
FMI 4-90.1

**HEAVY BRIGADE
COMBAT TEAM
LOGISTICS**

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HEADQUARTERS, DEPARTMENT OF THE ARMY

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Heavy Brigade Combat Team Logistics

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Preface

Field Manual-Interim (FMI) 4-90.1 provides tactics, techniques, and procedures (TTP) for the tactical employment of the brigade support battalion (BSB) and the forward support companies (FSC) organic to 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) logistics 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 BSB and FSC operations in HBCTs.

FMI 4-90.1 is written for the commanders and staffs of the HBCT, BSB and FSC. The manual reflects and supports the Army logistics doctrine as stated in FM 4-0, Combat Service Support yet provides unique techniques specific to the audience of this manual, which are not covered in FM 4-0. This is not intended as a stand-alone reference; rather, it is intended to be used in conjunction with existing doctrine. Examples and graphics are provided to illustrate principles and doctrine—not to serve as prescriptive responses to tactical situations. The appropriate leader on the ground makes the final decision for the best way to support and defend their logistics units.

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 4-90.1 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 4-90.1.

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 other FMI related to HBCT operations, including the Heavy Brigade Combat Team; HBCT combined arms battalion operations; HBCT fires and effects operations; the HBCT reconnaissance squadron operations; and the HBCT brigade troops battalion 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 of this publication is US Army Training and Doctrine Command (TRADOC). Submit comments and recommended changes and the rationale for those changes that improve this publication on DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forward it to Commander, USACASCOM, ATTN: ATCL-CDD, 3901 “A” Ave. Suite 220, Fort Lee, VA 23801-1809.

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

Introduction

SECTION I – PURPOSE

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 meet current and future operational requirements better, 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.)

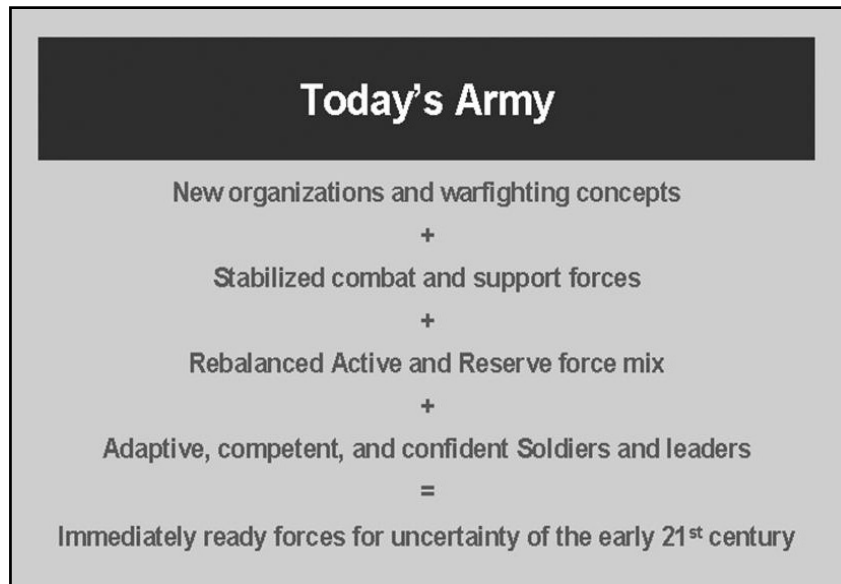


Figure Intro-1, Today's Army

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.

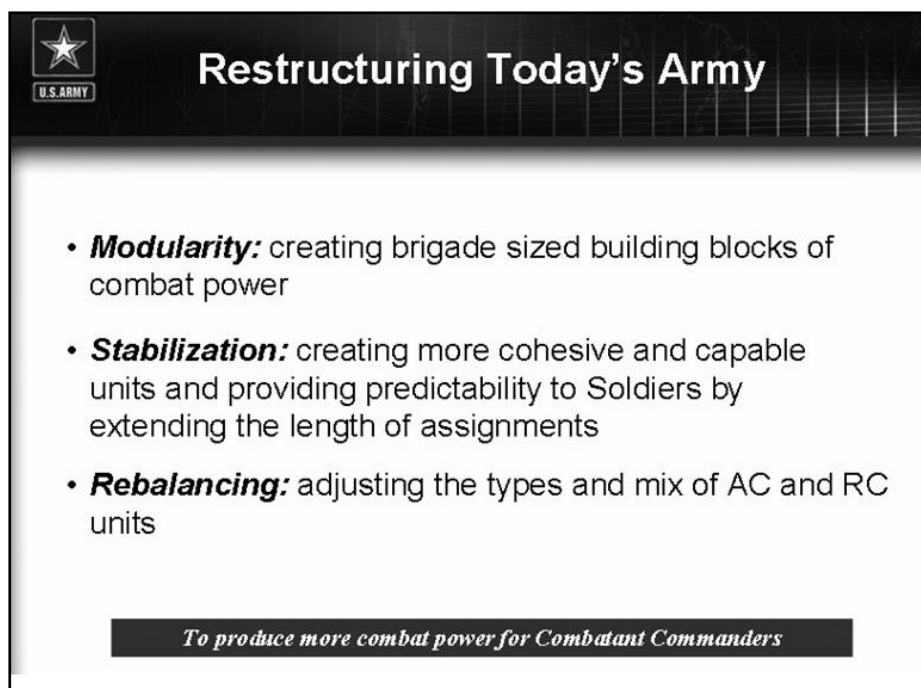


Figure Intro-2, Restructuring Today's Army

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).

Modularity: Provides capabilities-based units at the Brigade level to Regional Combatant Commanders with responsive, fully mission-Capable combat and support organizations that operate in a Joint, Combined or Multi-National environment.

Why Change:

- Provides greater capacity for rapid and tailorable force capability packages
- Improves strategic responsiveness for full spectrum operations

Offers:

- Embedded Joint capabilities and connectivity
- Organic staff precluding augmentation
- Interdependent Joint communications, ISR, and fires
- Deployable, separable Command Posts
- Organizations capable of C2 and/or support of Joint and multi-national forces

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 (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.

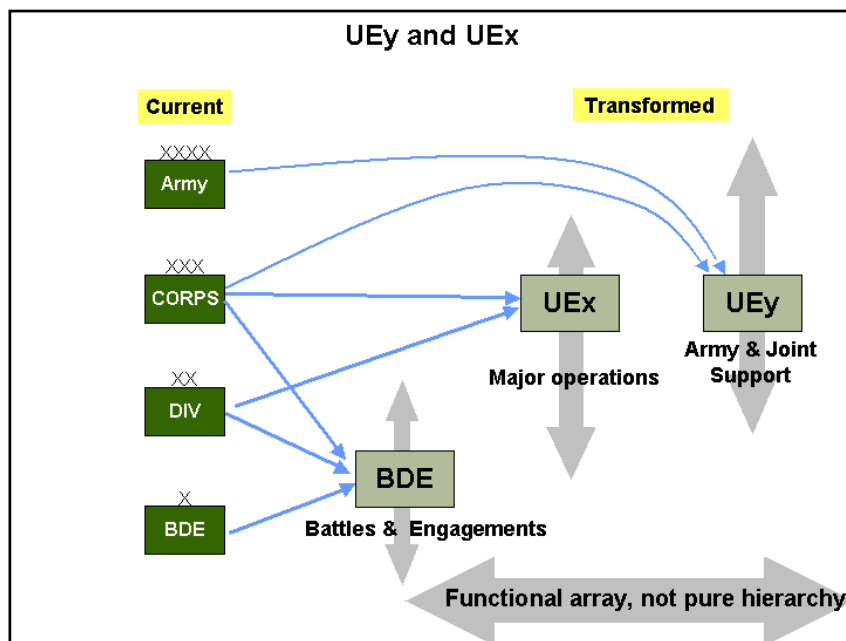


Figure Intro-4, UEy and UEx

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 (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.

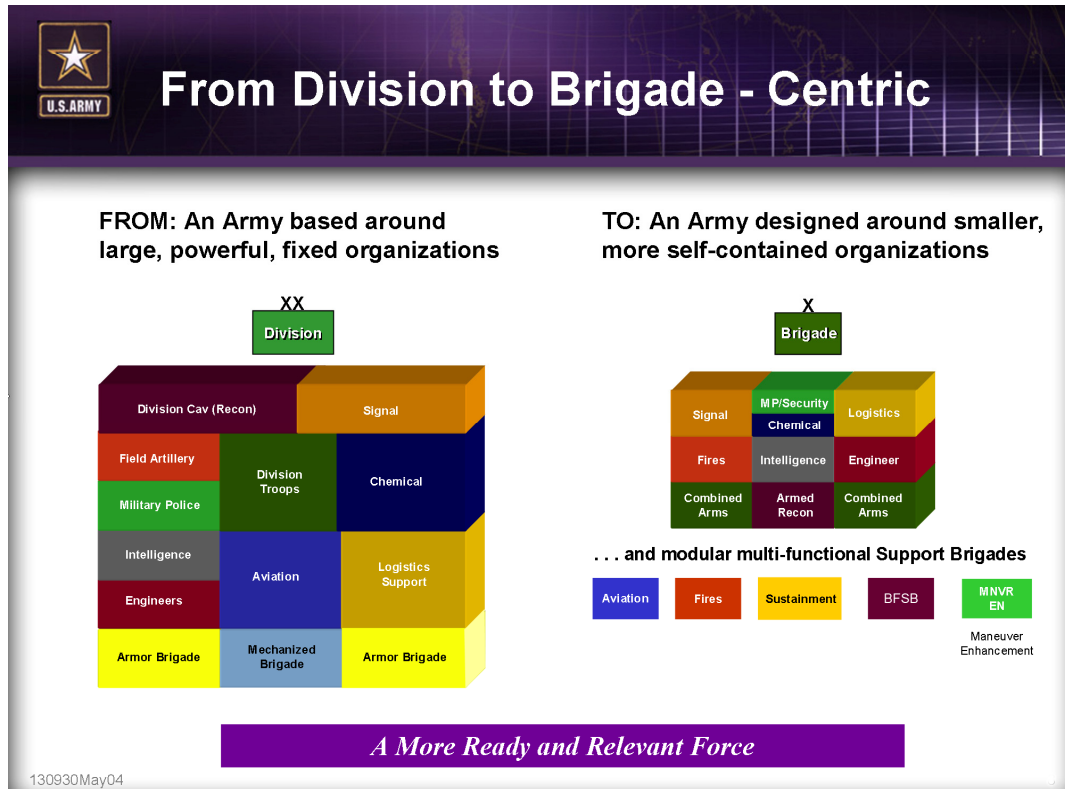


Figure Intro-5, From Divisions to Brigades

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 regional combatant commanders (RCC) 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 teams (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

UEY

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.

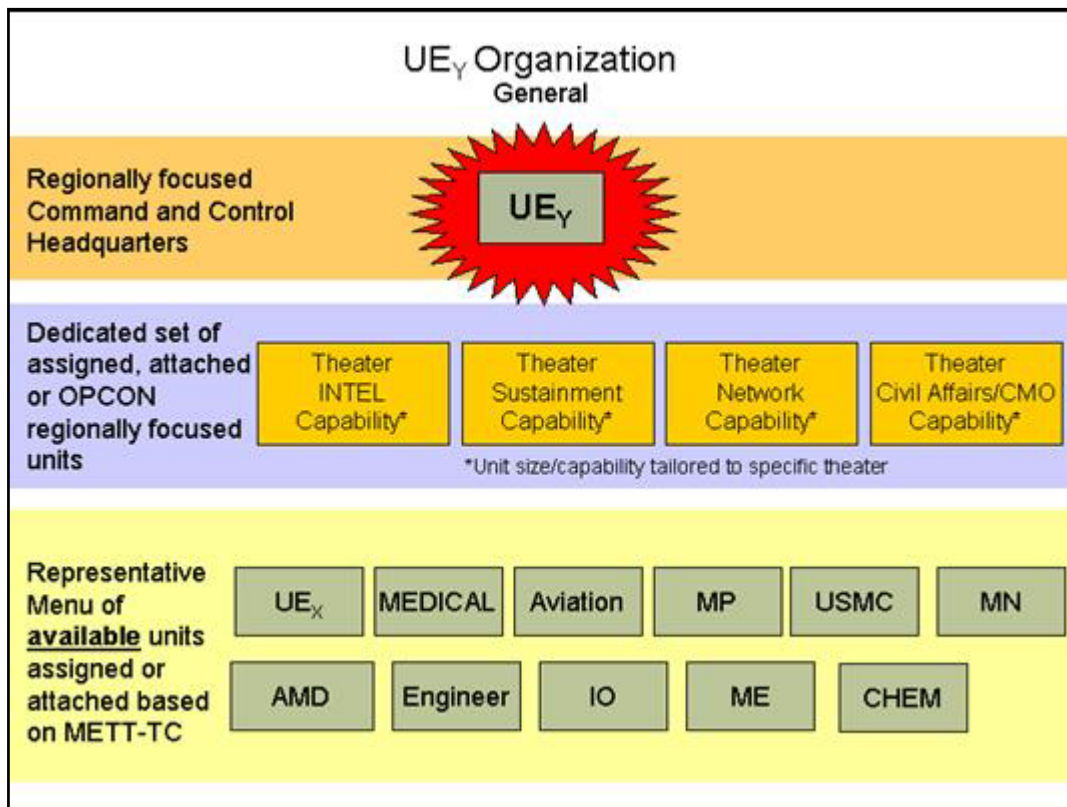


Figure Intro-6, UEy Organization, General

Four regionally focused commands or brigades will provide a theater base to each UEy and allow it to support the operations of the UE_x 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; and 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.

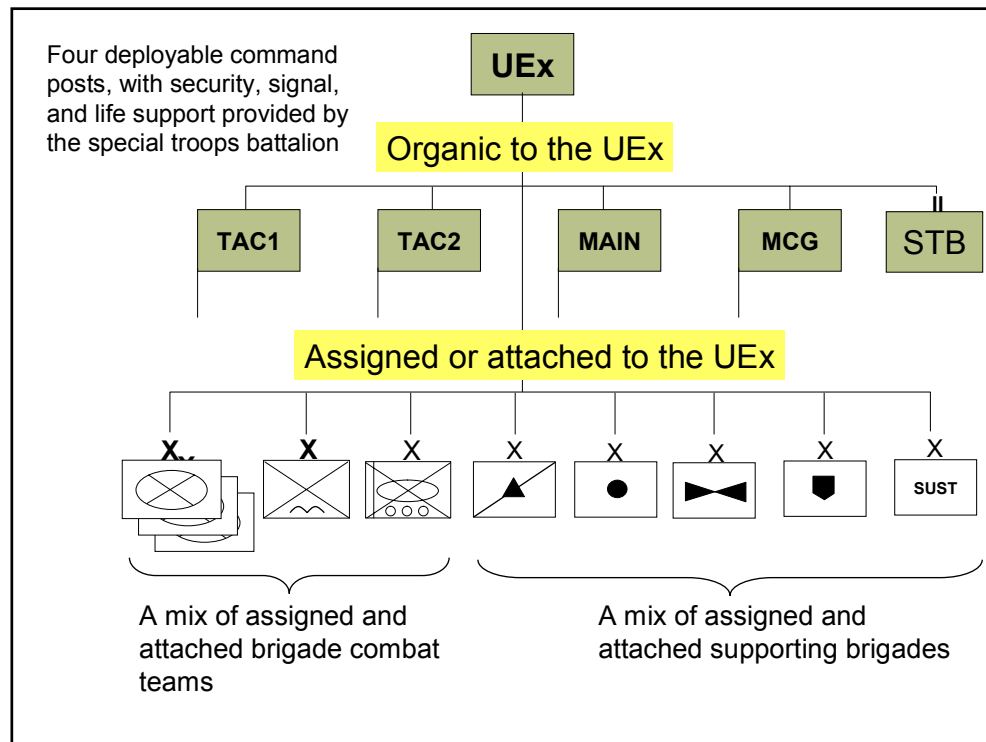


Figure Intro-7, UEx Organization

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, 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 UEx 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 according to 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 ARFOR headquarters 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.

HBCT

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.

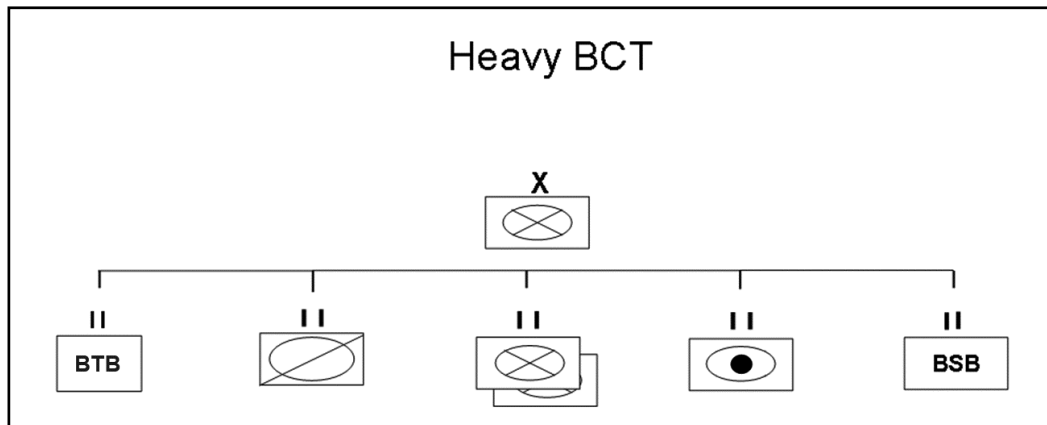


Figure Intro-8, Heavy BCT

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 maneuver battalions need minimal reconfiguration from mission to mission. Engineers and fire support elements are organic to the maneuver battalions. 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 HBCT maneuver battalions are combined arms formations. The next higher headquarters can modify the mission capabilities of the brigade, 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 varies 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, battlefield surveillance brigade (BFSB), maneuver enhancement, and sustainment brigades.

These 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.

Fires Brigade

The organization of the fires brigade differs from currently fielded corps and division field artillery brigades in its staff design and in its 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 missile battalion. Depending on METT-TC, fires brigades are task organized with additional long-range precision missiles, advanced cannon artillery, and counter fire radars. Figure Intro-9 provides the fires brigade mission, shows how it is organized with organic forces, and how shows 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.

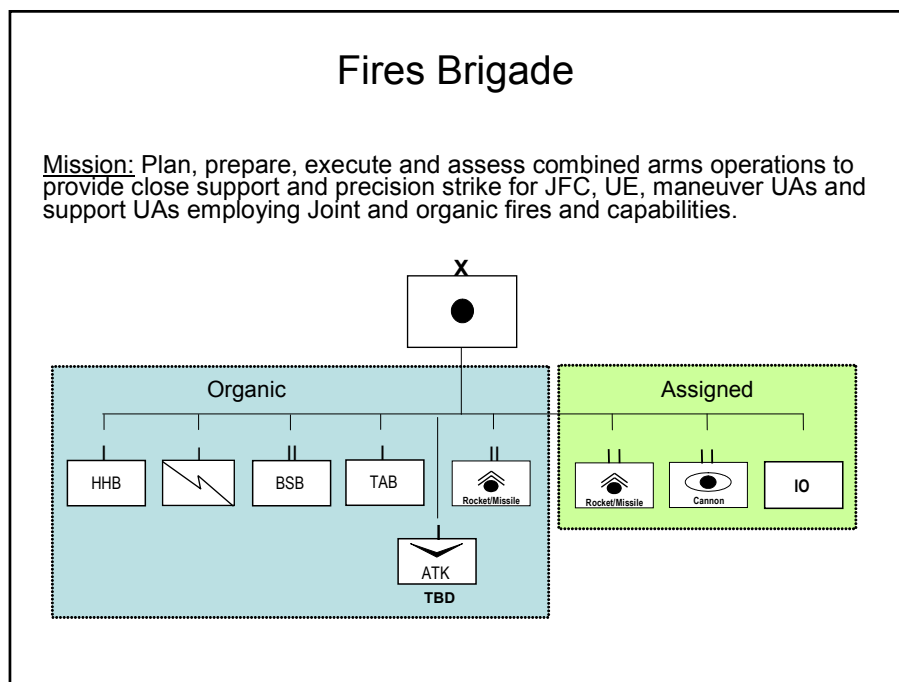


Figure Intro-9, Fires Brigade

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 nonlethal 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.

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 (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.

