheeled vehicle
HNS	host nation support
HPT	high payoff target
HPTL	high payoff target list
HQ	headquarters
HR	human resources
HRS	heavy reconnaissance squadron
HSSO	health services support operations
HTU	handheld terminal unit
HUMINT	human intelligence
HVT	high value target
HvyHC	heavy helicopter company
HW	half wave; hardware; hazardous waste
IA	information assurance
IAW	in accordance with

IBCT	infantry brigade combat team
IBS	integrated broadcast service
ICM	improved conventional munitions
ICW	in coordination with
ID	identification
IDMM	isolate, dominate, maintain, multidimensional-multiecheloned
IED	improvised explosive device
IETM	interactive electronic technical manual
IEW	intelligence and electronic warfare
IFF	identification, friend or foe
IFOR	Implementation Force
IFSAS	Interim Fire Support Automation System
IFTE	Integrated Family of Test Equipment
IFV	infantry fighting vehicle
IHFR	improved high frequency radio
IMETS	Integrated Meteorological System
IMINT	imagery intelligence
INC	interface network controller
INFOSYS	information systems
INMARSAT	international maritime satellite
INS	inertial navigation system
INTSUM	intelligence summary
IO	information operations
IOCOORD	information operations coordinator
ION	input/output node
IP	internet protocol; initial position
IPB	intelligence preparation of the battlefield
IPS	intelligence production support
IR	information requirements; infrared; intelligence requirements
IREMBASS	Improved Remotely Monitored Battlefield Sensor System
ISB	Intelligence Systems Board; intermediate staging base
ISG	information systems group
ISM	intelligence synchronization matrix
ISR	intelligence, surveillance, and reconnaissance
ISSO	information services support officer
ISYSCOM	integrated system control
ISYSCON(V)4	Integrated System Control (Version) 4
IT	information technology
ITAPDB	Integrated Total Army Personnel Database
ITO	invitational travel orders

ITV	in transit visibility
IV	intervisibility; intermediate voltage; inventory variance
IVIS	Intervehicular Information System
JAAT	joint air attack team
JAG	judge advocate general
JCDB	joint common database
JCMOTF	joint civil military operations task force
JCS	Joint Chiefs of Staff
JFACC	joint force air component commander
JFC	joint forces commander
JFLCC	joint force land component commander
JI	joint inspection
JIM	joint, interagency, multinational
JMC	joint military commission
JMeWS	joint medical workstation
JNN	joint network node
JOA	joint operational area
JPOTF	joint psychological operations task force
JRSOI	joint reception, staging, and onward integration
JSEAD	joint suppression of enemy air defense
JSTARS	Joint Surveillance Target Attack Radar System
JTACP	joint tactical air control party
JTF	joint task force
JTOC	joint tactical operations command; joint target oversight council
JTTP	joint tactics, techniques, and procedures
KCLFF	kitchen combat level field feeding
KIA	killed in action
L	low (risk)
LADW	local air defense warning
LAN	local area network
LAR	logistical assistance representative
LC	line of contact
LCC	land component commander
LDB	local database
LD	line of departure
LD/LC	line of departure/line of contact
LEIOV	latest event information of value
LEN	large extension node
LERSM	Lower Echelon Reporting and Surveillance Module
LHS	load handling system

LIN	line item number
L-IPB	logistics-intelligence preparation of the battlefield
LLDR	lightweight laser designator rangefinder
LMCS	Land Missile Combat System
LMTV	light/medium tactical vehicles
LNO	liaison officer
LOA	limits of advance
LOC	lines of communication
LOD	level of detail; line of demarcation; line of departure
LOG	logistics
LOGCAP	Logistics Civil Augmentation Program
LOGPAC	logistics package
LOGPAD	logistics helipad
LOGSA	Logistics Situation Awareness/Logistics Support Agency
LOGSITREP	logistics situation report
LOGSTAT	logistics status
LOR	limits of reconnaissance
LOS	line of sight
LP	listening post
LPB	logistics preparation of the battlefield
LPP	logistics release point
LRAS3	Long Range Advanced Scout Surveillance System
LRF	laser rangefinder
LRF/D	laser range finder/designator
LRP	logistics release point
LRRS	long range radar station
LRS	long range surveillance
LRSD	long range surveillance detachment
LRU	line replacement unit
LSDIS	light and special divisions interim sensor
LTACFIRE	Lightweight Tactical Automation System
LTF	logistics task force
LTIOV	last/latest time information is of value
LTO	logistics task order
LZ	landing zone
M	moderate (risk)
M3	maintenance and materiel management
MA	mortuary affairs
MAC	mine action center
MACOM	major command