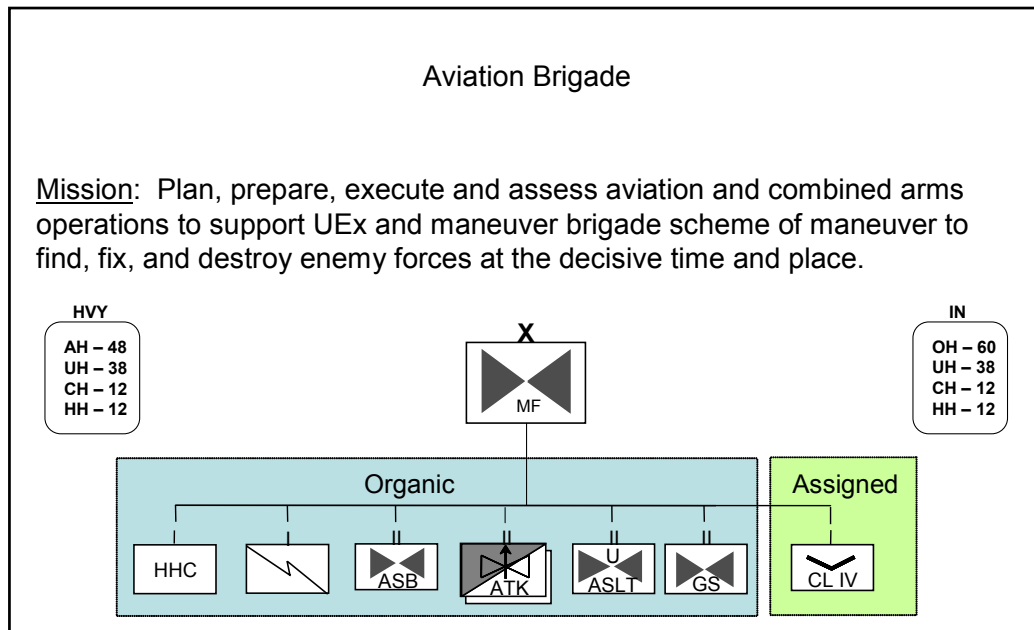


Figure Intro-10, UEx Aviation Brigade

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

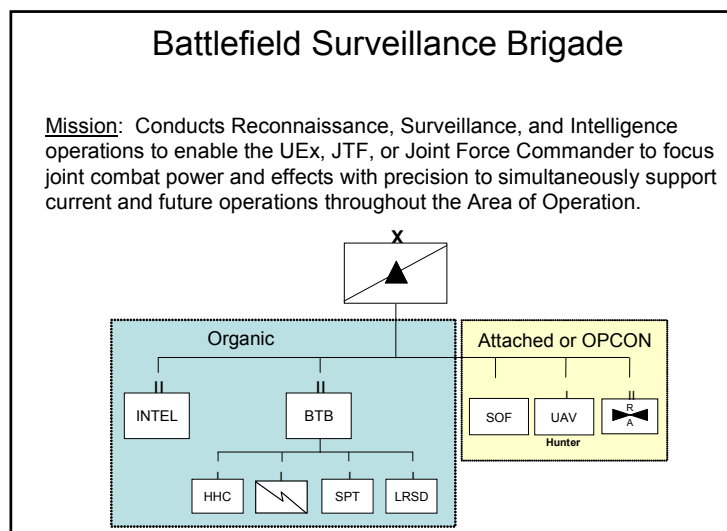


Figure Intro-11, BFSB Brigade

The BFSB 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 commander. The BFSB commander controls all UEx level surveillance and reconnaissance assets not task organized or organic to another brigade.

The BFSB 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 with additional assets. The UEx also focuses the BFSB through the allocation of brigade AOs. The BFSB has the capability to reinforce the BCT's collection capabilities. When circumstances and orders from the UEx dictate, the BFSB will reinforce brigade intelligence capabilities with additional assets.

Maneuver Enhancement Brigade

The maneuver enhancement brigade (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).

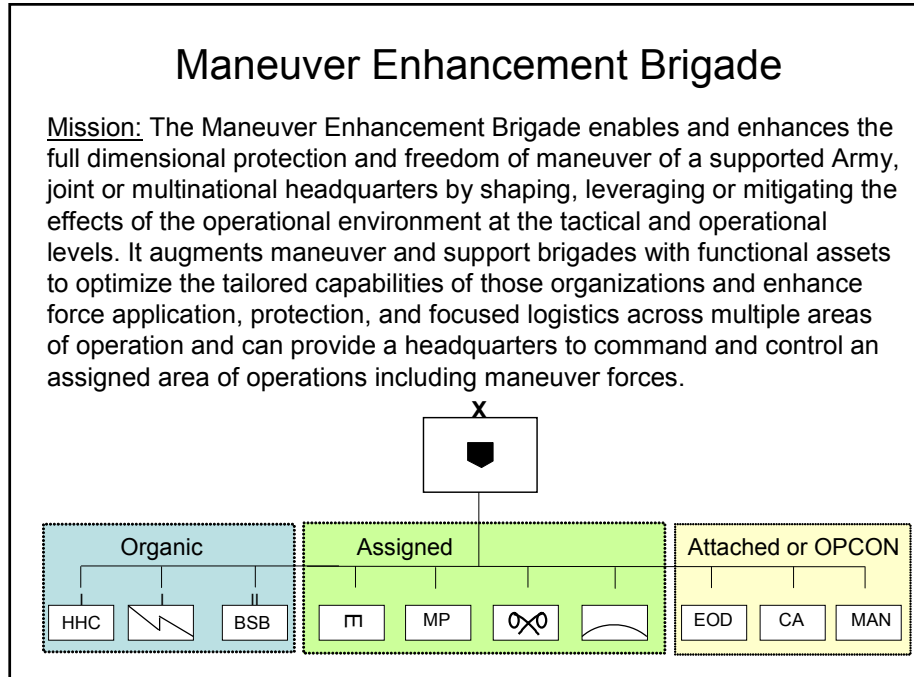


Figure Intro-12, Maneuver Enhancement Brigade

The maneuver enhancement brigade is responsible for protection outside of maneuver brigade combat team AOs. Tailored with MP, ADA, combat engineer and combat maneuver 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 (Figure Intro-13). Specialized support units of varying size are task organized based on METT-TC.

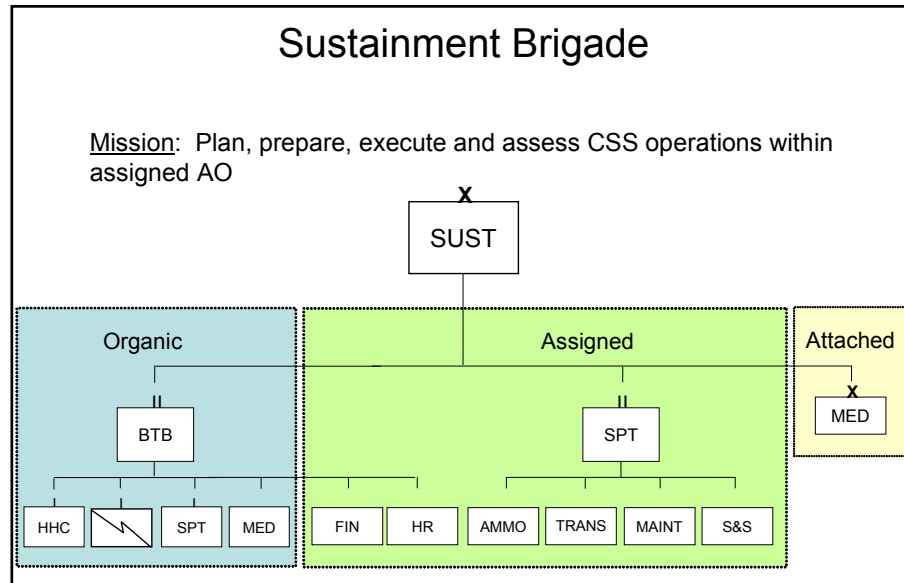


Figure Intro-13, Sustainment Brigade

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 BCT's 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 HBCT'S BSB

It describes how the brigade support battalion (BSB) optimizes organizational effectiveness while balancing sustainability, mobility, and survivability against requirements for rapid strategic deployability. This manual provides the tactics and techniques to exploit the BSB's range of logistics capabilities, and to ensure versatility across the full range of potential requirements. Requirements include such things as providing logistics for the HBCT to conduct/promote stability operations, conducting sustainment operations during peacetime military engagements, and conducting sustainment operations in support of offensive and defensive operations in MCO against localized threats. The details of the BSB organization and its capabilities will be provided in the ensuing chapters.

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Chapter 1

Logistics Overview of the Heavy Brigade Combat Team

SECTION I – WHAT THE BRIGADE COMBAT TEAM REDESIGN MEANS TO LOGISTICS UNITS

1-1. As the Army continues to support the global war on terror (GWOT) and Army transformation, there is an increased need for realignment and reshaping of the current force for rapid deployment, increased lethality and modular employment to meet challenges across the breadth and depth of full spectrum operations. The Army has deployed repeatedly for the past several years to conduct both conventional and unconventional warfare. Wartime missions and exigencies have forced the Army to rapidly shift from a force based on Cold War doctrine and threat, to one capable of modular employment and sustainment against an agile and adaptive enemy. This transformation requires changes in the design capability of logistics units and mandates changes in the maneuver sustainment distribution system to support the Warfighter structure. This overview provides information on the operational environment (OE) and emerging sustainment doctrine that impacts upon new combat service support units being developed to support the future force. The new units include the heavy brigade combat team (HBCT), the sustainment brigade, the HBCT's brigade support battalion (BSB), and the combined arms and fires battalions and reconnaissance squadron's forward support companies. Figure 1-1 provides the changing OE that led to the HBCT. This overview discusses the following items:

- The operational environment; logistics emerging doctrine that impacts upon the HBCT.
- The organizational structure of the sustainment brigade and the HBCT that includes the logistics units: BSB and the forward support company (FSC).
- The HBCT's doctrinal sustainment operation principles.
- A review of FM 4-0, Logistics (CSS) Characteristics.

1-2. Overall these logistics units will be the essential providers of logistics to Army and joint forces at the tactical and operational level for at least the rest of this decade. Figure 1-1 provides the changing OE that led to the HBCT.

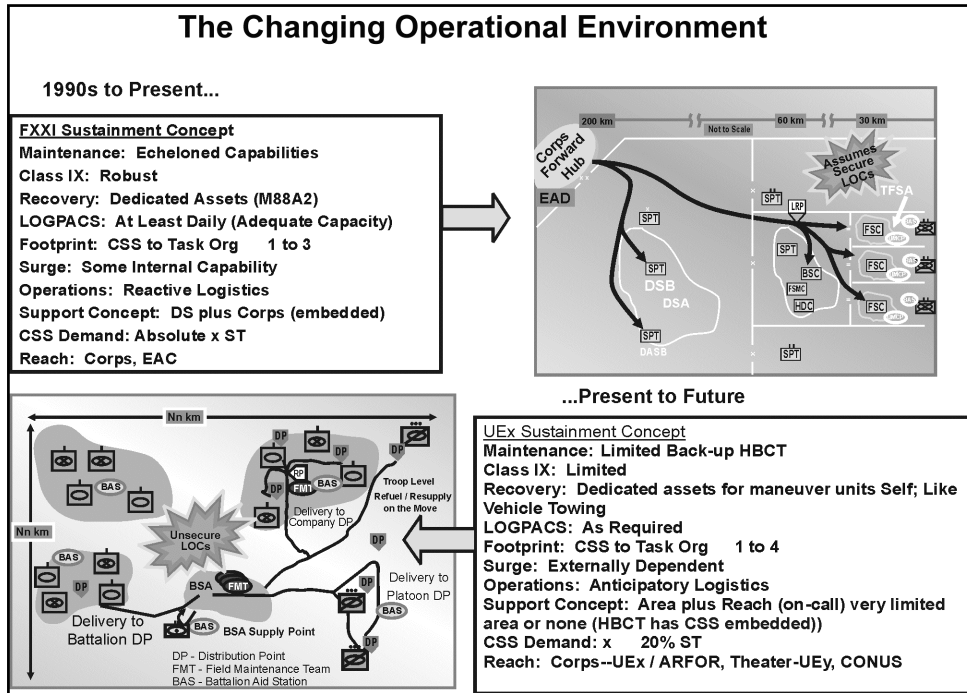


Figure 1-1, The Changing Operational Environment

1-3. Today's OE has a significant impact on Army support concepts and logisticians must adapt to these conditions. In a theater of operations, with combat forces widely distributed and operating in often non-contiguous areas, support must be provided in innovative ways, leveraging new technologies and new ideas. Support that does not come in a continuous stream across the communications zone, but in distinct packages is pulsed logistics. This is a new method for the commander who can take advantage of pulsed logistics with this redesign as the most commonly expected method of sustainment operations. These packages include the support units, as well as engineers, air and missile defense, and combat units for security—a combined arms approach for logistics support. Pulsed logistics assists combat commanders in maintaining a high degree of combat power, while, at the same time reducing the requirement on logistics units or their supported units to secure lines of communication (LOC) at all times and in all places within the battlespace.

1-4. Pulse operations such as a mission staging operations (MSO) will be used where UEx operations allow for cycling of the maneuver brigade combat teams to temporary bases where the brigade rests, refits, and receives large quantities of supplies. Hence, pulse operations are used so that maneuver units pulse in and out of contact to be replenished and returned to the fight, or readied for another mission. Pulsed logistics is especially important when sustaining combat units are widely distributed over a non-contiguous battlefield or a battlefield with LOC that can only be secured temporarily.

1-5. In today's contemporary operational environment (COE), support can no longer be viewed as a free, continuous, and secure function. In many type of operations, support is at risk as much as maneuver, with maneuver units having an effective duration that will expire if support is not reestablished when cut off, or if the maneuver units are not directed to another source of support.

1-6. Hence, there is a definite necessity to resource basic Soldier skills training to ensure that the logistician Soldiers and leaders are competent in combat skills of convoy defense,

patrolling and perimeter defense, and the use of the most up-to-date enabling technology to integrate the force protection and technical sustainment functions into overall tactical-level sustainment operations within logistics units.

1-7. Whereas Soldiers and leaders must be proficient in their technical and warrior skills, technology only allows Soldiers and leaders to do both of these Soldier requirements better. Soldiers and leaders must first master technical and warfighter skills and field craft before they can become digital experts.

1-8. Digitization will not make up for poor training or poor proficiency on basic war-fighting skills. No longer can logisticians expect the combat arms units/Soldiers to ensure their security without active participation by the Soldier and their leaders who happen to be logisticians. All Soldiers will be responsible for their personal security and fighting as part of a combined arms fight when necessary.

SECTION II – EMERGING LOGISTICS DOCTRINE THAT IMPACTS THE HBCT

1-9. One goal of a transformed logistics system is to reduce reliance on stockpiles and static inventories located at each echelon; a characteristic of the old Army of Excellence (AOE) supply-based system. In addition, the reduction of large stockpiles is assisted by the accuracy of reporting of requirements by the user and the logistician establishing trust within the system. This does not mean that there will be no on-hand supplies within the HBCT. For example: the unit will have limited combat spares (limited prescribed load list (PLL), shop and bench stock). Hence, once the request is submitted it is expected that it will be satisfied in a timely manner (i.e. no need for the PLL clerk or supply sergeant to reorder multiple times to ensure success). Use of the Battle Command Sustainment Support System (BCS3) is designed to assist with developing the needed trust by painting a logistical common operating picture (LCOP) that is accurate and timely. Therefore, distribution in the new logistics system substitutes reduced “order to receipt” time for large amounts of mass. This logistics system combines a LCOP and capabilities with efficient, yet effective delivery systems to form a seamless distribution pipeline. In essence, the supply pipeline becomes part of the warehouse, representing inventory in motion, thereby reducing but not eliminating both organizational and material layering in forward areas.

1-10. Logisticians control the destination, speed, and volume of the distribution system. With in-transit visibility (ITV), total asset visibility (TAV), advanced materiel management, and advanced decision support system technology, logisticians have access and visibility over all items within the distribution pipeline. This visibility allows logisticians to redirect, cross-level, and mass sustainment assets more effectively in support of the maneuver commander's intent. Logisticians also maintain situational understanding of the battle-space via the LCOP, which greatly facilitates planning and execution. The current BCS3 has enhanced the original LCOP.

1-11. The logistics system relies on reduced *order to receipt* time to produce efficiency, but is designed with an overall intent to be effective in a combat environment. Direct throughput from the theater's UEy sustainment brigade to the HBCT's BSB or, as needed, to the FSC in the maneuver battalion, is a goal of distribution-based logistics. Throughput distribution bypasses one or more echelons in the supply system to minimize handling and to speed delivery to forward units. Advanced materiel management allows supplies to be tailored, packaged and placed into configured loads (CL) for specific supported units based on a specific time and location point of need, and synchronized through distribution management channels based on the combat commander's mission and operation tempo (OPTEMPO).

1-12. Advanced delivery platforms, such as the palletized load system (PLS) and the container roll in/roll out platform (CROP) will be used to deliver materiel to supported units. Using ITV/TAV, delivery will be tracked and managed from higher echelons to points as far

forward as possible. Additional enablers will include advanced satellite based tracking systems, movement tracking system (MTS) and radio frequency identification (RFID). Radar tracking station (RTS) tags, which provide detailed distribution platform interrogation of items/material/stocks that, in turn, provide detailed asset visibility to the distribution system managers and forward units; a much improved materiel management system. BCS3 assists this process greatly.

1-13. Lastly, a secure intermediate staging base (ISB) located in close proximity to the area of responsibility (AOR) may be required to conduct rapid resupply when needed. All these aforementioned methodologies allow modular logistics units to focus on their supported units while conducting its own force protection operations.

SECTION III – ORGANIZATIONAL DESIGN OF THE SUSTAINMENT BRIGADE AND THE HBCT WITH LOGISTICS UNITS

HBCT LOGISTICS UNITS

1-14. The key to a more modular support structure is to organize it based on the mission that the logistics organizations have to support. They are designed and structured with modules to sustain the combat missions assigned the maneuver commander. Under the modular construct, organizational designs incorporate multifunctional, modular, self-reliant sustainment capabilities as part of maneuver brigade combat team (BCT) and maneuver battalion organizations, providing them with all the necessary logistics to sustain operations internally for a period of time while minimizing the need for external support.

1-15. To enable self-sustainment, a combined arms fires battalions/reconnaissance squadron will have organic to it a FSC, and a HBCT will have a BSB as an organic part of the unit structure to accomplish self-sustainment. The BSB commander is the senior logistics operator in the HBCT, who works closely with the HBCT's deputy brigade commander, XO, surgeon, and S1/S4 for sustainment operations. (See HBCT organization with BSB; Figure 1-2.) With this structure, maneuver units are organized with the self-sustainment capability to support internal needs for fuel, ammunition, medical care, maintenance, water production (brigade level), and common supplies, reducing the need for reliance on higher logistics organizations for anything other than replenishment operations with three combat loads in high intensity combat.

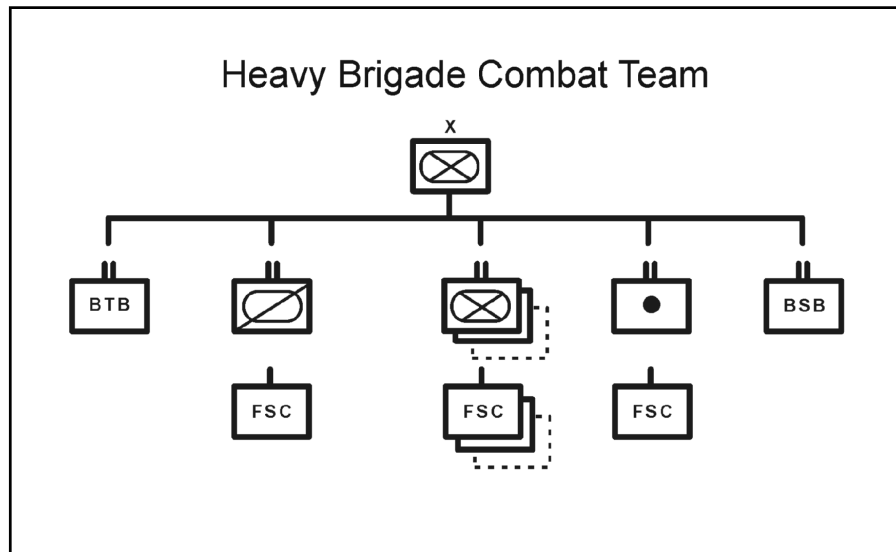


Figure 1-2, BSB and FSC in HBCT

Note: Future organizations may have three combined arms battalions. Each combined arms battalion would have its FSC.

1-16. Lastly, the HBCT must establish a connection, either face to face or via the preferred satellite automation link-up, for coordination with its higher logistics organization. This must be accomplished within an appropriate timeframe that is METT-TC dependent or it will not allow the internal sustainment structure time to catch-up and maintain the appropriate level of sustainment support for the next assigned mission in the COE. By ensuring the support linkages are made, it avoids the situation where the HBCT would have to decrease its intensity level in its operations or assume the risk of depleting material stocks to the point of becoming combat ineffective.

SUSTAINMENT BRIGADE

1-17. A logistics organization above brigade level at the UEx is required to conduct echelons above brigade (EAB) replenishment operations to the HBCT and provide modular maneuver units with the ability to extend their operational reach. That is a function of the sustainment brigade, which has assumed many of the missions of the Army of Excellence's (AOE) division's main support battalion (MSB) and the AOE's corps support command (COSCOM).

1-18. The sustainment brigade is a scalable, tailorable, networked logistics brigade providing full spectrum logistics support. It is a modular organization comprised of a headquarters and both functional and multifunctional subordinate logistics units. The sustainment brigade is an operational command with multifunctional support units and a staff that support multifunctional operations. The senior logistics commander would be the senior logistics advisor to the UEx commander when in support of a UEx. The UEx has a command and staff structure capable of providing logistics management at the tactical level and at the operational level, from providing a maneuver brigade combat team with external support, to area support in rear areas (contiguous)/unassigned areas (noncontiguous). In support of a UEx, the brigade staff coordinates with the UEx G4 to plan and direct sustainment

operations. Figure 1-3 illustrates the general structure of a multifunctional sustainment brigade.

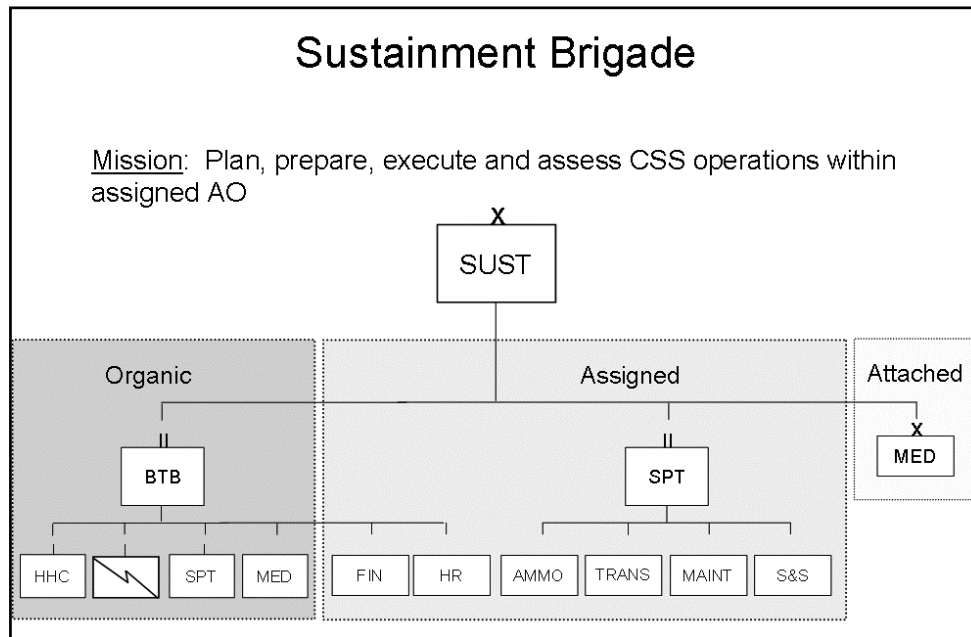


Figure 1-3, General Structure of a Multifunctional Sustainment Brigade

SECTION IV – BRIGADE COMBAT TEAM LOGISTICS PRINCIPLES

1-19. HBCT logistics principles have evolved from the principles and doctrine for Force XXI (FXXI) and the Stryker brigade combat team (SBCT). These evolving principles assist the logistician's battlefield challenges by incorporating advanced information and transportation technology, streamlining logistics organizations, and shifting from the AOE supply-based logistics system to a distribution-based system. The following are the logistics principles for the HBCT:

- Dedicated logistics operator: Unity of command for sustainment within maneuver units; EAB logistics commander is the single point of contact for support.
- Increased velocity with reduced order-to-receipt time.
- Situational understanding (SU) achieved with the assistance of a LCOP.
- An agile logistics system.

1-20. A dedicated logistics operator incorporates the unity of command imperative by centralizing distribution management and providing the unit maneuver commander assigned/organic logistics as the focal point for sustainment operations at each echelon within a brigade. The HBCT commander, based upon staff and BSB commander input, will order cross leveling, redirecting and massing of sustainment assets. Unity of command (single point of contact for logistics) at EAB for logistics facilitates the cross leveling, redirecting, and massing of sustainment assets within and between echelons down to the HBCT, and is an essential element of the distribution-based concept for the sustainment brigade. Within the HBCT, the maneuver commanders have C2 over the FSCs and medical assets assigned/organic to their units. Hence, the HBCT commander is the leader who surges

sustainment with logistics assets assigned to the HBCT (e.g. directs a maneuver commander to cross-attach FSC assets to another battalion).

1-21. **Increased velocity** refers to the time required, once the support requested is submitted, to move supplies, equipment, and capability from the strategic base through the distribution system to the end user. This is especially critical for the HBCT. Replenishment and how long it takes is very time sensitive to the combat commander's ability to shape the battlefield conditions. The increased velocity concept, now doctrine, relies on effective command and control provided by unity of command coupled with situational understanding. An example of increased velocity is the ability of the sustainment brigade to by-pass the BSB to deliver configured loads directly to the FSCs.

1-22. **Situational understanding (SU)** is the product of applying analysis and judgment to the COP and LCOP to determine the relationships among the factors of METT-TC (see FM 6-0). Situational understanding for logistics refers to the logistician's complete picture of the friendly situation, the enemy situation, and the logistics situation. Quite often this is obtained through the use of information technology enablers (e.g. BCS3). It enhances decision making by identifying opportunities, threats to the force or mission accomplishment, and information gaps. Situational understanding, based on COP and LCOP, fosters initiative in subordinate commanders by reducing, although not eliminating uncertainty. The COP and LCOP have limits, as they require constant verification to assist with developing a situational understanding. SU focuses on the current situation, however, achieving accuracy depends at least as much on human judgment as on machine-processed information—particularly when assessing enemy intent and friendly combat power. Simply having a technologically assisted portrayal of the situation cannot substitute for technical and tactical competence. The logistics system is now able to have a logistics COP of what the maneuver commander needs. The logistics system now knows through predictive analysis when and where the maneuver units need their support without wasting assets. For example, through the use of BCS3, the FSC commander knows that a LOGPAC with Class III (bulk) is due at a specified time and with a specified amount of fuel. However, due to enemy interdiction of the LOC, the FSC commander and battalion S4 will know that the specified time is delayed two hours with no enemy impact upon the fuel for replenishment operations. The impact upon the combined arms battalion will be minimal as the refuel requirement had a four-hour window to receive the fuel and it only takes one hour to refuel. The mission will not be impacted and the battalion commander is so advised.

1-23. **An agile logistics system** is one that takes the preceding principles and allows the commander to use their command position to provide the ability to surge support and provide recommendations based upon the ability to *paint a picture* with the LCOP provided by the latest technology enablers e.g. BCS3 and FBCB2. This allows the flexibility to ensure that the commander has the ability to use the modular unit concept to meet specific missions or needs as they develop or are anticipated. Because this allows commanders to provide modular support based upon the mission, it therefore reduces the logistics footprint in the battlespace. The reduction of personnel, equipment and supplies improves the agility of the HBCT during maneuver operations. The key to agility is to place on the ground only those modular logistics assets that are definitely needed for the mission, no more or no less.

SECTION V – LOGISTICS CHARACTERISTICS

1-24. A changing environment has diminished the probability of a prolonged, large-scale major conventional operation (MCO). However, the potential for numerous global actions on a smaller, regional scale has increased. In response to these changes the Army has become a force projection, rather than a forward-deployed Army. Stability operations and support operations consume much of the Army's resources and energy. Supporting the Army of today

and in the future will require logistics personnel to work faster and smarter. The following tenets support this task.

1-25. The tenets of Army operations—agility, initiative, depth, versatility, and synchronization—are basic to successful operations. They also establish the framework for organizing sustainment operations. An effective and efficient logistics system allows the Army to operate in accordance with (IAW) these tenets. Such a system has several fundamental characteristics as discussed in FM 3-0 and FM 4-0.

1-26. For all the changes that technology and force redesigns have brought, one thing remains true, that success in battle is dependent upon the unity of effort between the tactical operation and its logistics operations. The combat commander succeeds or fails by how well the logistics operators on the battlefield understand and adhere to the logistics characteristics as discussed in FM 4-0. In addition, how well the combat commander emphasizes accurate and timely reporting, and incorporates the logistics operators into the planning and preparing process prior to execution, also impacts upon his success or failure. FM 4-0's logistics (CSS) characteristics are:

- Responsiveness.
- Simplicity.
- Flexibility.
- Attainability.
- Sustainability.
- Survivability.
- Economy.
- Integration.

1-27. **Responsiveness** is providing the right support in the right place at the right time. It includes the ability to foresee operational requirements. Responsiveness involves identifying, accumulating, and maintaining the minimum assets, capabilities, and information necessary to meet support requirements. It is the crucial characteristic of sustainment, responsiveness involves the ability to meet changing requirements on short notice. Anticipating those requirements is critical to providing responsive logistics. It is also the ability to respond to changes in the maneuver commander's intent and changes on the battlefield without interrupting the flow of support. This must be done with little or no advance notice and as the combat operations are being carried out. The BSB and the FSC must maintain maximum flexibility and be ready to respond quickly, often with a task-organized structure that possesses appropriate firepower and lethally capable systems to meet combat convoy resupply requirements via combat logistics patrols.

1-28. **Simplicity** means avoiding unnecessary complexity in conducting—planning, preparing, executing and assessing—sustainment operations. Mission orders, drills, rehearsals, and standardized procedures contribute to simplicity. Emerging logistics information systems can be highly efficient tools to help with such tasks as establishing clear support priorities and allotting supplies and services e.g. BCS3.

1-29. **Flexibility** is the ability to adapt logistics structures and procedures to changing situations, missions, and concepts of operations. Logistics plans, operations, and organizations must be flexible enough to achieve both responsiveness and economy. The logistics force provides support in any environment throughout the spectrum of conflict and adapts as operations evolve. Flexibility may require improvisation, inventing, arranging, or fabricating what is needed from what is on hand. When established procedures do not provide the required support, logistics personnel seek innovative solutions, rapidly devise new procedures, or take extraordinary measures to adapt to the situation.

1-30. **Attainability** is generating the minimum essential supplies and services necessary to begin operations. Before an operation begins, the focus of the logistics effort is on generating combat power. The commander sets the minimum level of combat power he needs before an operation begins. This requires integrating operations and logistics planning. It involves the ability to identify and accumulate the critical resources required at the start of an operation.

1-31. **Sustainability** is the ability to maintain continuous support during all phases of campaigns and major operations. One of the characteristics of land combat is duration. Logistics personnel must work with operations planners to anticipate requirements over the duration of the operation and with logistics operators to synchronize provision of required supplies and services throughout. Logistics personnel must effectively perform their roles to attain the minimum combat power, and then be able to follow on with additional resources to sustain operations for as long as required.

1-32. **Survivability** is the ability to protect support functions from destruction or degradation. Logistics survivability is a function of force protection, which also consists of those actions to prevent or mitigate hostile actions against personnel, resources, facilities, and critical information. Integrating logistics with operation plans and force protection plans is critical to logistics survivability. Economy, through such methods as logistics reach operations, contributes to protecting capabilities by limiting the logistics resources that require protection. Dispersion and decentralization of sustainment operations may also enhance survivability. The commander may have to balance survivability with economy in considering redundant capabilities and alternative support plans.

1-33. **Economy** means providing the most efficient support to accomplish the mission. Resources are always limited. The commander achieves economy by prioritizing and allocating resources. Economy reflects the reality of resource shortfalls, while recognizing the inevitable friction and uncertainty of military operations. Many sustainment developments focus on the ability of the logistics commander to provide required support with the minimum expenditure of resources.

1-34. **Integration** consists of synchronizing logistics operations with all aspects of combat operations. First, it involves total integration of Army sustainment with the operations—plan-prepare-execute-assess—process. Support of the commander's plan is the goal of all sustainment efforts. Effective support requires a thorough understanding of the commander's intent and synchronizing sustainment plans with the concept of operations. Because of technological advancements, the anticipated OPTEMPO on the battlefield will increase. Through technology the logistics operators will have massive amounts of tactical and logistical information at their fingertips. They will have access to the same common relevant picture of the battlefield as the maneuver elements. Their challenge will be to sift rapidly through the information, assess its effect, and apply the logistics characteristics to provide the right sustainment to the right place at the right time to support the tactical effort.

SECTION VI – C2 IMPLICATIONS FOR REDESIGN OF LOGISTICS UNITS IN THE HBCT

1-35. The BSB commander and battle staff will face a change from old AOE push-to-talk C2 systems to the digitized world of today for C2. The force redesign with its most up to date technology enablers has provided subordinate units the ability to attain a level of LCOP and autonomy not achieved in structures of the past. At the lowest levels, the FSC, as the logistics provider for the HBCT's battalions and squadron, will be assigned/organic to the combined arms and fires battalions and reconnaissance squadron. The BSB's and the FSC's COE is discussed in Chapter 2 and their organization, functions and limitations are discussed in Chapter 3.

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Chapter 2

The Role of the Heavy Brigade Combat Team and Its Logistics Units

SECTION I – LOGISTICS UNIT MISSION ESSENTIAL TASKS (METL)

2-1. This manual addresses the tactical employment of the heavy brigade combat team (HBCT) and its logistics units. However, all battalion commanders and their leaders in the HBCT must read and understand the sustainment, operations, and tactical doctrine contained in FM 4-0, FM 3-07, FM 3-90 and FM 5-0 and FM 6-0. FM 4-0 is the Army's keystone logistics (CSS) doctrine. It bridges the gap between Army doctrine and joint and multinational doctrine. FM 3-0 establishes the Army's keystone doctrine for full-spectrum operations with warfighting as the Army's primary focus. Although built upon global strategic responsiveness for prompt, sustained Army force operations on land, FM 3-0 provides overarching doctrinal direction for the conduct of full-spectrum operations detailed in this and other Army manuals. FM 3-90 introduces the basic concepts and control measures associated with the art of tactics, but it cannot be read in isolation. FM 3-90 must be used with FM 3-0, the concepts in FM 3-07, and the operations process with its plan, prepare for, execute, and assess cycle as it relates to the military decision-making process (MDMP) that is described in FM 5-0. Together, these publications provide the essential framework for understanding this manual.

LOGISTICS UNIT MISSION ESSENTIAL TASK DEVELOPMENT

2-2. Logistics organizations develop their mission essential tasks list (METL) based on their war plans and external directives as described in FM 7-0. A generic METL for the brigade support battalion (BSB) that can be considered for use, but is not directive in nature is at Appendix B. Commanders in the chain of command approve unit METL. Mission essential tasks are the operational expression of the logistics unit's core competencies. They describe what well-trained, superbly-led, and well-equipped Soldiers do to support the Army's mission essential tasks of shaping the security environment, responding promptly to crisis, dominating land operations, and providing support to civil authorities (as described in FM 3-0).

SHAPE THE SECURITY ENVIRONMENT

2-3. National security and national military strategies establish an imperative for engagement. The US will remain politically and militarily engaged in the world and will maintain military superiority over potential adversaries. Forward basing, forward presence, and as we move into the future a mostly force projection Army, enhances the ability of Army forces to engage other nations—their people, governments, and militaries. The HBCT logistics units provide the requisite sustainment to maneuver forces to provide an overwhelming presence to potential adversaries and allow these units to conduct full spectrum operations regardless of the conditions. Due to the HBCT's logistics structure, and their ability to support a modular mounted force's operational requirements, they are uniquely suited to support the HBCT's mission to counter forces hostile to the US and its allies. Brigade combat teams (BCT) with their logistics units undertake peacetime military

engagement (PME) to reassure foreign governments, build trust and confidence, promote regional stability, reduce potential conflicts and threats, and deter aggression and coercion.

RESPOND PROMPTLY TO CRISIS

2-4. The Army's capability to rapidly project its forces to any environment provides military leaders the ability to increase force presence, to increase the magnitude of the enemy's dilemma, and to act decisively within the time specified by the joint force commander (JFC). Logistics units in the HBCT train to rapidly deploy personnel and equipment utilizing rail, sealift, and airlift from home stations to a theater of operations or rapidly deploy personnel by airlift and draw equipment from prepositioned stocks. This then enables them to quickly support their maneuver units throughout the depth of the area of operations (AO).

DOMINATE LAND OPERATIONS

2-5. Sustainment operations by attached and supporting organizations makes sustained land operations by the HBCT possible. The threat or use of Army tank and mechanized forces to close with and destroy enemy forces through maneuver and precision direct and indirect fires is the ultimate means of imposing our will on the enemy and achieving a decisive outcome. These units provide the commander with the ability to seize enemy territory, destroy the enemy's armed forces, and eliminate his means of civil population control. Tank and mechanized infantry forces conduct sustained and large-scale actions in full-spectrum operations throughout the depth of the AO. Sustained land operations provide for long-term establishment of conditions required by the nation in support of our national objectives. Faced with an enemy with the ability to conduct sustained resistance, the unit continuously creates conditions throughout the AO that lead to the enemy's ultimate defeat. This can not be accomplished without the logistics support system to achieve the commander's intent.

SUPPORT TO CIVIL MILITARY OPERATIONS

2-6. HBCTs must function in the full spectrum of operations. They must adapt and tailor their war fighting capabilities to include their organic logistics assets in order to complement and support civil authorities and agencies at home and abroad. In times of need, HBCTs provide support and expertise to reinforce or fill critical requirements beyond the immediate capabilities of civil authorities and agencies. Prompt Army assistance to civil authorities is often a critical and decisive element in crisis resolution and disaster relief.

OPERATIONAL ENVIRONMENT (OE)

2-7. Logistics units in support of the HBCT conduct operations in an OE consisting of six dimensions. Each affects how the unit combines, sequences, and conducts military sustainment operations. Commanders tailor forces, employ diverse capabilities, and support different missions to succeed in this environment.

THREAT DIMENSION

2-8. Multiple threats to US national interests exist. Some threats are direct, such as a cross border attack, others are indirect, such as coercion. Some regional powers aspire to dominate their neighbors and have the required conventional force capabilities. Such situations may threaten US vital interests, US allies, or regional stability. Transnational groups conduct a range of activities that threaten US interests and citizens at home and abroad. Extremism, ethnic disputes, religious rivalries, and human disasters contribute to destabilizing governments and regions through extensive refugee migrations. Collectively, these

transnational threats may adversely affect US interests and may result in military involvement (as further described in FM 3-0).

Threat Implications to the HBCT's Logistics Units

2-9. Weather and terrain will be extreme, and vary widely in character. The spread of urban environments and mix of civilians, paramilitaries, insurgents, and others in close physical proximity and often in cooperation with formed military forces will challenge all aspects of sustainment operations at the HBCT level. Opposition will be dispersed, camouflaged, and difficult to locate. Logistics units must also be able to discriminate and see through deception. To defeat these adaptive adversaries operating with unparalleled lethality and mobility in close terrain, HBCT sensor-shooter links must be informed and near instantaneous. The HBCT will employ a construct of focused intelligence preparation of the battlefield (IPB), indications and warnings, targeting, battle damage assessment (BDA), situational development (SD), and force protection (FP) actuated by intelligence, surveillance and reconnaissance (ISR) integration to develop and maintain situational understanding (SU) and cut through battlefield clutter. The logistics units must be postured to take advantage of the HBCT's combat power focused on defeating the enemy and provide their own Level 1 and II defense. Different characteristics that the threat may pose are:

- Adaptive adversaries will seek to modify their operations to create false battlefield presentations and reduce signatures through deliberate and expedient means to frustrate intelligence preparation of the battlefield (IPB), deceive and show the HBCT exactly what it expects to see.
- Threat forces will intentionally complicate indications and warnings—the process of detecting and assessing threats that fundamentally alter the commander's selected course of action (COA). Adversaries will position decoys and deception minefields in locations where the HBCT expects to see them, while emplacing real ones where they are not anticipated, making indications and warnings—complicated and difficult.
- Force protection at HBCT level will be made difficult by complex terrain, where opponents can close undetected with HBCT forces, often employing low-signature weapons. This, combined with a myriad of commercially available deception measures, deliberately raises the level of ambiguity with the goal of slowing the pace of HBCT maneuver, thereby making it still more vulnerable. This is especially important to logisticians as force protection requirements are heightened in this OE.
- Enemies will seek to complicate HBCT targeting by hugging (closing distances to neutralize standoff precision fires) HBCT forces or through shielding of forces in cities, among civilian populations, or within landmarks and social or religious structures.
- Presence of niche high-technology systems in enemy hands will also make discerning signatures of high payoff systems more difficult, further confounding the HBCT's targeting efforts. Differentiating valid and invalid targets will consume time, impact intelligence, surveillance, and reconnaissance (ISR) capabilities through deception and, dispersion.
- Battle effects will be difficult to determine due not only to dispersion and signature reduction efforts, but there will be compounded masking of the true effects of strikes through the same deception and denial techniques employed against targeting. HBCTs will routinely operate across a dispersed variable highly lethal environment; to survive and win, they must therefore see first—enabled by organic/embedded, special operations forces (SOF), UEx, joint, and national ISR before and during entry and decisive operations. The HBCT, augmented by UEx and UEy air and missile defense operations (AMDO) must ensure the enemy sees

last by destroying enemy unmanned aerial vehicles beyond standoff and conducting an aggressive counter-reconnaissance, surveillance, target acquisition (RSTA) effort.