MACP	mortuary affairs collection point
MANPADS	man-portable air defense system
MARC	manpower Army requirements criteria
MASINT	measurement and signature intelligence
MB	maneuver battalion
BA	main battle area
MBCOTM	mounted battle command on the move
MBSA	maneuver battalion support area command post
MC	movement control; medical company
MC4	medical communications for combat casualty care
MCG	mobile command group
MCL	mission configured load
MCM	multicapable maintainer
MCO	major combat operations; movement control office; movement control officer
MCOO	modified combined obstacle overlay
MCS	Maneuver Control System; maintenance control section
MCS-L	Maneuver Control System-Light
MCSR	Mission Condition Status Report
MCT	movement control team
MDMP	military decision-making process
ME	maneuver enhancement (brigade)
MEDEVAC	medical evacuation
MEDLOG	medical logistics
MEDSUP	medical supply
MES	medical equipment set
METL	mission-essential task list
METSAT	meteorological satellite
METT-TC	mission, enemy, terrain and weather, troops and support available, time available, and civil considerations
MFR	memorandum for record
MGB	medium-girder bridge
MGRS	military grid reference system
MGS	mobile gun system
MH	mental health
MHE	materials handling equipment
MI Co	military intelligence company
MI	military intelligence
MIA	missing in action
MIC/HIC	mid-intensity/high-intensity conflict

MICLIC	mine clearing line charge
MICO	military intelligence company
MILVAN	military van
MKT	mobile kitchen trailer
MLO	military liaison officer; medical logistics officer
MLRS	multiple-launched rocket system
MMMB	medical material management branch
MMS	mast-mounted sight
MMSO	maneuver and mobility support operations
MOE	measure of effectiveness
MOEI	measure of effectiveness indicator
MOOTW	military operations other than war
MOP	measure of performance
MOPMS	modular pack mine system
MOPP	mission-oriented protective posture
MOS	military occupational specialty
MOU	memorandum of understanding
MP	military police
MRE	meals, ready to eat
MRO	materiel release order
MSD	minimum safe distance
MSE	mobile subscriber equipment
MSO	mission staging operations
MSR	main supply route
MSRT	mobile subscriber radio telephone
MST	maintenance support team
MSU	major subordinate unit; medical supply unit
MTF	medical treatment facility
MTOE	modified table of organization and equipment
MTS	Movement Tracking System
MTV	medium tactical vehicles
MTW	major theater of war
MWR	morale, welfare, and recreation
NAI	named area of interest
NATO	North Atlantic Treaty Organization
NAVAID	navigation aid
NBC	nuclear, biological, and chemical
NBCI	National Broadcasting Company Internet/Interactive
NBCRS	nuclear, biological, chemical, and radiological simulation; Nuclear, Biological, Chemical Reconnaissance System

NBCWRS	Nuclear, Biological, Chemical Warning and Reporting System
NC	node center
NCA	National Command Authority (Use Secretary of Defense or President, DOD, or Secretary of Defense, As per JCS letter dated 01Jan02).
NCO	noncommissioned officer
NCOIC	noncommissioned officer in charge
NCS	net control station
NEO	noncombatant evacuation operation
NETCOM	network command
NETOPS	network operations
NFA	no-fire area
NG	National Guard
NGF	naval gunfire
NGFS	naval surface fire support
NGIA	National Geospatial Imagery Agency
NGLO	naval gunfire liaison officer
NGO	nongovernmental organization
NIMA	National Imagery Mapping Agency
NIPRNET	nonsecure internet protocol router network
NLOS	night line of sight
NLT	no later than
NMC	nonmission capable
NODLR	night observation device, long range
NOE	nap-of-the-earth
NORMA	nature of the target, obstacle clearance, range to target, multiple firing positions, adequate area for proper dispersion between aircraft
NP	neuropsychiatry services
NRT	near real time
NRTS	not repairable this station
NSC	net control station
NSFS	naval surface fire support
NSL	nonstockage list
NSN	national stock number
NTDR	near-term digital radio
NVG	night-vision goggles
O&I	operations and intelligence
O/I	operations and intelligence
OAKOC	observation and fields of fire, avenues of approach, key terrain, obstacles and movement, and cover and concealment
OB	order of battle