2-10. The sum of our current and future adversaries' efforts will be to seek defeat of the HBCT by confounding its ability to achieve and maintain unparalleled situation development—superior knowledge of the enemy in relation to friendly forces and intentions, and through it, dominant situational awareness. The net effect will be to drive the increased speed and unparalleled decisiveness the HBCT commander must possess to act within his opponent's decision cycle and win. Future operational environments will place mid grade and junior leaders in complex situations with international, informational and political importance, where their tactical actions have operational and strategic impact. These leaders must effectively recognize and solve challenging problems in these difficult circumstances. The unparalleled visibility and reach provided by both sensors and shooters available on the worldwide arms markets means that HBCT's logistics units must be capable of conducting force protection operations of its moving formations, and performing immediate action at ranges beyond line of sight (BLOS). An example is a combat logistics patrol when engaged by mortars and the use of counter-fires. The HBCT can also expect to be engaged by opponents similarly equipped and trained, on their own ground. The variety of difficult terrain sets in the future OE, along with adverse weather and the lethal nature of adaptive learning opponents, often equipped with state of the art equipment, operating with home ground advantage, means that the HBCT must seek lethality, survivability and information overmatch. The HBCT's logistics units must take advantage of these strengths of the HBCT and focus on their own survivability requirements.

Political Dimension

2-11. Successful military operations require commanders to have a clear sense of objectives. They must understand how the use of military force fits into the national security strategy and the desired military conditions required to meet policy objectives. Each political decision during the conduct of operations has strategic, operational, and tactical implications. Likewise, each strategic, operational, and tactical action directly or indirectly impacts the political dimension.

Unified Action Dimension

2-12. The US national military strategy calls for Army forces to act as part of a fully interoperable and integrated joint force. Combat commanders synchronize air, land, sea, space, and special operations forces to accomplish their mission. Logistics units with the HBCT can expect to operate in a unified command structure both in MCO and more commonly in stability operations and support operations. Logistics units may also work with multinational and interagency partners to accomplish the full spectrum of missions. Logistics units committed to stability operations and support operations can expect to protect American lives and interests, support political initiatives, facilitate diplomacy, promote fundamental ideals, and disrupt illegal activities. Close coordination is the foundation of successful unified action.

Land Combat Operations Dimension

2-13. Land combat continues to be the salient feature of combat and is the primary function of the HBCT that the logistics units support. Land combat usually involves destroying or defeating enemy forces or taking land objectives that reduce the enemy's willingness to fight. Four characteristics distinguish land combat: scope, duration, terrain, and permanence.

- **Scope.** Land combat involves direct and indirect combat with an enemy throughout the depth of an operational area. Forces conduct simultaneous and sequential

operations in contiguous and noncontiguous AOs. Commanders maneuver forces to seize and retain key and decisive terrain. They use the elements of combat power to defeat or destroy enemy forces.

- **Duration.** Land combat is repetitive and continuous. It involves rendering an enemy incapable or unwilling to conduct further action. It may require destroying him.
- **Terrain.** Land combat takes place amid a variety of natural and manmade features. The complexity of the ground environment contrasts significantly with the relative transparency of air, sea, and space. Plans for land combat must account for the visibility and clutter provided by the terrain and the effects of weather and climate.
- **Permanence.** Land combat frequently requires seizing or securing terrain. With control of terrain comes control of populations and productive capacity. Thus, land combat makes permanent the temporary effects of other operations.

Information Dimension

2-14. Decisive operations historically have been enabled by information superiority. Information superiority provides commanders with accurate, timely information that enables them to make superior decisions and act faster than their adversaries. Information superiority, derived from ISR; information management (IM); psychological operations (PSYOP); and information operations (IO), provides a common framework for how to plan, task, and control assets; how and where to report information; and how to use information. The information environment also includes information derived from nongovernmental individuals and organizations, such as the media, that produce and disseminate information that affects public opinion that can alter the conduct and perceived legitimacy of military operations.

Technological Dimension

2-15. Technology enhances leader, unit, and Soldier performance and impacts how Army forces plan, prepare, and execute full-spectrum operations in peace, conflict, and war. Technology has significantly increased our ability to conduct ISR operations and the ability to generate a logistical common operating picture (LCOP). Use of Battle Command Sustainment Support System (BCS3) assists with generating the LCOP. Technology greatly enhances the ability to conduct battle command through modern telecommunications and micro processing. The proliferation of advanced technology systems requires the commander to integrate the capabilities of highly modernized organizations and less-modernized and multinational units. Additionally, logistics commanders must also realize that they do not have a monopoly on advanced technology for war fighting. Even adversaries lacking any research and development program can purchase sophisticated systems in the global marketplace and gain selected parity or superiority to US systems.

FULL-SPECTRUM OPERATIONS

2-16. Logistics units in the HBCT are trained and equipped to support the HBCT's sustainment requirements for full spectrum operations. Tank and mechanized infantry commanders may combine different types of operations simultaneously and sequentially to accomplish missions in war as well as stability operations and support operations. The Army's mounted forces are optimized for operations in a MCO but retain the ability to conduct small-scale contingencies (SSC) and peacetime military engagements (PMEs). Logistics commanders must be able to support the following operations by the HBCT.

2-17. Full spectrum operations include offensive, defensive, stability, and support. Missions in any environment require the HBCT and their logistics units to conduct or prepare to conduct any combination of these primary operations:

- **Offensive.** Offensive operations aim at destroying or defeating an enemy. Their purpose is to impose US will on the enemy for decisive victory.
- **Defensive.** Defensive operations defeat an enemy attack, buy time, economize forces, or develop conditions favorable for offensive operations. Defensive operations alone normally cannot achieve a decision. Their purpose is to create conditions for a counteroffensive that regains the initiative.
- **Stability.** Stability operations promote and protect US national interests by influencing diplomatic, civil, and military environments. Regional security is supported by a balanced approach that enhances regional stability and economic prosperity simultaneously. Army force presence promotes a stable environment.
- **Support.** Support operations employ Army forces to assist civil authorities, foreign or domestic, as they prepare for or respond to crises and relieve suffering. Domestically, Army forces respond only when directed by the Secretary of Defense. Army forces operate under the lead federal agency and comply with provisions of US law to include the Posse Comitatus Act and the Stafford Act.

2-18. HBCTs with their logistics units can conduct more than one type of operation at a time and transition from one type of operation to another as the strategic and operational requirements change. For example, one combined arms battalion may conduct an offensive spoiling attack on enemy forces while the rest of the brigade conducts defensive operations to protect a seaport of debarkation (SPOD) while other HBCT's arrive in theater. It is also possible to conduct offensive operations simultaneous with stability operations.

SECTION II – OPERATIONAL FRAMEWORK

2-19. The operational framework consists of the arrangements of friendly forces and resources in time, space, and purpose with respect to each other and the enemy or situation. Commanders design an operational framework to accomplish their mission by defining and arranging three components—the AO, battlespace, and battlefield organization. Commanders use the operational framework to focus combat power.

AREA OF OPERATIONS (AO)

2-20. The logistics unit's AO is the geographical area assigned by a higher commander, including the airspace above, in which logistics commander has responsibility and the authority to conduct military operations.

2-21. AOs should allow the commander to employ his organic, assigned, and supporting systems to the limit of their capabilities. The logistics commander normally designates AOs for subordinate units; either in a perimeter defense with sectors and sometimes with perimeter defense clusters within the brigade support area (BSA). Commanders use control measures to describe AOs and design them to fit the situation and take advantage of the unit's capabilities. Commanders specify the minimum control measures necessary to focus combat power, delineate responsibilities, assign geographic responsibility, and promote unified action. At a minimum, control measures include boundaries on all sides of the AO.

2-22. Commanders typically subdivide some or all of the assigned AO by assigning subordinate unit areas. These subordinate AOs may be contiguous or noncontiguous (see Figure 2-1). When friendly forces are contiguous, a boundary separates them. When friendly forces are noncontiguous, the concept of operation links the elements of the force, but the AOs do not share a boundary. The intervening area between noncontiguous AOs remains the responsibility of the higher headquarters.

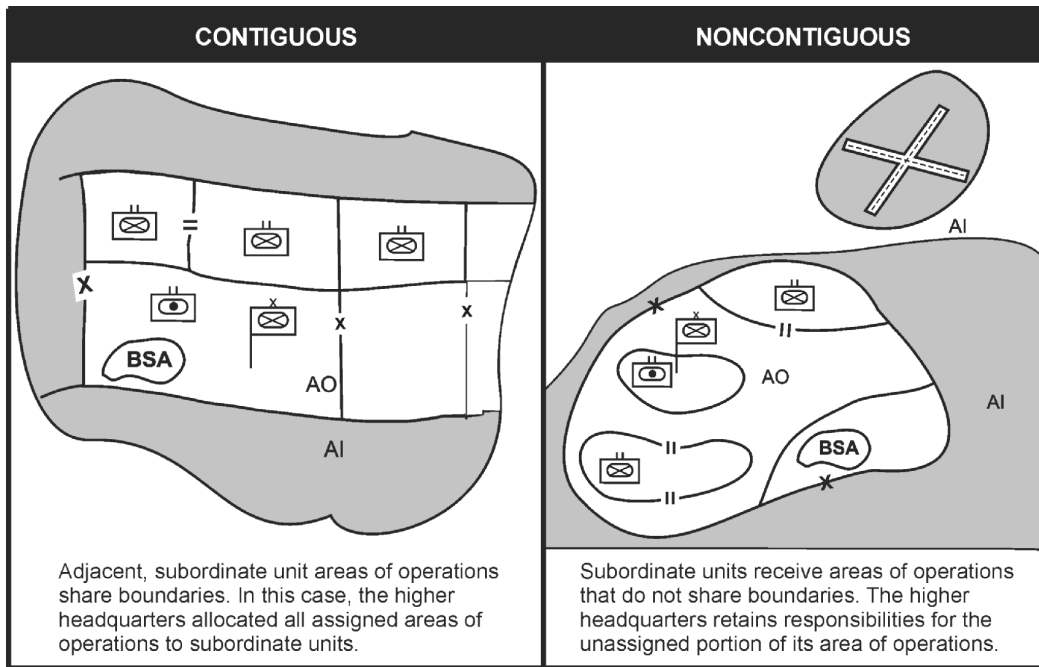


Figure 2-1, Contiguous versus Noncontiguous

AREA OF INTEREST (AI)

2-23. The logistics unit's area of interest (AI) is a geographical representation of the area from which information and intelligence are required to execute successful tactical force protection (FP) operations. It includes any threat forces or characteristics of the battlefield environment that will significantly influence accomplishment of the command's mission. A higher commander does not assign the AI. The AI is developed by logistics commander and his staff to help visualize the battlefield and to determine information requirements.

BATTLESPACE

2-24. Battlespace is the environment, factors, and conditions that must be understood to successfully apply combat power, protect the force, and complete the sustainment mission for the logistics units. Battlespace includes land, air, sea, space, enemy and friendly forces, facilities, weather, terrain, the electromagnetic spectrum, and the information environment within the AO and AI.

2-25. Battlespace is conceptual—a higher commander does not assign it. Commanders determine their battlespace based on their concept of operations. Commanders use their experience, professional knowledge, and understanding of the situation to visualize and change their battle space as current operations transition to future operations. Battlespace visualization begins with a picture of the ground and successively layers enemy, friendly, and environment over terrain visualization.

2-26. Battlespace is not synonymous with AO. Commanders visualize their battlespace to analyze all the factors that may impact on current and future operations, even if they can only directly affect those factors inside their AO. By defining his battlespace, and in particular, his AI, the commander can focus his intelligence and intelligence operations.

BATTLEFIELD ORGANIZATION

2-27. Commanders visualize their battlespace and determine how to arrange their forces. Sustainment battlefield organization is the arrangement of subordinate forces according to purpose, time, and space to accomplish a sustainment or force protection mission for the logistics unit. The purpose-based framework centers on decisive, shaping, and sustaining operations. Purpose unifies all elements of the battlefield organization by providing the common focus for all actions. However, forces act in time and space to accomplish a purpose.

2-28. Logistics commanders may organize forces according to the purpose of their supported units by determining whether each unit's operation will be decisive, shaping, or sustaining. Alternatively, commanders may organize forces by determining main effort and supporting effort(s). The logistics commander chooses the technique to articulate his concept of support based on which best facilitates his ability to visualize, describe, and direct actions at the unit level. These decisions form the basis of the concept of sustainment operations for the HBCT. Commanders also synchronize operations in time and space.

DECISIVE OPERATIONS

2-29. Decisive operations directly achieve the mission and intent of the higher headquarters. Decisive operations conclusively determine the outcome of battles and engagements. There is only one decisive operation for any phase of an operation for any given echelon. The decisive operation may include multiple actions conducted simultaneously throughout the depth of the AO. Commanders weight the decisive operation while economizing on the effort allocated to shaping operations.

2-30. In the offense and defense, decisive operations normally focus on maneuver. Conversely, logistics may be decisive during the mobilization and deployment phases of an operation or in support operations, particularly if the mission is humanitarian in nature.

SHAPING OPERATIONS

2-31. Shaping operations create and preserve the conditions for the success of the decisive operation. Shaping operations include lethal and non-lethal activities conducted throughout the AO.

2-32. Shaping operations support the decisive operation by affecting the enemy's capabilities and forces or influencing the opposing commander's decisions. Shaping operations use the full range of military power to neutralize or reduce enemy capabilities. They may occur simultaneously with, before, or after initiation of the decisive operation. They may involve any combination of forces and can occur throughout the depth of the AO. Some shaping operations, especially those that occur simultaneously with the decisive operation, are economy-of-force actions. If the force available does not permit simultaneous decisive and shaping operations, the commander sequences shaping operations around the decisive operation. A shaping operation may become the decisive operation if circumstances or opportunity demand. In that case, commanders weight the new decisive operations at the expense of other shaping operations. The concept of the operation clearly defines how shaping operations support the decisive operation.

2-33. Security is an important shaping operation. Security enables the decisive operation of the next higher headquarters. Security protects the force and provides time for friendly forces to react to enemy or hostile activities. It also blinds the enemy's attempts to see friendly forces and protects friendly forces from enemy observation and fires.

SUSTAINING OPERATIONS

2-34. The purpose of sustaining operations is the generation and maintenance of the HBCT's combat power. Sustaining operations are operations at any echelon that enable shaping and decisive operations by providing sustainment, rear area security, movement control, and terrain management. Sustaining operations include the following elements.

- Logistics sustains combat power by providing essential capabilities, functions, activities, and tasks necessary to sustain all elements of the operating forces. Sustainment operations encompass those activities at all levels of war that generate and maintain forces on the battlefield.
- Rear area security in contiguous operations and unassigned areas security during noncontiguous operations includes measures taken by a military unit, an activity, or an installation to defend and protect itself against all acts that may impair its effectiveness.
- Movement control includes the planning, routing, scheduling, controlling, and security of personnel and materiel moving into, within, and out of the AO. Maintaining movement control and keeping lines of communication (LOC) open when necessary are critical requirements with ensuring requisite movement throughout the AO.
- Terrain management includes the process of allocating terrain, designating assembly areas, and specifying locations for units and activities.

2-35. Sustaining operations are inseparable from decisive and shaping operations, although they are not by themselves decisive or shaping. Failure to sustain normally results in mission failure. Sustaining operations occur throughout the AO, not just within the rear area or non-contiguous support areas. Sustaining operations determine how fast forces reconstitute and how far forces can exploit success. At the tactical level, sustaining operations underwrite the tempo of the overall operation; they assure the ability of the HBCT to take immediate advantage of any opportunity.

2-36. In order to support sustaining operations, the logistics units must be able to conduct combat operations themselves. The enemy will use many different tactics to degrade the logistics infrastructure that is critical to support military operations. Unfortunately, the Army does not know which tactics will be chosen by the enemy, so the HBCT's logistics assets must be prepared to defeat or destroy the enemy in order to at a minimum mitigate their desired effects. Logistics units, their Soldiers and leaders, must be trained, equipped and manned to operate in a potentially hostile environment while accomplishing their mission(s). Hence, the preceding discussion on Threat implications, the COE and the following implications to logistics units need to be considered in development of a unit METL. The unit then executes the training program that supports the attainment of a trained unit ready to execute its assigned METT-TC mission. The following are implications to logistics units that conduct sustaining operations in the COE:

- Due to the potentially lethal environment, the organizational structure and equipment must be resourced to support combat operation by the logistics unit. Examples are up-armored vehicles, radios for each vehicle, machineguns with gun mounts for transportation vehicles and their escort vehicles and protective vests for each Soldier. The S2/3 section must be able to take advantage of and supplement the HBCT's ability to conduct intelligence, surveillance, and reconnaissance (ISR) and conduct pre-briefs and debriefings of all convoy operation's leaders or Soldiers as necessary.
- All commanders must acknowledge the basic concept that as force protection requirements go up, the ability to conduct sustainment operations go down. Figure 2-2 displays this very simply. The previous thoughts of generally accepting risk in the rear in contiguous spaces or unassigned areas in noncontiguous spaces are no

longer a valid thought process by any commander in the contemporary operational environment. This has to be thought through as to what the logistics commander can accomplish (i.e. destroy Level 1, defeat Level 2 with assistance and use of a tactical combat force (TCF) for Level 3—but this does not presume that 100% level of sustainment operations can occur 100% of the time). It may fluctuate depending upon the threat level and enemy operations. If the enemy threat is stronger than the ability of the logistics unit to destroy or defeat its forces, then the prudent commander knows that other forces are required to sustain logistics operations at the level desired.

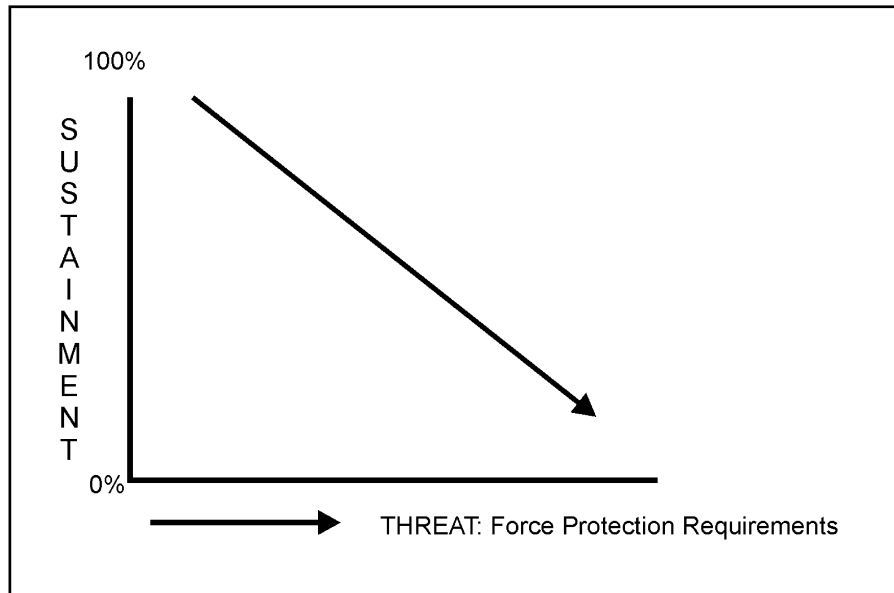


Figure 2-2, As Threat Increases, Sustainment Operational Capability Decreases

- Logistics leaders must be imbued with the concepts of battle command as discussed in Chapter 4. Simply acknowledging their premises is no longer valid. Every leader must be imbued with the doctrine of FM 6-0 and be a consummate practitioner. Logistics Soldiers, leaders, and their units must be trained and as previously mentioned equipped to defeat at least threat Level I and II. They are not infantry Soldiers, but the Soldier who happens to have a logistics skill must inculcate the Chief of Staff's intent to have a warrior ethos. That means they must be competent to execute individual and collective level combat tasks required for their unit and battlespace in a potentially lethal environment.
- Maneuver commanders must allocate combat power as an essential part of the mission to defend high risk logistics units and open and maintain as necessary ground and aerial lines of communication. This may take the form of combat unit(s) escorting convoys, attaching a combat unit to reinforce the perimeter defense or occupying an area with sufficient force for a stated period of time to eliminate an air or ground threat.
- The implied task for the logistics commander is to have the requisite skills to integrate the maneuver commander's forces into his plan. Logistics leaders must also be able to defend their AO through use of their own assets. In addition, as appropriate, they coordinate with the brigade troops battalion (BTB) commander and HBCT S3 for assistance in development of the rear area defense plan in a liner

concept, or the unassigned area defense plan in a non-contiguous battlespace. Establishing a perimeter defense for logistics units is discussed in Chapter 8.