OBJ	objective (graphics)
OBSTINTEL	obstacle intelligence
OCIE	organizational clothing and individual equipment
OCOKA	observation and fields of fire, cover and concealment, obstacles, key terrain, and avenues of approach
OCPA	Office of the Chief of Public Affairs
ODS	Operation Desert Shield
OE	operational environment
OEG	operational exposure guidance
OI	operations and intelligence
OIC	officer in charge
OIF	Operation Iraqi Freedom
ONA	operational net assessment
OP	observation post
OPCON	operational control
OPLAN	operation plan
OPLAW-JA	operations law-judge advocate
OPLOG	operational logistics
OPLOG-PLANNE	operations logistics planner
OPORD	operation order
OPSEC	operations security
OPTEMPO	operations tempo
ORGWON	organization work order number
ORL	ordnance release line
OST	order ship time
P&A	Personnel and Administration
PA	physician's assistant; position area
PAC	personnel and administration center
PAG	public affairs guidance
PAI	personnel asset inventory
PAM	pamphlet
PAO	public affairs officer; public affairs office
PARC	principal assistant responsible for contracting
PARRTS	Patient Accounting and Reports Real-Time Tracking System
PASBA	Patient Administration System and Biostatistics Activity
PASR	personnel accounting strength report
PBO	property book officer
PCC	pre-combat check; primary control center
PCI	precombat inspection
PDD	presidential decision directive

PDF	protective defensive fires
PEL	priority effects list
PEO	peace enforcement operations
PERSITREP	personnel situation report
PGM	precision-guided munition
PIR	priority intelligence requirements
PKO	peacekeeping operations
PL	phase line, platoon leader
PLGR	precision lightweight GPS receiver
PLL	prescribed load list
PLS	pallet logistics system; palletized load system
PLS-E	Palletized Load System-Enhanced
PM	provost marshall/program manager
PMCS	preventive maintenance checks and services
PME	peacetime military engagement
PMM	preventative medicine measures
PO	peace operations
POC	point of contact
POD	port of debarkation
POE	port of embarkation
POL	petroleum, oils, and lubricants
POM	preparation for overseas movement
POSNAV	position navigation
POV	personally owned vehicle
PP	passage point
PR	personnel recovery
PROPHET	programmed reviewing, ordering, and forecasting inventory technique
PS	physical security;
PSD	personnel security detachment
PSG	platoon sergeant
PSNCO	personnel staff noncommissioned officer
PSS	personnel service support
PSYACTS	psychological operations actions
PSYOP	psychological operations
PVNTMED	preventive medicine
PVO	private volunteer organization
PW	prisoner of war [do we want to use PW or POW? PW is the official usage, but POW is more familiar.]
PZ	pickup zone

PZCO	pickup zone control officer
Q&A	questions and answers
QC	quality control
QM	quartermaster
QRF	quick reactionary force
QSC	quantity per shipping container
R	reinforce
R&S	reconnaissance and surveillance
R/GSR	reinforcing/general support reinforcing
RA	routing area
RAAM	remote antiarmor mine
RAAMS	Remote Antiarmor Mine System
RAP	rocket-assisted projectile
RATELO	radio-telephone operator
RAU	radio access unit
RC	reserve component
RCC	regional combatant commander
RDD	required delivery date
RDO	radar deployment order
RECCE	reconnaissance
RECON	reconnaissance
RED	risk estimate distance
REDCON	readiness condition
RF	radio frequency
RFA	restrictive fire area
RFI	request for intelligence; request for information
RFID	radio frequency identification tag
RFL	restricted fire line
RHO	reconnaissance handover
RHOL	reconnaissance handover line
RI	relevant information
RM	requirements management
ROE	rules of engagement
ROI	rules of interaction
ROM	refuel on the move
RP	release point
RPB	regional PSYOP battalion
RPG	rocket-propelled grenade
RPOL	rearward passage of line
RPV	remotely piloted vehicle