- Logistics leaders and their Soldiers must know how to execute the tactical enabling operation of movement operations. This is discussed further in Chapter 7.

MAIN EFFORT

2-37. Within the battlefield organization of decisive, shaping, and sustaining operations, commanders designate and shift the main effort.

- The main effort is the activity, unit, or area that the commander determines constitutes the most important task at that time. Commanders weight the main effort with resources and priorities. Within shaping and decisive operations, the brigade commander may designate a main effort for each operation; however, he will designate only one main effort per operation and shift the main effort as circumstances and intent demand.
- The main effort and the decisive operation are not always identical. Identification of the main effort in shaping operations is a resource decision. A shaping operation may be the main effort before execution of the decisive operation. However, the decisive operation becomes the main effort upon execution. Shifting the main effort does not normally require changing or adjusting the plan. Commanders anticipate shifts of main effort throughout the operation. In contrast, changing the decisive operation from the plan requires execution of a branch, sequel, or new plan.

CLOSE, DEEP, AND REAR AREAS

2-38. Despite the increasing nonlinear nature of operations, there may be situations where commanders describe decisive, shaping, and sustaining operations in spatial terms. Typically, linear operations involve conventional combat and concentrated maneuver forces. Ground combat forces share boundaries and orient against a similarly organized enemy force. Terrain or friendly forces secure flanks and protect sustainment operations. In some multinational operations, the capabilities and doctrine of partners may dictate spatial organization of the AO. In such situations, commanders direct and focus simultaneous decisive, shaping, and sustaining operations in deep, close, and rear areas respectively (see Figure 2-3).

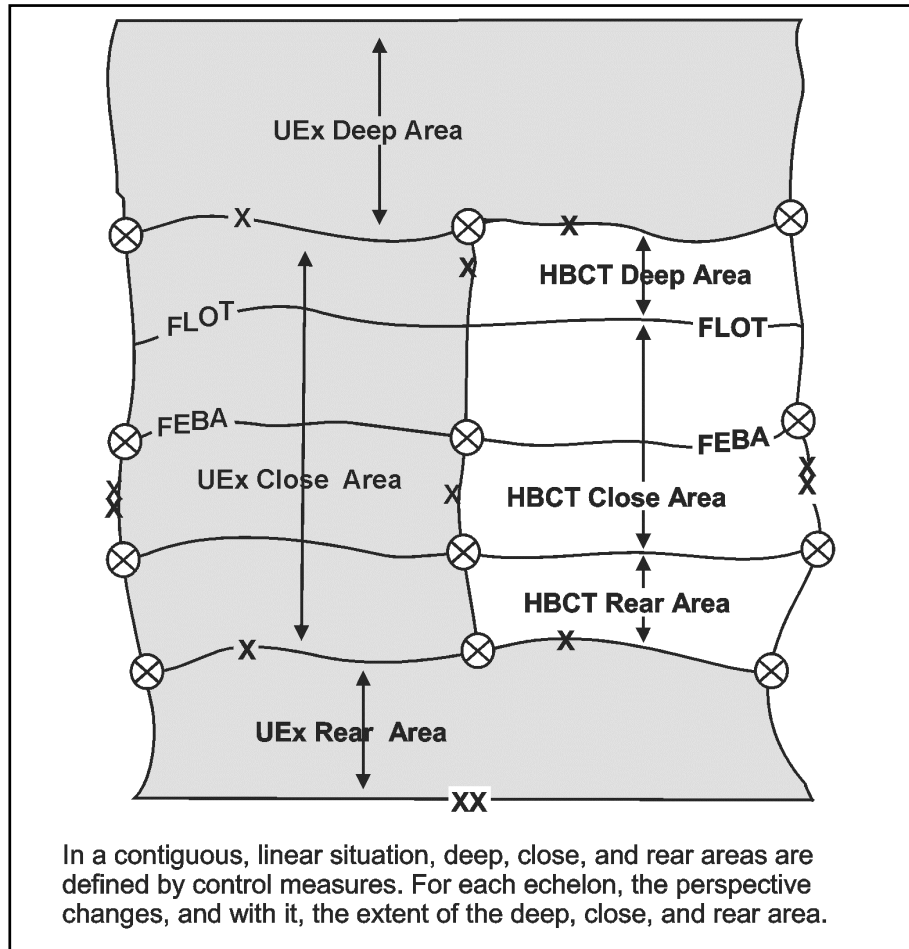


Figure 2-3, Deep, Close, Rear Areas

Close Areas

2-39. When designated, the close area is where forces are in immediate contact with the enemy and the fighting between the committed forces and readily available tactical reserves of both combatants is occurring, or where commanders envision close combat taking place. Typically, the brigade's close area is the area extending from its maneuver battalion rear boundary to the brigade forward boundary. Commanders plan to conduct decisive operations through maneuver and fires in the close area and position most of the maneuver forces in it.

2-40. Close combat includes the activities of forces directly supporting fighting elements. Examples of these activities are reinforcing field artillery (FA) fires, and force health protection (FHP) operations. Within the close area, one subordinate unit may conduct the decisive operation while another conducts shaping operations.

Deep Areas

2-41. When designated, the deep area is an area forward of the close area that commanders use to shape enemy forces before they are encountered or engaged in the close area. Typically, the brigade's deep area is that area from its battalion's forward boundary to the forward boundary of the UEx or Army forces (ARFOR) headquarters. Thus, the deep area relates to the close area not only in terms of geography, but also in terms of purpose and

time. The extent of the deep area depends on how far out the force can acquire information and strike targets. Commanders may place forces in the deep area to conduct shaping operations. Some of these operations may involve close combat. However, most maneuver forces stay in the close area. The brigade's ability to conduct deep operations is limited by the ranges of the systems in its task organization, and its ability to sustain forces inserted deeper than the forward line of troops (FLOT). A brigade will normally require additional artillery or Army aviation assets to conduct deep operations.

Rear Areas

2-42. When designated, the rear area for the brigade extends from its rear boundary to the rear of the area assigned to its subordinate battalion in a linear environment. This area is provided primarily for the performance of support functions. Operations in rear areas assure freedom of action and continuity of operations, sustainment, and command and control (C2). Regardless of the specific sustaining operations performed by an organization occupying the rear area, their focus on other than combat operations leaves them more vulnerable than combat forces to defend forces conducting sustaining operations and facilities. In some cases, geography or other circumstances may cause the commander to designate a noncontiguous "rear area." In this case, the "rear area" or unassigned space force protection challenge increases due to the physical separation from combat units that would otherwise occupy a contiguous close area.

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Chapter 3

Organization and Capabilities of Logistics Units

SECTION I – HBCT’S LOGISTICS UNITS ORGANIZATION, FUNCTIONS AND LIMITATIONS

BRIGADE SUPPORT BATTALION (BSB)

3-1. The HBCT BSB is organized to perform distribution-based sustainment functions in accordance with UEx and UEy logistics concepts. The BSB (Figure 3-1) consists of a headquarters and headquarters company (HHC), a distribution company, a maintenance company, and a medical company. It combines situational understanding (SU) with efficient delivery systems to form a distribution pipeline, reducing most stockpiles. Supplies are tailored and packaged for specific supported units based on a specific time and location. Total asset visibility, including in-transit visibility, gives logistics personnel visibility over all assets and infrastructure capacity in the area of operations (AO).

3-2. The multi-functional BSB provides support to brigade level combat teams. The BSB may function in a highly dispersed manner, with some BSB elements close to the maneuver units and others near the brigade rear area or within the support area in a non-contiguous battlefield. The BSB commander is the brigade commander’s senior logistician and serves as the senior logistics advisor for support to the maneuver brigade. His battle staff monitors and manages sustainment operations through on-site supervision, recurring reports and an array of digital information systems and other technological innovations. The BSB provides logistical support for the HBCT. Unlike the Force XXI (FXXI) and SBCT logistics unit assignment design with the FSCs assigned/organic to the support battalion, the combined arms, fires, reconnaissance commander commands and controls the forward support company (FSC) (i.e. the FSC is assigned/organic to the combined arms, fires battalion and the reconnaissance squadron). For the combined arms, fires and reconnaissance units its supplies, distribution and maintenance functions have been consolidated into the new FSC design. Medical operations remain with the HHCs of the combined arms, fires and reconnaissance units. However, there still must be close involvement with synchronizing the maneuver of the BSB and the maneuver commander’s FSC with the inbound shipments from echelon above brigade (EAB). The BSB places a single smaller footprint on the battlefield through dispersion and centralization of sustainment due to this redesign and reliance upon distribution based sustainment operations. This BSB, with its distribution management of logistics, continues to reduce the maneuver brigade commander’s involvement with most of the complex logistical support decisions but maintains task organization decisions at the HBCT level.

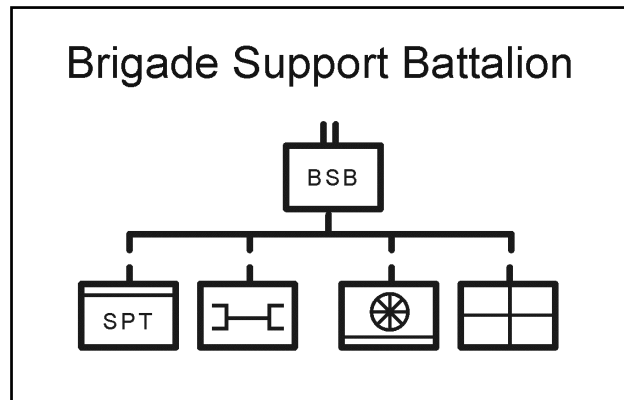


Figure 3-1, Brigade Support Battalion

TOC FUNCTIONS

3-3. The BSB TOC, under the supervision of the BSB commander, anticipates, requests, coordinates, and integrates logistics for the tactical mission. The brigade S4 located at the HBCT CP assists the BSB commander and his battle staff by providing in-depth analysis of the maneuver plan and the sustainment requirements inherent to that plan. The BSB TOC has the capacity to pass logistics information using Force XXI Battle Command Brigade and Below (FBCB2), the movement tracking system (MTS), and the BCS3. The BSB TOC will receive information from the brigade command posts (CP), the battalion combat tactical command posts (CTCP) and battalion/squadron support areas. The logistics functionality on the FBCB2 and BCS3 systems gives the war fighter a clear picture of the current sustainment situation at his echelon of command and at subordinate levels for operational planning and execution. The FBCB2 with the BCS3 also provides the logistician a better overall tactical view and sustainment situational understanding throughout the battlefield. The FBCB2 common operating picture of the tactical and the BCS3 logistics common operating picture in near real time allows the BSB to provide synchronized support to the HBCT. The logistics functionality on FBCB2 provides logistical messaging, situational understanding, and task management capabilities. This functionality affects the synchronization of all logistical support between the war fighter and supporter.

BSB KEY LEADERS AND THEIR SECTION'S DUTIES

BSB HEADQUARTERS

3-4. The battalion HQ performs the command, control, communication, computers, intelligence, surveillance, and reconnaissance (C4ISR) functions. Generally, its mission includes the following:

- C2 of organic and attached units.
- C2 of all units in the BSA for security and terrain management.
- Planning, directing, and supervising support provided by the BSB to units in the brigade area and to the brigade.
- Providing information and advice on BSB support to the commander and battle staff of the HBCT.
- Planning, directing, and supervising the administration, training, and internal logistics support for units organic and attached to the battalion.

COMMAND SECTION

3-5. The command section of the BSB provides C2 for assigned and attached units and supervision for the BSB battle staff. It provides sustainment operations for the brigade. It also provides information and advice on logistics to the sustainment brigade and has the senior logistics advisor to the HBCT commander, and his battle staff.

3-6. The command section consists of the BSB battalion commander, battalion executive officer (XO), command sergeant major (CSM), coordinating battle staff officers, and special staff. Battle staff officers supervise and coordinate the functions of subordinate sections. Command section battle staff officers perform duties and responsibilities common to all battle staff officers. FM 5-0 discusses in detail these duties and responsibilities which include:

- Provide information.
- Develop estimates.
- Develop recommendations.
- Prepare plans and orders.
- Supervise subordinate's actions.

3-7. Coordinating officers conduct battle staff mission analysis, develop estimates and plans, and implement policies and orders. They develop a reporting and monitoring system for battle staff operations in their area of expertise. They provide information updates to the battalion commander and exchange information with other battle staff sections on areas that are critical to mission accomplishment.

BSB Battalion Commander

3-8. The BSB commander is the senior logistician for the brigade commander. He manages sustainment through the use of an array of digital information systems and technologically competent battle staff that is capable of capitalizing on all other technological innovations. The BSB commander directs all units organic or attached to the battalion in support of the HBCT mission. He also has control of all elements in the BSA for security and terrain management. He provides subordinate elements with clear missions, taskings, and statement of his intent.

3-9. The commander with his battle staff supervises the activities of subordinate units. They ensure that decisions, directives, and instructions are implemented and that the commander's intent is being fulfilled. The BSB commander and battle staff advises the brigade commander on BSB support as required.

3-10. The battalion commander's duties include the following:

- The commander is responsible for everything the BSB does or fails to do.
- Understand their responsibility to the Soldiers under their command.
- Senior logistician that provides distribution management at the HBCT level and maintains situational understanding of the logistics assets required to support the brigade.
- Establish his commander's critical information requirements (CCIR).
- The commander must also know the capabilities and limitations of the companies' personnel and equipment in performing the logistics mission as well as those of logistics elements attached to him.
- His responsibilities include leadership, discipline, tactical employment, training, administration, personnel management, supply, maintenance, communications, and sustainment activities of the company.

- Develop and provide a logistics common operating picture in meaningful terms for the HBCT commander and his staff.
- Stay personally involved in and appraised of the sustainment mission and tactical situation throughout the HBCT AO and BSA battlespace.
- He must be proficient in the tactical employment of the battalion and its assigned and attached logistics elements.
- Establish an effective perimeter defense plan for all assets within the BSA that is fully coordinated with the BTB commander and HBCT S3. Personally ensure the establishment of the plan by subordinate commanders/leaders with on-site inspections.
- Develop fully coordinated, effective combat convoy movement plans with HBCT and BTB commanders and their staff, for execution if necessary with combined arms forces.
- Understand the full capabilities of the tactical and sustainment radio and data transmission capabilities available to the commander and his staff.
 - Maintain contact with higher, lower and adjacent, supported and supporting units. Use a liaison if that is the best solution.
 - Ensure they are used to their full capability and effectively by trained staff and leaders.
 - Ensures connectivity of Standard Army Management Information Systems (STAMIS) and FBCB2 with the HBCT and supporting units.
- Know the responsibilities and capabilities of higher, lower and supporting units and know the support required and what support each level or type of organization can provide.
- Use effective oral communications and write clear directives and orders.
 - Provide commander's intent and mission guidance.
 - Review battle staff estimates of the tactical and logistical situation, their course of action (COA) analysis, and then recommend the COA that best supports the HBCT mission by sustaining the fighting capability of the HBCT.
 - State his estimate of the situation and announces his decision.
- Be familiar with the law of land warfare with respect to civilians, civil affairs, and civil-military operations
- Ensure there is a well-known and rehearsed plan of command succession.

Battalion Executive Officer (XO)

3-11. The battalion XO is the principal assistant to the battalion commander. As second in command, he must understand internal functions of the battalion, and tactical operations plus when necessary assist with support operation functions. He supervises the BSB battlestaff and coordinates assigned missions with subordinate unit commanders. In accordance with command directives, he formulates battlestaff operating policies. He also oversees the master policy file and supervises the tactical operations center (TOC).

3-12. The duties of the battalion XO include:

- Coordinates battlestaff planning and response to the battalion commander's guidance.
- Disseminates time analysis limitations to all battlestaff sections.
- Supervises battle staff mission analysis process.
- Assumes command of the battalion when the battalion commander is unavailable.
- Develops, approves, and monitors battle staff operating policies.
- Oversees coordination of information manager responsibilities for the battlestaff.

Command Sergeant Major (CSM)

3-13. The CSM is the principal enlisted advisor to the brigade support battalion commander on all matters pertaining to and dealing with the enlisted members and their families. He is an advisor and personal battle staff member whose general duties and responsibilities pertain to all levels of the command.

3-14. The CSM serves as the senior enlisted representative for the battalion. As an extension of the eyes and ears of the battalion commander, he maintains frequent contact with his subordinate units and monitors the pulse of the battalion.

3-15. The duties of the BSB command sergeant major include:

- Maintaining close coordination with the HBCT's command sergeant major.
- Providing the battalion commander information on the status of enlisted matters.
- Ensuring the health, morale, and welfare of the unit.
- Serving as the battalion's senior enlisted master trainer. The CSM is critical to identifying training requirements for individuals, crews, battlestaff, units and leaders. The CSM ensures training solutions are resourced, executed, and assessed to satisfy mission essential task list (METL) and battle tasks.
- Responsible for individual Soldier training proficiency in field crafts and basic Soldier skills.
- Recommending enlisted assignments to the BSB commander.
- Ensuring that new Soldiers/leaders replacement training is conducted.
- Ensuring training and development of first sergeants, battlestaff NCOs, and platoon sergeants within the battalion.
- Emphasizing training in field crafts (command post set up, field sanitation, erects field tents, Soldier tasks as applied within the physical environment, etc...).
- Emphasizing training in force protection, including marksmanship, fortifications, combat convoy operations, CBRN, and combat lifesaver.
- Demonstrating expertise in operation of battalion equipment such as weapons, vehicles, generators, communications, and automation.
- Demonstrating expertise in FBCB2.
- Understanding ongoing missions of his unit(s) and supported headquarters.
- Monitoring medical evacuation operations.
- Identifying and helping resolve any battlefield sustainment problems.
- Monitoring mortuary affairs operations.

S1 SECTION

3-16. The S1 is the battalion commander's principal battle staff officer for human resources and other Soldier related support functions. He advises the commander on all personnel support issues and has primary battle staff responsibility for coordinating personnel service support internal to the BSB. This includes personnel services, finance services, chaplain activities, command information services, medical and legal services support. He develops the personnel support annex of the OPOD/OPLAN. He also coordinates for transportation assets in support of personnel functions.

3-17. The S1 functionally organizes battalion S1 personnel to execute the responsibilities of the element. The personnel sergeant assists the S1 by directing the activities of the three major elements. The unit support element is responsible for postal operations management, morale, welfare, recreation (MWR) program administration, and other unit support programs such as equal opportunity (EO), sponsorship, alcohol and drug abuse prevention control (ADAPC), line of duty (LOD), safety and publications/blank forms. The legal support

element is responsible for reviewing officer or enlisted transfers and discharges. They also review military judicial or nonjudicial actions and courts and boards. The personnel support element functions include personnel accounting strength report (PASR), readiness management, database management, casualty reporting, replacement operations, personnel actions, evaluations, retention, promotions and reductions, awards and decorations, military pay and leave, and coordinates command information activities, finance services, chaplain activities and enemy prisoner of war (EPW) administration.

3-18. Typically, the battalion S1 collocates with the S4 section in or near the BSB CP. The duties of the S1 officer include the following:

- Supervises battalion administrative and human resource matters.
- Informs the battalion commander of personnel actions.
- Develops personnel estimates.
- Develops casualty estimates.
- Informs the battle staff of the supportability of missions from a personnel services viewpoint.
- Recommends ways to reduce the effects of major personnel deficiencies.
- Informs the battalion commander on areas that impact on troop preparedness.
- Assists in preparing and processing court-martial and board proceedings.
- Ensures proper and prompt disposition of legal actions to protect the rights of Soldiers within the battalion.