RS	radio set; religious support
RSCAAL	remote sensing chemical agent alarm
RSO	reconnaissance staff officer; regional security officer
RSOI	reception, staging, onward movement, and integration
RSP	regional supply point
RTQ	response to query
RSR	required supply rate
RSSA	reconnaissance squadron support area
RSSP	ration supplement/sundries pack
RSTA	reconnaissance, surveillance, and target acquisition
RTD	return to duty
RTS	remote tracking station;
RUF	rules on the use of force
RVT	remote video terminal
RWS	remote workstation
RX	reparable exchange
S1	adjutant/personnel officer
S2	intelligence officer
S3	operations and training officer
S4	logistics officer
S5	civil affairs officer
S6	communications staff officer
SA	security assistance
SAAS-MOD	Standard Army Ammunition System-Modernized
SADARM	search and destroy armor
SALT	size, activity, location, and time
SALUTE	size, activity, location, unit, time, and equipment
SAMS	Standard Army Maintenance System
SARSS	Standard Army Retail Supply System
SARSS-O	Standard Army Retail Supply System-Objective
SATCOM	satellite communications
SBCT	Stryker brigade combat team
SBF	support by fire; suppress by fire
SC4	systems for command, control, communications, and computers
SCATMINE	scatterable mine
SCATMINEWARN	scatterable minefield warning
SCL	standard conventional load
SCT	scout (graphics)
SD	self-destruct
SEAD	suppression of enemy air defense

SECSGT	section sergeant
SEE	small emplacement excavator
SEN	small extension node
SFC	sergeant first class
SFOR	sustainment force
SGM	sergeant major
SGT	sergeant
SHORAD	short-range air defense
SIDPERS	Standard Installation Personnel System
SIGCOM	(theater) signal command
SIGINT	signals intelligence
SINCGARS	Single-Channel Ground and Airborne Radio System
SIP	system improvement plan
SIR	specific information requirements
SITREP	situation report
SITTEMP	situation template
SIV	systems integration vehicle
SJA	staff judge advocate
SMART-T	secure, mobile, antijam reliable, tactical terminal
SME	subject matter expert
SMFT	semitrailer mounted fabric tank
SMU	special-mission unit
SOEO	scheme of engineer operations
SOF	special operations forces
SOI	signal operating instructions
SOO	space operations officer; special operations officer; supply operations officer; support operations officer
SOP	standing operating procedures
SOR	specific orders and requests
SOS	source of supply; special operations squad; strategic operating system
SOSRA	suppress, obscure, secure, reduce, and assault
SP	start point
SPBS-R	Standard Property Book System-Revision
SPIES	special patrol insertion/extraction system
SPINS	special instructions
SPLL	self-propelled loader-launcher
SPO	support operations officer
SPOD	seaport of debarkation
SPOE	seaport of embarkation
SPORT	soldier portable-system repair tool

SPOTREP	spot report
SPT OPS	support operations
SRC	Standard Requirement Code
SRO	system readiness objective; standing route order; singly resonant oscillator
SRP	Soldier readiness preparations
SSC	small-scale contingency
STAMIS	Standard Army Management Information System
STANAG	Standardization NATO Agreement
STANG	Standardization Agreement (NATO)
STE ICE	simplified test equipment/internal combustion
STE	secure telephone equipment; simplified test equipment
STON	short ton
STRIKEWARN	strike warning
STU	secure telephone unit
SU	situational understanding
SUA	support unit of action
SUAV	small-unit unmanned aerial vehicle
SVML	standard vehicle-mounted launcher
SWEAT-MS	sewage, wear, energy, academics, trash, medical, and security
SR	system-revised
T/ESM	target/effects synchronization matrix
TA	target acquisition
TAA	tactical assembly area
TAC	terminal attack controller
TACAIR	tactical air
TACON	tactical control
TACP	tactical air control party
TACSAT	tactical satellite
TAI	target area of interest
TAIS	Target Airspace Integration System
TALO	theater airlift liaison officer
TAML	theater army medical laboratory
TAMMIS	The Army Medical Management Information System
TAMMS	The Army Maintenance Management System
TARSOC	theater army special operations command
TAV	total asset visibility
TB	technical bulletin
TC-AIMS II	Transportation Coordinator's Automated Information for Movement System II

TC-AIMS	Transportation Coordinator's Automated Information for Movement System
TCAM	TAMMIS customer assistance module
TCAM	threat condition alerting message
TCF	tactical combat force; tactical command force
TCMD	transportation control and movements document
TCN	transportation control number
TCO	troop commanding officer
TCP	traffic control point
TCRIT	target criteria
TDA	table of distribution and allowances
TDD	time definite delivery
TDIS	time and distance
TDMA	time distance multiple access
TECHCON	technical control
TEP	theater engagement plan
TEWT	tactical exercise without troops
TF	task force
TI	tactical internet
TIB	theater intelligence brigade
TIM	toxic industrial materials
TIO	tactical intelligence officer
TIRS	Terrain Index Reference System
TIS	thermal imaging sensor
TLE	target location error
TLP	troop-leading procedures
TM	team (graphics)
TMDE	test, measurement, and diagnostic equipment
TMIP	Theater Medical Information Program
TMM	target management matrix
TMR	transportation movement release; technical modification request
TNC	theater network command
TO	task order
TOA	transfer of authority
TOC	tactical operations center
TOE	table of organization and equipment
TOW	tube-launched, optically tracked, wire-guided
TPFDDL	time-phased force and deployment data list
TPL	time phase line
TPN	tactical packet network