STAFF JUDGE ADVOCATE

3-19. The BSB does not have staff judge advocate (SJA) support within its battle staff. However, the brigade operational law (BOLT) section supports the battalion with legal support operations. In addition to advising on defense and prosecution issues, the BSB commander can call upon the SJA for advice and assistance when dealing with issues such as:

- International agreements regarding the status of forces and installations on foreign soil.
- Contingency contracts and regular acquisitions of goods and services needed for entry into, and sustainment of the force within an AO.
- Compliance with the law of land warfare and in the treatment of enemy prisoners of war (EPW), retained persons, internees, and refugees.
- Claims against the United States and against Soldiers or the unit under Article 139, uniform code of military justice (UCMJ).
- Investigation and disposition of allegations of war crimes and violations of the law of land warfare.
- Compliance with the law of land warfare in operational seizure and use of and reimbursement for foreign, real, and private property.
- Compliance with domestic and international environmental law and regulation.
- Coordination of the commander's legal requirements with the SJA in the BSB CP.

UNIT MINISTRY TEAM

3-20. The BSB commander is responsible for the religious program in his unit. The BSB unit ministry team (UMT) is the staff section that provides religious support (RS) to the battalion. Chaplains serve as the conscience of the command. Chaplains advise the Commander on the moral and ethical nature of command policies programs actions and the impact of command policies on Soldiers. They advise the commander on:

- Religious and ethical issues as they effect mission accomplishment.

- Indigenous religions and their impact on the mission.
- Accommodation of special religious needs and practices within the command.
- Matters of unit morale as affected by religion.

3-21. The following are specific UMT duties:

- **Religious leader.** Religious services; rites, ordinances, and sacraments; spiritual care and counseling; and religious education.
- **Principal religious advisor to commander.** Professional support to the command; Crisis Intervention and Management; management and administration; training; and military religious support operations.

3-22. The team consists of a chaplain and a chaplain assistant. The chaplain provides the clergy-related support to the unit. These include worship and prayer services, funeral and memorial services, and in-depth grief counseling. The chaplain assistant provides the administrative and logistical management for the team as well as the team's security.

3-23. The UMT develops a religious support (RS) annex for the BSB OPORD/OPLAN. This annex is based on the brigade's RS plan and the BSB commander's intent. It addresses the priority of RS to the BSB and BSA and includes UMT support to medical facilities, actions during mass casualty situations, support to enemy prisoners of war, and planning for worship, funeral, and memorial services.

3-24. During sustainment and force protection operations, the UMT keeps abreast of the situation by maintaining contact with the BSB S1 and S2/S3. Through FBCB2, the UMT can receive calls for RS directly from the individual company HQ sections and the BSB staff through the religious support call for support FBCB2 screen. Because the team is small and the mission sensitive, it is critical that the commander allow the UMT as much autonomy as possible. This will provide the most responsive and effective support to the Soldiers.

S2/S3 SECTION

3-25. The S2/S3 officer is the operations, security, and training officer. He is responsible for internal BSB operations. The S2/S3 advises and assists the BSB commander in tactical planning, coordinating, and supervising the communications, operations, training, and security functions of the battalion. The S2/S3 supervises the BSB functions that are not classified as logistics or medical. However, his role and that of the support operations officer require that they maintain constant contact. The S2/S3 is responsible for writing and reviewing the battalion tactical standard operating procedure (SOP).

3-26. The S2/S3 section monitors the tactical operations of the BSB, makes recommendations to the commander, publishes orders, and supervises implementation of plans and orders. It maintains the current friendly and enemy situations. It positions units within the BSA and plans BSA security that includes planning the equipment and personnel for the quick reaction force. Also, in coordination with the any supporting military police (MP) unit with a mission to support the BSA, it develops and implements the traffic circulation plan for the BSA. The brigade troops battalion (BTB) commander ensures the BSA security plan is integrated into the overall brigade rear operations plan or brigade operations plan when operating in a noncontiguous battlespace. When working with a MP section, guidance can be found in FM 3-19.1, *Military Police Operations*.

3-27. The S2/S3 section also plans and coordinates tactical movements. It supervises with staff oversight route reconnaissance, supervises tactical road marches, receives closing reports, and supervises appropriate battle staff activities during movement. The S2 briefs and debriefs all convoys to gain intelligence information.

3-28. The S2/S3 officer duties include the following:

- Conducts continuous intelligence preparation of the battlefield (IPB).

- Recommends the commander's critical information requirements (CCIR) and essential elements of friendly information (EEFI) to the BSB commander.
- Develops the unit task organization in coordination with BSB support operations to correctly reflect the task organization in the existing operation order/plan.
- Considers tactical intelligence and develop OPLANs and OPORDS.
- Prepares the BSB's decision support template (DST).
- Determines unit requirements for map sheets and provides information to the S4 to order them.
- Plans and executes operations security and CBRN defense and training.
- Plans, prepares and executes the mission of the response force with a quick reaction force (QRF) mission.
- Provides estimated times for tactical deployment or movement of the BSB.
- Issues warning order to all assigned or attached elements, informing them of pending operations.
- Coordinates with brigade S2/S3 section battle staff on the tactical situation in the brigade area.
- Prepares contingency plans.
- Analyzes operational data and reports for conformance to directives and commander's intent.
- Conducts BSA tenant meetings that would include the FSC commander and other BOS units, if they are a member of the BSA.

3-29. The S2/S3 operations sergeant. The duties of the S2/S3 operations SGT include the following:

- Conducts continuous intelligence preparation of the battlefield (IPB).
- Advises on base security.
- Coordinates with explosive ordnance disposal (EOD) detachments/teams.
- Determines which group facilities are vulnerable to damage.
- Supervises force protection training: individual and collective tasks for perimeter defense and tactical movement.

3-30. The nuclear, biological, and chemical (NBC) NCO prepares the chemical, biological, radiological and nuclear (CBRN) defense annex to operations plan (OPLA), operations order (OPORD) and SOPs. He monitors CBRN threats and predicts fallout and collects, evaluates, and distributes CBRN reports. He monitors contamination patterns and disseminates CBRN data. He prepares vulnerability analyses of significant targets in the BSB's AO. The NBC NCO coordinates surveys and determines requirements for CBRN protective shelters. He also recommends priorities for decontamination support and monitors and assists in the employment of CBRN teams. He develops response procedures for CBRN defense and makes recommendations to the commander on mission oriented protective posture (MOPP) levels. He also prepares NBC reports 1 through 6. The duties of the NBC NCO include:

- Conducts continuous intelligence preparation of the battlefield.
- Supervises the CBRN program.
- Prepares tactical CBRN plans.
- Conducts weather analysis and nuclear vulnerability assessment analysis.
- Maintains the radiation exposure status for subordinate units.
- Plans for decontamination support to subordinate units.

3-31. **S2 officer and NCO duties.** The S2 informs the BSB commander on all intelligence preparation of the battlefield (IPB) information. He also develops the R&S plan. The S2 officer and his staff develop procedures for handling and using or disposing of enemy

equipment and documents. The S2 NCO supervises the handling of enemy defectors and materiel, and monitors EPW collection point activities for the BSB. He also is responsible for obtaining classified maps through staff S2/G2 channels required by BSB units. Finally, he is responsible for the preparation of the following documents:

- Intelligence annex to orders.
- Daily intelligence summary for subordinate units.
- Operations estimates.
- Intelligence estimates updates. Paragraphs 2 and 3 of the BSB OPORD/OPLAN.

3-32. The S2 is also responsible for the following tasks:

- Conducts continuous intelligence preparation of the battlefield.
- Debriefs patrols and convoys to gather potentially critical information for targeting future enemy operations or analyzing patterns of enemy operations i.e. pattern analysis of the enemy.
- Conducts pattern analysis of the BSB's and other logistics unit's battle rhythm or reactions to contact and ascertain if the enemy could see and capitalize on them. Identifies them and then varies the unit schedule or actions accordingly.
- Continuously monitors route status.
- Conducts continual refinement, execution and update of the R&S plan.
- Helps prepare the S3's situation and event templates.
- Coordinates tactical intelligence activities between subordinate units, and brigade S2/S3.
- Maintains a weather factor analysis matrix.
- Performs terrain analysis of the area of responsibility (AOR).
- Prepares situation event and decision support templates.
- Supervises preparation of the intelligence portion of OPLANs/OPORDs and maps.
- Develops the intelligence estimate.
- Distributes the analysis of the AO, as appropriate.
- Identifies intelligence collection requirements.
- Assesses enemy vulnerability and probable courses of action.
- Disseminates intelligence to subordinate units.
- Prepares reports on captured enemy materiel.

S4 SECTION

3-33. The BSB S4 provides technical supervision and assistance for unit-level support within the battalion. He is responsible for preparing the BSB's logistics estimate and making recommendations to the commander on internal logistics activities. He also writes, in coordination with the S1, the internal service support annex to the BSB OPORD/OPLAN. He supervises personnel in the S4 section. The BSB S4 coordinates all internal BSB related logistics planning with the HBCT S4 to ensure the BSB is integrated in to the HBCT logistics plan. The BSB S4 will also coordinate for use of the commander's emergency response program (CERP) funds with the HBCT S4.

3-34. The S4 also reports on the overall internal logistics situation. He reports significant problem areas and major deficiencies in basic loads. He should also include an account of significant incidents that hinder internal logistics operations.

3-35. The S4, in conjunction with the S2/S3 section personnel prepare the unit administrative movement order for moves, although elements may move constantly. The S4 develops and maintains administrative movement plans for all modes of transportation using FM 4-01-series publications. Unit movement plans should include:

- Security requirements.
- Logistics coordination requirements.
- Load plans for vehicle, aircraft, and rail cars.
- Duties of unit movement personnel.
- Preparation of transportation documents.
- Description (weight, length, width, and height) of outsized, unusual cargo.
- Coordination with the HBCT S4 movement control officer.

3-36. The S4 also coordinates movement plans with the S2/S3 and monitors field feeding and sanitation activities within the BSB. He consolidates transportation requirements for BSB units and passes them to the support operations section. The S4 coordinates through the HBCT S4 to obtain payment support for local procurement and imprest fund operations from the servicing sustainment brigade finance support unit. The duties of the S4 officer include the following:

- Conducts continuous internal to the BSB logistics preparation of the battlefield.
- Develops the internal logistics estimate.
- Keeps BSB battle staff informed of mission supportability from an internal logistics viewpoint.
- Monitors the unit supply and unit maintenance operations of subordinate units.
- Obtains maps and prepares overlays ICW other staff sections.
- Acquires and assigns facilities.
- Provides advice on food service operations and the command.
- Monitors property book activities.

3-37. The S4 section works with the distribution company for the BSB's supplies. It coordinates with them on locations of internal supply and services activities. It processes requests for replenishing basic loads of all BSB elements, and monitors the request of Class I, II, III, IV, V and VII items. It requests and issues all required common table of allowances (CTA) 50-900 items within the BSB. It monitors requests that BSB elements submit for Class IX items. The section also monitors the status for all battalion elements in the area of operational readiness of equipment. It prepares the Class III (bulk) forecast for the BSB and submits it to the support operations section. The S4 section coordinates with the S1 on unit strength and replacement data to project logistics requirements. Together they also ensure BSB replacements are issued all authorized equipment.

BSB MAINTENANCE OFFICER

3-38. The BSB maintenance officer is a maintenance warrant officer in the BSB S4 section who coordinates BSB maintenance operations with the BSB support operations section and the BSB maintenance company. He is the BSB field maintenance technical expert. The BSB maintenance officer works closely with the BSB maintenance company. He consolidates BSB unit maintenance reports. He provides the commander and other battle staff sections with equipment status reports. He also supervises controlled exchanges in accordance with (IAW) the commander's priorities. He monitors BSB combat spares (prescribed load list (PLL), shop and bench stock) and coordinates recovery of BSB equipment.

3-39. The BSB maintenance officer uses the Army materiel status system (AMSS) module in the Unit Level Logistics System-Ground (ULLS-G) to process and produce an automated mission condition status report (MCSR). The Army materiel status system replaced manual readiness reporting on the front side DA Form 2406 (*Materiel Condition Status Report*). The ULLS-G box is located in the maintenance company's maintenance control office. The BSB maintenance officer is responsible for preparing the readiness report for the BSB commander to sign.

3-40. The duties of the BSB maintenance officer include the following:

- Conducts continuous logistics preparation of the battlefield.
- Ensures mission essential equipment is available to accomplish mission support.
- Controls battle damage assessment and repair (BDAR), recovery, and maintenance operations internal to the BSB.
- Determines maintenance priorities for BSB equipment with the battalion XO.
- Coordinates AMSS reporting with appropriate staff agency.
- Monitors the battalion's Army oil analysis program.

S6 SECTION

3-41. The BSB communications officer (S6) supervises communications, automation, and security (COMSEC) and controlled cryptographic items (CCI) activities. The signal specialists install, operate, and maintain communications equipment. This entails the establishment and maintenance of the net control station (NCS) for the BSB net. They ensure communication links with higher, adjacent, subordinate, and supported units. They plan and implement backup means of communications and ensure radio communications exist during a move between the start point (SP) and release point (RP) point, and along the route of march. They also develop and implement a BSA security communications system to connect elements such as the dismount point, observation post (OP), logistic release point (LRP), and quick reaction force (QRF). The S6 is responsible for the full range of tasks associated with network management, systems administration and systems/software security for all tactical automation IAW FM 24-7.

3-42. As systems administrators and system/software security managers the S6 performs all tasks normally associated with information technology (IT) operations ranging from issuing passwords and installing anti-virus software, and performing BCS3 network management functions. The S6 works closely with the BSB's combat service support automation management officer (CSSAMO) to resolve applications problems with logistics STAMIS. The S6 is also responsible for installing and operating local area networks in support of BSB operations. He is responsible for determining requirements and exercising battle staff supervision over communications services related to BSB operations. He advises the commander, battle staff, and subordinate units on communications and automation information systems (AIS) matters.

SUPPORT OPERATIONS SECTION

3-43. This section, under the direction of the support operations officer, provides centralized, integrated, and automated command, control, and planning for all distribution management operations within the battalion. It coordinates with logistics operators and medical personnel in the fields of supply, maintenance, force health protection (FHP), mortuary affairs, and movement management for the support of all units assigned or attached in the brigade area. Its primary concern is customer support and increasing the responsiveness of support provided by subordinate units. It continually monitors the support and advises the battalion commander on the ability to support future tactical operations. With the Global Combat Support System-Army (GCSS-A), BCS3, FBCB2, Blue Force Tracker, and Movement Tracking System (MTS), the support operations section has access to more information and receives information in near real time. Therefore, support operations possess the capability to view the tactical and logistics common operating picture in the maneuver units. This allows support operations to identify problems quicker and allocate resources more efficiently. BCS3 gives support operations the visibility of the logistics status from the combat battalion to the BSB clear back to the sustainment brigade and potentially throughout the world depending upon the level of detail required. This battlestaff section serves as the point of contact (POC) for supported units. It directs problems to appropriate

technical experts within subordinate branches. The duties of the support operations officer include the following:

- Conducts continuous HBCCT focused logistics preparation of the battlefield.
- Plans and coordinates for aerial resupply and plans for landing zones (LZs) vicinity of the BSA.
- Develops logistics synchronization matrix.
- Submits logistics forecasts to the UEx sustainment brigade.
- Manages all flatracks throughput to and retrograding from the brigade support area.
- Coordinates and provides technical supervision for the BSB's sustainment mission; which includes supply activities, maintenance support, FHP, and coordination of transportation assets.
- Identifies tentative force structure and size to be supported.
- Coordinates the preparation of the support operations estimate on external support.
- Provides support posture and planning recommendations to the BSB commander.
- Sets up and supervises the logistics operations center located in the BSB TOC.
- Coordinates with brigade S3 air for air routes for supply and aeromedical evacuation support.
- Provides centralized coordination for units providing support to the brigade.
- Analyzes the impact of BCS3 reports.
- Advises the battalion commander on the status of logistics support.
- Coordinates logistics support for units passing through the brigade's area. Works with BSB S3, BTB S3 and HBCCT S3, as appropriate, for terrain management and movement across other unit's AO.
- Analyzes contingency mission support requirements.
- Revises customer lists (as required by changing requirements, workloads, and priorities) for support of tactical operations.
- Coordinates external logistics provided by subordinate units.
- Advises the battalion commander on the supportability of BSB support missions and of shortfalls that may impact on mission accomplishment.
- Serves as the single point of coordination for supported units to resolve logistics support problems.
- Plans and coordinates contingency support.
- Develops supply, service, maintenance, and transportation policies that include logistics synchronization and maintenance meetings.
- Plans and supports combat replenishment operations (CRO), sustainment replenishment operations (SRO) and mission staging operations (MSO).
 - CRO is defined as brief or pit-stop like events to rearm, refuel, provision essential supplies, and support the maintenance function by cross leveling and use of on-board spares with a duration of up to 3 hours.
 - SRO is defined as quick, in-stride, sustainment operations that are conducted within a unit's battle rhythm with a duration of 3 to 7 hours. An SRO can be either a deliberate or hasty operation if an opportunity exists or circumstance allow.
 - MSOs are intense time-sensitive operations which include all preparations for an upcoming mission—planning, troop leading, rehearsals, training, reconnaissance, and surveillance, reconstitution, tailoring for the next mission, information operation, etc. to ensure mission success. This is a planned deliberate operation.

MSO can be of duration of one to three (1-3) days that will require support from the BSB and sustainment brigade.

3-44. The support operations officer will perform functions as the BCS3 manager. The support operations officer must work in conjunction with the S2/S3, S4, and S6 to establish and manage the BCS3 network and database. The support operations officer must maintain supply point and maintenance data entered into the system. Specific tasks for the support operations officer are:

- Gathering, inputting, and maintaining supply point logistics and maintenance data in the system.
- Developing the critical tracked items list (CTIL) to track supply point items of interest to the commander.
- Setting message handling tables to correctly route supply logistics messages.
- Setting status thresholds for supply point items.
- Establishing reporting times for subordinate direct support units.
- Setting support-to-supported relationships to reflect which supply points support which units.
- Establishing and setting continuity operations (CONOPS) pairing IAW guidance from the HBCT S4.

3-45. The duties of the support operations SGT include the following:

- Conducting continuous logistics preparation of the battlefield.
- Analyzing trends and forecasting requirements for supplies and equipment based on priorities and procedures.
- Coordinating major end item resupply activities within the group.
- Coordinating activities internal to the support operations section.

Supply and Services Cell

3-46. The support operations supply and service officer plans and recommends the allocation of resources in coordination with the supported chain of command. This includes coordination with the distribution section. He also forecasts and monitors the distribution of supplies within the brigade. This information is entered into BCS3 at the brigade S4 and transferred to BCS3 at the support operations. This allows support operations to identify problems quickly and allocate resources more efficiently through BCS3. The supply and service officer is responsible for mortuary affairs (MA) activities carried out within the brigade area of operations. He is also responsible to coordinate and monitor all transportation movements of replenishment stocks and services for and within the BSB. Duties of the supply and services officer include the following:

- Conducts continuous logistics preparation of the battlefield.
- Determines petroleum and water requirements.
- Provides technical expertise on supply and distribution of petroleum and water.
- Reviews bulk fuel forecasts and adjust the forecasts after coordination with the brigade S3 on the impact of tactical operations on fuel requirements.
- Secures additional fuel and water storage capacity.
- Monitors requirements for water source.
- Provides technical guidance on water treatment, storage, distribution, and quality control operations.
- Supervises flatrack management within the brigade support area.
- Provides technical expertise on supply and field service support.
- Coordinates field services support for the brigade.

- Coordinates with UEx sustainment brigade relative to requirements for evacuation of remains to CONUS.
- Supervises the mortuary affairs (MA) NCO and transportation NCO.
- Coordinates and monitors all transportation within the brigade battlespace.
- Conducts battle staff inspections to resolve problem areas and provides supply functional expertise.
- Monitors Class IX authorized stockage list (ASL) mobility requirements.
- Provides advice on management of ASL stockage.
- Provides technical guidance on stock records and materiel control and accounting functions.
- Uses summary management reports to evaluate the efficiency of supply functions.
- Analyzes data and reports to determine efficiency of operations conformance to standards and trends.
- Determines material handling equipment MHE requirements to support operations.
- Monitors subsistence supply, storage, and distribution operations in subordinate units.

3-47. The supply and services section has one MA NCO with which to coordinate all MA support within the brigade area. The BSB has no other organic MA assets. The NCO's duties include:

- Advises the BSB commander on MA issues.
- Coordinates MA operations in the brigade AO.
- Conducts continuous logistics preparation of the battlefield.
- Trains the brigade and BSB units and personnel on performing search and recovery, tentative identification, and evacuation of remains to the mortuary affairs collection point (MACP).
- Establishes the mortuary affairs collection point within the BSA.
- Coordinates with the sustainment brigade for augmentation by a MA collection platoon.
- Advises on emergency burial policy and the security and disposition of remains and personal effects.
- Plans and coordinates escort of remains.
- Maintains files, reports, and a situation map on MA support activities.

3-48. Individual units are responsible for initial search, recovery, identification, and evacuation of remains to the MACP. The MACP provides temporary storage of remains and personal effects before evacuating the remains and their accompanying personal effects to a MACP in the brigade support area (BSA) or sustainment brigade. When tasked, the MACP also provides support to units forward of the BSA by providing personnel to supervise post-combat search and recovery missions or interment.

3-49. The supply and services MA NCO recommends to the BSB commander the best location within the BSA for the MACP. Sites are screened from passing troops and access to the site will be the responsibility of the NCOIC at the MACP. Collection points should be located near MSRs or the ammunition transfer/holding point (ATHP) near the BSA. They are usually located near the main supply route (MSR). Once the site has been approved, administrative orders are published detailing the location of the MACP. The BSB commander provides adequate manning to assist the MA NCO in establishing and operating the site. During this time, the sustainment brigade mortuary affairs company deploys a MA platoon forward to the DSA. The MA platoon then sends a MA collection section to the BSB.

3-50. Vehicles bringing supplies (except Class I) to the BSA evacuate remains to the BSA collection point as a backhaul mission or by throughput to the sustainment brigade collection company. The recommended method of evacuation of remains is air evacuation (fixed or rotary wing) in coordination with the BSB support operations and UEx G3 air. The UEx G3 approves, requests, and tasks the aviation brigade to perform the mission. Applying the throughput concept, remains may be evacuated directly to the rear for shipment to the port of embarkation (POE) mortuary. This method of evacuation allows for expeditious processing and minimizes advanced stages of decomposition of remains. For morale purposes and respect for the deceased, remains should always be covered and screened from sight during transportation.

3-51. The supply and services cell also has a role in distribution. This cell coordinates and monitors all transportation movements of replenishment stocks and services for and within the BSB. It also coordinates the transportation requirements for backhaul of equipment and supplies with the MCO in the UEx sustainment brigade. Delivery priorities are coordinated with the BSB support operations.

3-52. The supply and services cell has two traffic management coordinators assigned to control the movement of transportation assets in and around the BSB. The traffic management coordinators coordinate, monitor, control, and supervises the movement of personnel, equipment, and cargo. Movement can be by air, rail, highway, and water. They determine the most efficient mode of transport that accomplishes mission requirements. Specific functions the traffic management coordinators will perform within the BSB are to supervise cargo documentation and movement control for all transportation modes. They develop and review movement programs (to include convoy planning) for logistical support functions within the BSB/BSA. They advise in the preparation of support plans where transportation is required. They verify the accuracy of movement control documents. They ensure allocation of transport capability is appropriate to accomplish each mission in a cost-effective manner. When transportation requirements exceed the BSB's capability, the traffic management coordinators coordinate support with the movement control office (MCO) in the sustainment brigade's support operation section. They also anticipate and recommend the use of main supply route (MSR) to the MCO.

3-53. The addition of new enabling technologies will allow the traffic management coordinators to track, trace, and divert transportation platforms operating the HBCT AO. The traffic management coordinators are responsible for the in transit visibility (ITV) in the theater of operations. This will be best accomplished by the BSB movements NCO interfacing with other STAMIS to develop inbound/outbound requirements and also using the movement tracking system (MTS) and other ITV technology to get a near real-time location of transportation assets and supplies. In addition, the traffic management coordinators are able to synchronize the delivery schedule via FFCB2 with customer units to minimize the offload/upload times. With FFCB2 and the MTS control station, the traffic management coordinators are now able to give specific coordinating instructions to the vehicle operators without having to rely on manned control points. These new technologies will allow information to be transferred between the HBCT S4, battalion S4, BSB support operations section and the traffic management coordinators to schedule and synchronize transportation requirements within or in support of brigade/battalion operations.

3-54. The duties of the movement NCO include the following:

- Conducts continuous logistics preparation of the battlefield.
- Overall flat track management responsibility within the brigade support area. The movement control NCO has flat track management and status reporting responsibility to the HBCT movement control office.
- Prepares battalion movement plans and annexes in support of logistics or contingency plans.

- Resolves movement priority conflicts with the support operations officer and S2/S2/S3.
- Coordinates subordinate unit movement requirements with EAB.
- Regulates MSR use requirements for unit moves.
- Operates movement tracking station.
- Coordinates movement of aerial logistical resupply.

Maintenance Cell

3-55. The support operations maintenance officer plans and recommends the allocation of resources in coordination with the supported unit's chain of command. This includes coordination of maintenance company's operations. He also forecasts and monitors the workload for all equipment by type. The maintenance officer and maintenance NCO use standard Army maintenance system- level 2 (SAMS-2) to collect and process maintenance operations data and to assist in the management of maintenance operations. It processes maintenance information required to control workload, manpower, and supplies. The SAMS-2 capabilities are designed to assist in both maintenance and readiness management.

3-56. Maneuver units will transmit logistics situation report (LOGSITREP) electronically to the brigade S4 and BSB SPO. This allows support operations to identify problems quickly and allocate resources more efficiently. FBCB2 also provides map graphics that portray unit locations, grid coordinates, and terrain features so support operations can track maintenance on the battlefield.

3-57. The support operations maintenance cell develops the plans and policies for reparable exchange, and Class IX operations. It monitors shop production and job status reports in the field maintenance company and FSCs. It also monitors and reviews the combat spares and coordinates critical parts status with the sustainment brigade. For unserviceable items, the SAARS box in the distribution company generates disposition instructions based on UEx and UEy commander guidance. Instructions include evacuation, cannibalization, and controlled exchange policies. With the brigade S4, it reviews backlogs on critical weapon systems. For any additional support requirements, the BSB support operations coordinates through the UEx sustainment brigade materiel management branch. The duties of the maintenance officer include the following:

- Conducts continuous logistics preparation of the battlefield.
- Tracks and investigates Class IX high priority requisitions.
- Assists with planning and coordinating contingency support.
- Directs redistribution of maintenance workloads by BSB.
- Coordinates maintenance back-up support with the sustainment brigade.
- Monitors units' maintenance posture using SAMS-2.
- Coordinates maintenance priorities with the brigade S4.
 - Provides recommendations to the HBCT S4 to redistribute FSC maintenance assets within the HBCT.
- Establishes maintenance priorities for workload management through coordination with the supported unit.

Health Service Support (HSS) Cell

3-58. The HSS cell is staffed with a medical operations officer, a medical logistics officer (MLO) and an operations NCO. Personnel assigned to this cell are members of the BSB battle staff. This cell is responsible for:

- Providing the force health protection (FHP) component for logistics preparation of the battlefield (LPB) for the BSB.

- Providing the FHP estimates, patient estimates, and medical threat input for inclusion in the BSB commander's estimate.
- Coordinating and synchronizing BSB FHP for the BCT and EAB units operating in the brigade AO.
- Coordinating the delivery of Class VIII with supported units/elements.
- Overseeing all BSB FHP planning activities to ensure such planning is synchronized laterally and vertically.
- Developing the FHP portion of the BSB OPLAN in coordination with the BSB staff, the brigade support medical company (BSMC) commander, and the brigade surgeon section (BSS).
- Coordinating the placement of supporting sustainment brigade medical elements attached to the BSB and operating within the brigade support area (BSA).
- Identifying FHP support requirements for the BSA.
- Coordinating FHP taskings from the BSS, with the BSB staff and the BSMC commander. Tasking may include area medical/dental, support, medical evacuation by ground ambulance, preventive medicine (PVNTMED), combat operational stress control, and FHP reinforcement, or reconstitution support.
- Coordinating for the training and use of non-medical personnel to perform patient decontamination procedures under the supervision of medical personnel in the event of a CBRN or weapons of mass destruction attack. (See FMs 4-02.7 and FM 3-5).
- Coordinating for the training and use of non-medical personnel and equipment in the event of a mass casualty (MASCAL) event, such as to serve as litter bearers.
- Coordinating and synchronizing all FHP requirements with the BSS.
- Monitoring the status of BSB and brigade medical elements via the medical situational reporting on FBCB2.
- Advising the BSB commander on FHP operations in the BSA and brigade AO.
- Maintaining situational understanding of lateral and supporting medical units.
- Submitting and forwarding status reports IAW brigade tactical SOP (TSOP).
- Coordinating for the evacuation and replacement of medical equipment with the supporting medical logistics (MEDLOG) element.
- Submitting and forwarding status reports according to the BSB and BCT TSOP.
- Verifying emergency Class VIII request for submission to the supporting MEDLOG element and taking the necessary action to expedite shipment.
- Establishing and managing the Class VIII critical items list (to include blood products) in coordination with the BSMC and the BSS.
- Establishing coordination procedures for the disposition of captured medical materiel, if required.
- Prioritizing Class VIII supply request and distribution requirements, as required.
- Analyzing Class VIII replenishment operations, identifying trends in performance, and providing technical advice, as necessary.
- Receives all technical medical guidance from the brigade surgeon.

3-59. For brigade FHP operations, the HSS cell provides input to the BSS for inclusion into the FHP annex of the brigade OPLAN. See FM 4-02.21 for definitive information on the BSS. The medical operations officer provides BSS information on all medical activities to include: attachment of sustainment brigade medical elements, Class VIII resupply, medical evacuation, and priority of FHP for the BSA and brigade AO. Based on estimates from the HBCT S1, the medical operations officer develops the FHP plan for the BSB. This HSS cell assists the BSS with the coordination and implementation of the brigade FHP plan. The

HSS cell coordinates the BSB FHP plans with units in the BSA and the BSS and the supported units. The HSS cell through the support operations section provides appropriate and timely tasking to the medical company to ensure adequacy of support. The HSS cell plans for the use of nonstandard platforms for casualty evacuation and the support operations section manages their use during mass casualty operations. See FMs 8-10-6 and 8-10-26 for definitive information on medical evacuation operations.

3-60. The HSS cell coordinates and synchronizes the BSB FHP missions with the BSS. Force health protection for the brigade is planned and monitored by the BSS. The BSS is collocated with the brigade TOC. The brigade surgeon and his staff are responsible for all medical activities in the brigade area as to how they are technically executed. The brigade surgeon is a special staff officer to the brigade commander, and works in close coordination with the brigade staff. He uses the brigade S1's casualty and loss estimates and the brigade S2/S3's mission plan to develop a plan for FHP that will provide the most effective and efficient use of medical resources assigned or supporting the brigade. During the planning phase of the BSS:

- Provides the FHP estimate, patient estimates, and medical threat input for the commander's estimate.
- Reviews the OPLAN and contingency plans to identify potential medical hazards associated with the location and climatic conditions.
- Determines procedures, techniques, and limitations in the conduct of routine medical care, emergency medical treatment, and advanced trauma management. This includes planning and coordinating for:
 - The system of treatment and medical evacuation, including medical evacuation by Army ground and air ambulance.
 - Dental services.
 - Preventive medicine services.
 - Combat operational stress control.

3-61. The brigade surgeon is also responsible for coordinating GS and DS relationships of organic medical units and of other medical units or elements under OPCON of the brigade. See FM 4-02.21 for information on the BSS.

3-62. The medical communications for combat casualty care (MC4) system will assist the HSS cell and the BSS in performing their responsibilities through the collection, integration, and transmission of medical information. These sections will have near real-time information on the status of medical units, brigade unit medical readiness information, casualty evacuation, medical supplies, and medical treatment.

Battle Staff

3-63. The BSB headquarters battle staff is the team that allows the BSB commander to be a practitioner of battle command. The combination of the battalion and supporting staff elements form the commander's battle staff.

SECTION II – DUTIES AND RESPONSIBILITIES OF KEY PERSONNEL FOR LOGISTICS WITHIN THE HBCT

3-64. The HBCT TOC controls and coordinates logistics for the HBCT. This includes ensuring that supplies and services for replenishment are provided by higher, joint, multinational, host nation, or contract sources. The primary logistics functions required by the HBCT include casualty treatment and evacuation, resupply operations, maintenance activities, and personnel service support. The HBCT S1 and S4 sections are within the sustainment cell of the HBCT TOC. A method to effect close coordination with the BSB TOC

and its support operations section during planning processes is to have the BSB provide liaison personnel to the HBCT TOC during the deliberate military decision-making process (MDMP).

3-65. **HBCT commander.** The commander ensures that logistics operations sustain his HBCT's fighting potential. He provides guidance for logistics personnel and his battlestaff on the following areas:

- Sustainment priorities in terms of maintenance, transportation, supply, force health protection, field services, explosive ordnance disposal, human resources support, financial management operations, religious support, legal support, and band support.
- Location of logistics assets.
- FHP operations.
- Controlled supply rates.
- Guidance on construction and provision of facilities and installations.

3-66. **HBCT deputy brigade commander (DBC).** The DBC is responsible to the HBCT commander for integrating the logistics plan throughout the HBCT and ensuring its execution.

3-67. The following are general areas that he could focus on to meet this requirement:

- Advise the commander on all matters regarding logistics within the HBCT.
- Overwatch the HBCT's MDMP as it relates to logistics of the HBCT to ensure all logistics functions and their capabilities are taken into consideration to include force protection requirements.
- Ensure that there is a HBCT level logistics synchronization and maintenance meeting conducted by the BSB with appropriate participation for the METT-TC conditions.
- Ensure the sustainment needs of the HBCT's brigade troops are coordinated with the BTB commander.

3-68. **HBCT executive officer.** The XO integrates and synchronizes the HBCT's logistical efforts. During the deliberate planning phase, he ensures that logistics requirements are included in the MDMP process and ensures that either FHP is part of the maneuver rehearsal or that immediately preceding the maneuver rehearsal there is a HBCT level logistics and a medical evacuation rehearsal.

3-69. **BSB commander.** The BSB commander is the senior logistics commander and logistics operator for the HBCT. He directs all units organic or attached to the battalion in support of the HBCT mission. He also has C2 of all elements in the BSA for security and terrain management and ensures that the HBCT commander's logistics guidance is being fulfilled.

3-70. **Combined arms, fires and reconnaissance commanders.** The commander ensures that logistics operations sustain his maneuver unit's fighting potential and exercises all C2 authority (administratively and tactically) with the assigned/organic FSCs.

3-71. He provides guidance for logistics personnel and his battlestaff regarding the following areas:

- Sustainment priorities in terms of maintenance, transportation, supply, force health protection, field services, explosive ordnance disposal, human resources support, financial management operations, religious support and legal support.
- Location of logistics assets.
- FHP operations.

3-72. **Brigade troops battalion (BTB) commander.** The BTB commander has C2 of the assigned/organic separate companies and attachments of the HBCT. The BTB provides the HBCT with military intelligence support, communications and force protection capabilities. The BTB trains organic units and provides C2, administrative/logistical operations, force health protection to organic and attached units. The BTB has organic support assets that provides the BTB maintenance, CL III and field feeding support. The organic medical support section provides treatment and evacuation services. This support unit may receive augmentation from the BSB per mission requirements. The BTB support includes support to the HBCT HHC. The BTB secures all HBCT command posts and plans, prepares and executes security operations within the HBCT rear area, with assets provided by the HBCT commander, to defeat Level I and II enemy threats.

3-73. **HBCT adjutant (S1).** The HBCT human resources section is responsible for maintaining unit strength and conducting personnel actions. The S1 section processes status and strength reports and personnel awards and orders. It coordinates finance, legal, and postal services for the HBCT. The S1 coordinates the special staff efforts of the chaplain, brigade surgeon, and any attached public affairs personnel. The S1 manages the casualty system. The S1 is also the staff point of contact for activities such as inspector general and morale support issues.

3-74. **HBCT logistics officer (S4).** The logistics section is responsible for providing logistical planning and support to the HBCT. He determines the requirements for maintenance, supply, transportation, and services for the HBCT. The S4 section is at the main CP to assist the S2/S3 synchronization of combat and sustainment operations.

3-75. **HBCT signal officer (S6).** The S6 section is responsible for maintenance management of the C2 INFOSYS network. (See discussion of Bridge to the Future in Appendix A) S6 sections in the HBCT's battalions provide operator maintenance support. The HBCT signal company provides limited field maintenance support for organic signal equipment within the company. The S6 also coordinates for civilian and contractor support to supplement military personnel.

3-76. **BSB support operations officer.** The support operations officer (SPO) is the principal BSB staff officer for coordinating logistics to the HBCT. He provides the technical supervision for the external logistics mission of the support battalion. He is the key interface between the supported units and the support battalion. Support requirements are determined in coordination with the HBCT S1, S4, the surgeon, and the logistics representatives of the supported units. The SPO plans and monitors support operations and makes necessary adjustments to ensure support requirements are met. The SPO requests and coordinates augmentation with the higher echelon when requirements exceed capabilities.

3-77. **Brigade surgeon.** The HBCT brigade surgeon, as a special staff officer, is responsible for FHP operations in support of the HBCT. Using his staff, he ensures the timely planning, coordination, integration, rehearsal, and synchronization of HSS assets in support of HBCT operations. The brigade surgeon coordinates with the BSB, the combined arms battalions, the fires battalion, the reconnaissance squadron, and other staff elements to ensure adequacy of support. The brigade surgeon, as authorized by the commander, is responsible for all of the medical activities in the command as to how they are technically executed. The brigade surgeon keeps the commander informed on the status of FHP for HBCT operations and on the health of the command. He coordinates and synchronizes FHP planning and operations with the BSB SPO HSS cell. He provides technical medical directions and guidance to other subordinate medical cells, sections, and units in the HBCT. This BSS cell includes a medical operations officer, a medical logistics plans and operations NCO, and a MLO. See FM 4-02.21 for definitive information on duties of the brigade surgeon.

3-78. **Brigade operational law team (BOLT).** The BOLT is an integral part of the brigade's fires and effects cell (FEC). 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.

3-79. The BOLT is composed of a brigade judge advocate, an operational law judge advocate and a paralegal NCO.

3-80. The brigade judge advocate (BJA) is the legal advisor to the brigade commander and the senior legal advisor to the brigade staff.

3-81. The operational law judge advocate (OPLAW JA) supports the BJA in delivering 24/7 operational law support to brigade operations. The OPLAW JA also serves as the brigade trial counsel, prosecuting courts-martial and serving as the recorder to administrative boards.

3-82. The brigade paralegal NCO is battlestaff qualified and coordinates the delivery of paralegal support to the BOLT and the brigade staff. The paralegal NCO is also responsible for the technical supervision of the paralegal specialist (27D10) embedded in each of the brigade's organic battalions.

3-83. The paralegal specialist in each of the organic battalions ensures timely and responsive paralegal support at the unit level, rapid legal issue identification, and reliable coordination of legal matters between unit commanders and the BOLT. When at home station, these battalion paralegal specialists may be consolidated in a Brigade Legal Center under the supervision of the brigade paralegal NCO.

3-84. The BOLT provides the brigade commander and staff with immediate access to the legal expertise they need to prevail in an increasingly complex and legally intensive operational environment. The primary mission of the BOLT is to provide expert legal support to the planning and conduct of military operations (AUTL, Art. 7.4.5). This includes:

- Preparing legal estimates, drafting legal annexes and reviewing operational plans and orders.
- Developing, interpreting, and training rules of engagement (ROE) and rules on the use of force (RUF).
- Advising on the application of the law of war (or other humanitarian law) to military operations, including the legal aspects of targeting.
- Coordinating determinations on the status and proper treatment of enemy prisoners of war (EPW), detainees, and civilian noncombatants.
- Ensuring the proper reporting and investigation of violations of the law of war.
- Advising on battlefield acquisition and contingency contracting matters.
- Advising on relations with nongovernmental organizations (NGOs) and private volunteer organizations (PVOs) and the release of information to the media.

3-85. The location of the BOLT in the effects cell of the HBCT CP is designed to facilitate integrated and responsive legal support to the targeting process, so that targeting decisions comply with the law of war.

3-86. **Chaplain.** Chaplains are assigned to US military units to assist commanders in providing for the right of free exercise of religion to all personnel. The chaplain is a special staff member who serves as a confidential advisor to the commander on the spiritual fitness

and ethical and moral health of the command. He is responsible for the professional oversight of the battalion unit ministry teams. Each UMT is composed of a chaplain and one enlisted chaplain's assistant.

LIMITATIONS OF THE BRIGADE SUPPORT BATTALION

3-87. The BSB is not designed to provide all or part of the following logistics functions. Explanations as to how the logistics functions are provided are explained in Chapter 6, Sustainment Operations.