TPS	Tactical Personnel System
TPT	tactical PSYOP team
TRADOC	US Army Training and Doctrine Command
TRI-TAC	tri-service tactical communications
TRMT	treatment
TRP	target reference point
TSC	theater sustainment command
TSM	TRADOC systems manager; TRADOC systems management
TSOP	tactical standing operating procedures
TSS	target selection system; target selection standard
TTP	tactics, techniques, and procedures
TUAV	tactical unmanned aerial vehicle
TVS	television sensor
TWV	tactical wheeled vehicle
UA	unit of action
UAV	unmanned aerial vehicle
UBL	unit base load
UCMJ	Uniform Code of Military Justice
UEx	unit of employment x
UEy	unit of employment y
UGR-E	unitized ground rations-express
UGR-H&S	unitized ground rations-heat and serve
UGR	unitized ground rations
UGR-A	unitized group ration-A
UGR-B	unitized group ration-B
UH	utility helicopter
UHB	ultrahigh brightness
UHF	ultrahigh frequency
UHN	unit hub node
UJTL	universal joint task list
ULLS	Unit-Level Logistics System
ULLS-(A/G/S4)	Unit-Level Logistics System- (Air/Ground/Logistics)
ULLS-G	Unit-Level Logistics System-Ground
UMCP	unit maintenance collection point; unit maintenance control joint
UMO	unit movements officer
UMT	unit ministry team/unit maintenance technician
UN	United Nations
UO	urban operations
US	United States
USAF	United States Air Force

USAR	United States Army Reserve
USMC	United States Marine Corps
UTO	unit task organization
UXO	unexploded ordnance
VBIED	vehicle borne improvised explosive device
VHF	very high frequency
VHSIC	very high-speed integrated circuits
VMF	variable message format
VOIP	voice over internet protocol
VSAT	very small aperture terminal
VT	variable time
WAN	wide area network
WARNO	warning order
WCS	weapons control status
WIA	wounded in action
WILCO	will comply
WIN	Warfighter Information Network
WMD	weapons of mass destruction
WO	warning order
WP	white phosphorus
WSM	weapon system manager
WSRO	weapon system replacement operations
XO	executive officer
ZOR	zone of responsibility

SECTION II – TERMS

retrans	retransmission
met	meteorological
mm	millimeter
km	kilometer
kmph	kilometer per hour

This page intentionally left blank.

References

Army Publications

AR 190-8. *Enemy Prisoners of War, Retained Personnel, Civilian Internees and Other Detainees*. 1 October 1997.

AR 360-1, *Army Public Affairs Program*. 15 September 2000.

FM 3-0. *Operations*. 14 June 2001.

FM 3-09.21. *Tactics, Techniques, and Procedures for the Field Artillery Battalion*. 22 March 2001.

FM 3-19.40. *Military Police Interment/Resettlement Operations*. 1 August 2001.

FM 4-0. *Combat Service Support*. 29 August 2003.

FM 6-0. *Mission Command: Command and Control of Army Forces*. 11 August 2003.

DA Form 2823. *Sworn Statement*.

DA Form 4137. *Evidence/Property Custody Document*.

DA Form 5988-E. *Equipment Inspection Maintenance Worksheet (EGA)*.

DD Form 2745. *Enemy Prisoner of War (EPW) Capture Tag*.

Joint Publications

JP 1-02. *Department of Defense Dictionary of Military and Associated Terms*. 12 April 2001 (as amended through 14 August 2002).

JP 3-63. *Joint Doctrine for Detainee Operations*. 27 July 2004.

This page intentionally left blank.

By order of the Secretary of the Army:

PETER J. SCHOOMAKER
General, United States Army
Chief of Staff

Official:

SANDRA R. RILEY
Administrative Assistant to the
Secretary of the Army
0508402

DISTRIBUTION:

Active Army, Army National Guard, and U.S. Army Reserve: Not to be distributed.
Electronic Means Only.