- A requirement exists to plan for and receive augmentation based on the METT-TC to accomplish missions. Assessing the mission organization of the HBCT's brigade support battalion is a critical task in every mission analysis.
- Urban areas, dense jungles and forests, steep and rugged terrain, and large water obstacles limit movement.
- Field Services:
 - Mortuary affairs—planning only—no collection, processing and evacuation without augmentation.
 - Laundry and bath is not organic at this level—support is provided by the sustainment brigade.
- Limited financial management.
- Limited Class IX/VIII storage capability.
- Limited capability to re-configure load. Ammunition from EAB must be in strategic or operational configured loads.
- No fire fighting capability.
- Explosive ordnance disposal (EOD) is provided by the maneuver enhancement brigade.
- Human resources other than its own unit S-1 HR operations. Reliance on the sustainment brigade to provide additional critical wartime personnel support.
- Legal Support is limited to the assigned brigade operations law team (BOLT); augmentation to support all JAG functions is required.
- Limited maintenance back-up support to the maneuver units.
- No organic band support.
- Optical fabrication and blood product management support.
- No organic aeromedical evacuation support.

SECTION III – BSB'S COMPANIES ORGANIZATION AND FUNCTIONS

FUNCTIONS COMMON TO EACH COMPANY

3-88. The company headquarters is responsible for the command and control, and security of the company. Functions of the company headquarters are to:

- Maintain load plans.
- Perform route reconnaissance.
- Organize the unit for movement and issue movement orders to company personnel. Request additional transportation through the BSB S4.
- Coordinate with the BSB S2/S3 on the quartering party.
- Provide C2 of the company in response to an air or ground attack.
- Coordinate perimeter defense IAW with the BSB OPORD.
- Establish communications with higher, lower and adjacent units.
- Determine placement of CBRN assets in the headquarters area.

COMPANY COMMANDER

3-89. The company commander is responsible to the BSB commander for the discipline, combat readiness, and training of his company. He must be proficient in the tactical employment of the company. Additionally, his responsibilities include leadership, discipline, tactical employment, training, administration, personnel management, supply, maintenance, communications, and sustainment activities of the company. These duties require the commander to understand the capabilities of the company's Soldiers and equipment and to know how to employ them to best tactical and logistics advantage. At the same time, the commander must be well versed in enemy organizations, doctrine, and equipment. Using this knowledge, the commander prepares his unit for combat operations using troop-leading procedures. Ultimately, he must know how to exercise command effectively and decisively. He must be flexible, using sound judgment to make correct decisions quickly and at the right time based on the higher commander's intent and the tactical situation. He must be able to issue instructions to his subordinate leaders in the form of clear, accurate combat orders and then he must ensure that the orders are executed. The company commander's responsibility in combat is threefold. He will:

- Accomplish all missions assigned to the company in accordance with the BSB commander's intent.
- Preserve the fighting capability of the company.
- Maintain continual communications with higher, lower, and adjacent units.

COMPANY EXECUTIVE OFFICER

3-90. The company executive officer is the company's second in command and its primary internal logistics planner and coordinator. He and the company headquarters personnel serve as the company's battle staff and operate the company CP and NCS for both radio and digital traffic. The company executive officer's other duties include the following:

- Continuous battle tracking.
- Ensure accurate, timely tactical reports are sent to the BSB TOC.
- Assume command of the company as required.
- In conjunction with the 1SG, plan and supervise the company's logistics and defense effort before, during, and after the battle.
- Prepare the company OPORD for the commander.
- Conduct tactical and logistical coordination with higher, adjacent, and supported units.
- As required, assist the commander in issuing orders to the company, headquarters, and attachments.
- Conduct additional missions as required. These may include serving as OIC for the quartering party, company movement officer, or company training officer.
- Assist the commander in preparations for follow-on missions.

FIRST SERGEANT (1SG)

3-91. The 1SG is the company's senior NCO and normally is its most experienced Soldier. He is the commander's primary logistics and tactical advisor and he is an expert in individual and NCO skills. He is the company's primary internal logistics operator and helps the commander and executive officer to plan, coordinate, and supervise all logistical activities that support the company's mission. He operates where the commander directs or where his duties require him. The 1SG's specific duties include the following:

- Execute and supervise routine operations. The 1SG's duties may include enforcing the tactical SOP; planning and coordinating training; coordinating and reporting

personnel and administrative actions; and supervising supply, maintenance, communications, and field hygiene operations.

- Supervise, inspect, and/or observe all matters designated by the commander. For example, the 1SG may observe and report on the company's battle position, proof fighting positions, or designing and ensuring emplacement of the defensive perimeter.
- As necessary, serves as quartering party NCOIC.
- Using FBCB2 to transmit company rollup reports LOGSITREP and PERSITREP. Transmit call for support (CFS) for immediate resupply for Class III, IV, V or recovery missions using FBCB2 (as required).
- Conduct training and ensures proficiency in individual and NCO skills and small-unit collective skills and ensuring Soldiers tasks are trained that support the company's METL and the operating environment.
- Receive incoming personnel and assigns them to subordinate elements as needed.
- Responsible for the medical evacuation of sick, injured, and wounded Soldiers to the supporting medical treatment facility.
- Responsible for the evacuation of Soldiers killed in action to the supporting mortuary affairs collection point.
- In conjunction with the commander, establish and maintain the foundation for company discipline.

SUPPLY SERGEANT

3-92. The supply sergeant requests, receives, issues, stores, maintains, and turns in supplies and equipment for the company. He coordinates all supply requirements and actions with the 1SG, unit S4 and the support operations officer. The supply sergeant's specific responsibilities include the following:

- Control the company supply vehicle and resupplies the water trailer, and supervise the supply clerk/armorer.
- Monitor company activities and/or the tactical situation; anticipate and report logistical requirements; and coordinate and monitor the status of the company's logistics requests.
- Coordinate and supervise the issue or delivery of supplies to the company's sections.
- Provide order, receipt, and issue capability for Classes I, II, III (P), IV, V, and VI through supply STAMIS (either ULLS-S4 or PBUSE).

NBC SPECIALIST

3-93. The NBC Specialist assists and advises the company commander in planning for and conducting operations in a CBRN environment. He plans, conducts, coordinates, and/or supervises CBRN defense training with the 1SG and covers such areas as decontamination procedures and use and maintenance of CBRN-related equipment. Specific duties include the following:

- Assist the commander in developing company operational exposure guidance (OEG) in accordance with OEG from higher headquarters.
- Make recommendations to the commander on CBRN survey and/or monitoring, decontamination, and smoke support requirements.
- Requisition CBRN-specific equipment and supply items.
- Assist the commander in developing and implementing the company team CBRN training program.

3-94. The NBC Specialist ensures that the training program covers the following requirements:

- First-line supervisors provide effective sustainment training in CBRN common tasks.
- The CBRN-related leader tasks are covered in sustainment training.
- The CBRN-related collective tasks are covered in overall unit training activities.
- The CBRN factors are incorporated as a condition in the performance of METL tasks.
- Inspect company elements to ensure CBRN preparedness and report to the commander the findings.
- Process and disseminate information on enemy and friendly CBRN capabilities and activities, including attacks.
- Advise the commander on contamination avoidance measures.
- Coordinate, monitor, and supervise decontamination operations.

ARMORER

3-95. The armorer performs field maintenance on the company's small arms and is responsible for evacuating weapons as necessary to the brigade field maintenance company for maintenance. In addition, he normally assists the supply sergeant in his duties. As an option, the armorer may serve as the driver of the 1SG's vehicle to make him more accessible for weapons repair and maintenance.

COMPANY SPECIFIC FUNCTIONS

HEADQUARTERS AND HEADQUARTERS COMPANY

3-96. The company headquarters provides the company with administration and supply, and provides food services support for all assigned or attached personnel in the battalion. The headquarters provides the staff support discussed in the previous sections. See Figure 3-2 for the BSB's HHC.

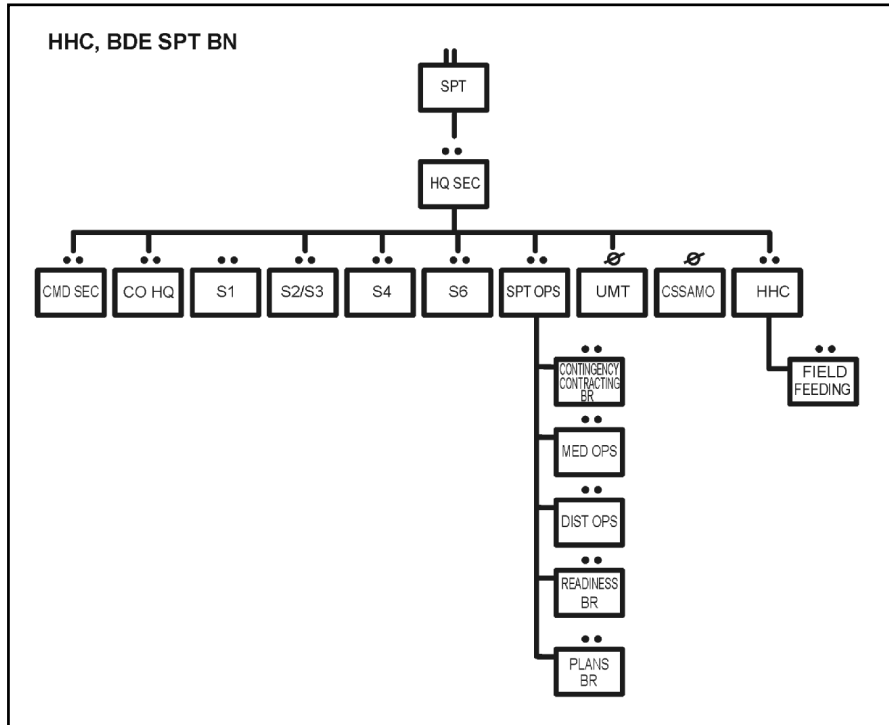


Figure 3-2, The BSB's Headquarters and Headquarters Company

DISTRIBUTION COMPANY

3-97. The distribution company has three platoons: transportation platoon, supply platoon and fuel and water platoon. See Figure 3-3 for its organization.

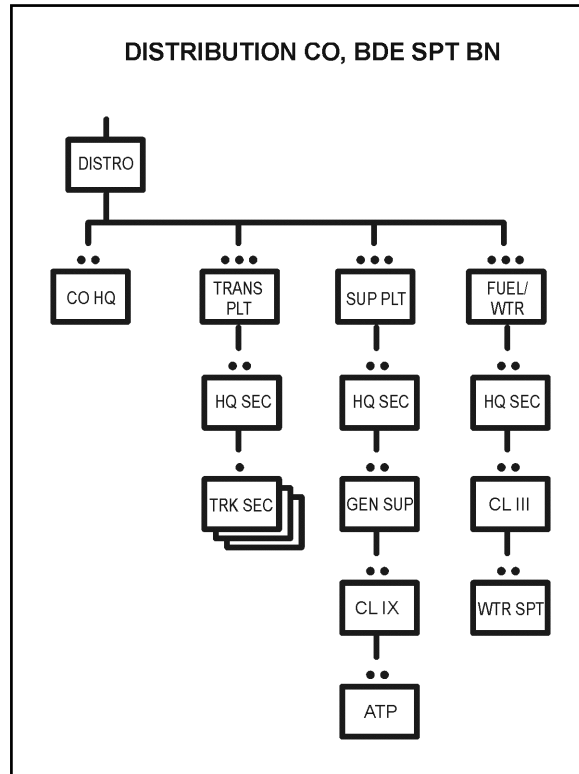


Figure 3-3, Distribution Company, Brigade Support Battalion

TRANSPORTATION PLATOON

3-98. The transportation platoon provides direct transportation support to the brigade. This section also provides distribution support of supplies to the FSCs.

3-99. Duties and responsibilities of the transportation platoon leader include:

- Provide transportation support for the distribution of supplies to FSCs.
- Provide transportation to brigade.

3-100. The primary focus of the Transportation platoon leader in a tactical scenario is conducting resupply LOGPACs to the FSC's distribution assets for their LOGPAC operations and receiving resupply from UEx UEy.

3-101. Although the transportation platoon leader works for the distribution company commander, he receives taskings from the battalion support operations section.

SUPPLY PLATOON

3-102. The supply platoon provides the brigade a single source for all supply (less Class I (water), III (bulk), VIII (medical) operations). It provides Class I, II, III (P), IV, V, VI, VII and IX support to the brigade. The supply platoon receives, stores (limited) and issues Class II, III (P), IV, and IX. It also receives and distributes, in conjunction with (ICW) with the Transportation Platoon, Class I and VI from the field ration issue point, and receives and issues Class VII as required. The platoon also maintains limited Class II, III (P), IV and IX ASL for the brigade. The ATHP section supports the brigade with Class V and operates the brigade ammunition transfer/holding point (ATHP). The platoon HQ maintains the FBCB2 and STAMIS (SARSS-1). Duties and responsibilities of the supply platoon leader include:

- Provide command and control of the Class I and general supply, Class V, Class IX of the supply platoon.
- Manage the distribution supply Classes I, II, III(P), V, VII, and IX to the brigade.
- Provide Class I, II, III(P), and IV support to brigade.
- Conduct field ration issue points for Class I for members of BSA and coordinates for Class I distribution to FSCs.
- Receive, store, and issue Class II, III(P), and IV.
- Maintains ASL for Classes II and III(P), and receives and issues Class VII as required.
- Provide Class IX support to brigade.
- Receive, store, and issue Class IX.
- Maintain ASL for Class IX.
- Provide exchange for reparable items.
- Maintain supply STAMIS (SARSS or GCSS-A).
- Provide Class V distribution ICW the transportation platoon to battalions in the HBCT.

Stock Control And Warehouse Section

3-103. This section utilizes SARSS-1 and related automated systems to provide ASL stock control, receipt, storage, and issue management. The stock control supervisor must ensure that daily start-up and closeout procedures are followed. IAW the schedule of operations established by the established supporting headquarters. Automated document processing and warehousing operations will be conducted IAW AR 710-2, DA Pam 710-2-1, this FM/TTP, ADSM 18-L1Y-AJT-ZZZ-EM (SARSS 1), ADSM 18-L1Y-AJT-ZZZ-UM (SARSS 1), and unit SOP.

3-104. The stock control and warehousing section should be collocated to facilitate on-site item management and inventory control. The stock control section will:

- Operate the SARSS-1 system.
- Maintain a current ASL listing for all supported commodities.
- Process receipts and requests for issues and turn-ins.
- Provide material release instructions to the warehouse section.
- Process turn-ins to maintenance (for reparable items).
- Perform periodic location surveys to ensure location accuracy.
- Process inventory adjustments and create necessary reports.
- Maintain coordination and provide general supervision over supporting signal assets.

3-105. The warehouse section will:

- Establish storage and issue facility for all supported commodities.
- Perform receipt, storage and issue of all supported commodities.
- Coordinate with support operations for delivery/ pickup of issued assets and turn-ins (to maintenance and/or for disposal).
- Perform storage and inventory management activities as directed by stock control.

General Supply Section

3-106. The general supply section receives, stores, and issues Class II, III (P), IV, and VII in support to the brigade units. It receives and issues Class I at the field ration issue point through distribution to the FSCs ICW the transportation platoon.

ATHP Section

3-107. The ATHP section receives, issues, and performs limited storage and supports shipment of the brigade's ammunition. Distribution to the FSCs is by pulsed logistics using the transportation platoon or in METT-TC dependent situations the use of supply point operations (e.g. tenants in the BSA).

Class IX Section

3-108. The Class IX supply section provides Class IX to brigade units. This section receives, stores, and issues Class IX and also maintains the brigade's authorized stockage list (ASL) and provides direct exchange for reparable items.

FUEL AND WATER PLATOON

3-109. **Water Section.** Its assets set up and operate the water distribution point in the BSA from which the water distribution team can obtain water to take forward to the FSCs. The distribution team provides vehicles and personnel for delivery of water and Class III (bulk) forward to the FSCs and maneuver units.

Class III Section

3-110. The Class III section provides reinforcing Class III (B) resupply to the FSCs (one combat load for the HBCT), and area support to brigade units. It provides retail capability to individual vehicles of the BSB. The section also provides supply point distribution to other units within the BSA.

FIELD MAINTENANCE COMPANY

3-111. The mission of the field maintenance company is to provide field level maintenance support for the HBCT. It provides recovery, automotive/armament, ground support and electronic maintenance and maintenance management to brigade base elements (HQ HBCT, BSB, and BTB). It also provides maintenance advice and support to the brigade and serves as the central entry and exit point into the brigade for low density equipment. The FMC's maintenance for low density communications MOS's is reliant upon CL VII floats. It has limited redundant or back-up capabilities (reliant on the UEx sustainment brigade.) See Figure 3-4 for its organization.

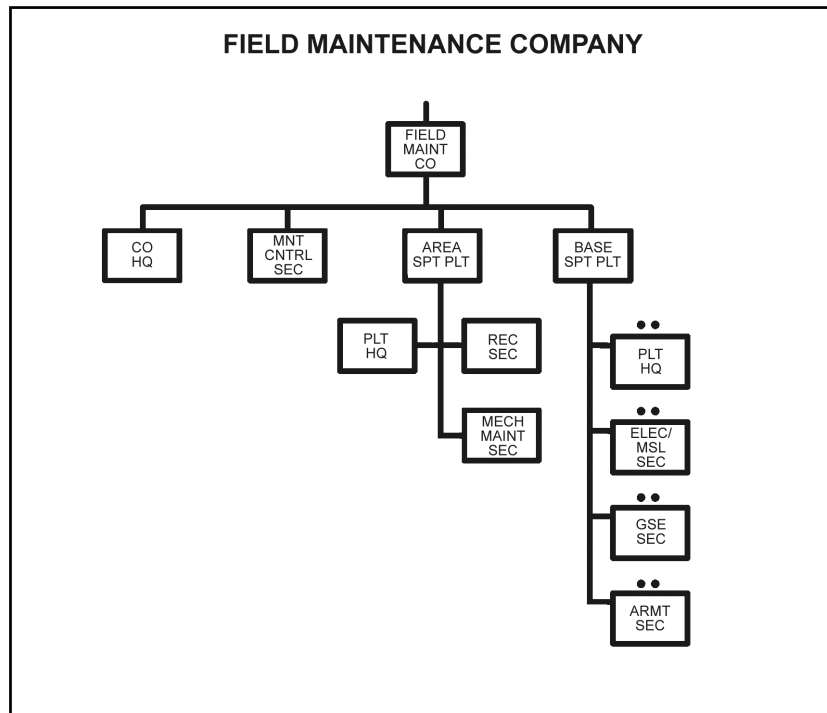


Figure 3-4, Field Maintenance Company

Maintenance Control Section (MCS)

3-112. The maintenance control section provides maintenance management for units operating within the BSA. The MCS uses four management tools: ULLS-G, SAMS-1, SAMS-2 (all three to be replaced by PBUSE in the near future) and FFCB2. The MCS receives call for support (CFS) messages through FFCB2. With the introduction of GCSS-Army, maintenance functionality will be consolidated in the maintenance module. The MCS is best located in close vicinity of the distribution company's Class IX section during operations in the BSA—this is a commander's call based upon METT-TC.

3-113. The MCS tracks the call for support through the task management file in FFCB2. In turn, the CFS is entered into ULLS-G (for jobs formally classified as organizational) or SAMS (for jobs formally classified as DS); this is a hold-over from the conversion to the field maintenance concept with two levels of maintenance in the Army. In addition, when fielded, SAMS-Enhanced will incorporate the functions of ULLS-G, SAMS-1, and some functions of SARSS-1.

3-114. The MCS is the manager for all field maintenance and recovery mission actions within the BSB, BTB, HQS HBCT and as tasked for support to the FSCs. This includes managing TAMMS, performing dispatching, using ULLS-G for all equipment in the HBCT headquarters, the BSB and the BTB. The ULLS-G boxes are collocated with the maintenance control section. The ULLS-G clerks input the DA Form 5988-E completed by the operator or crew. This section provides the technical inspectors, monitors the job orders, and maintains limited combat spares (PLL and shop stock). The technical inspectors are responsible for all aspects of quality assurance, technical inspection, and quality control maintenance activities of the company. The MCS provides maintenance management information to the BSB support operations section.

3-115. If a vehicle is non-mission capable for organizational level maintenance, the ULLS-G operator enters that information into the ULLS-G computer. If vehicles require DS level maintenance, an automated maintenance request from ULLS-G or a completed DA Form 2407 (*Maintenance Request*) is entered into SAMS. There will soon be fielded a system that will incorporate into one software program/computer the functions of ULLS-G, SAMS-1 and SAMS-2. If maintenance sections exceed either capabilities or capacities, the MCS can request backup maintenance support through the BSB support operations section from the EAB.

3-116. The MCS receives missions from:

- Supported units via FBCB2, voice, or face-to-face.
- The BSB support operations section as backup support to the FSC.

3-117. All requests for BSB maintenance support flow through the MCS. The maintenance message flow begins when the MCS receives a CFS from a supported unit—requests for support from the FCSs must first go to the BSB support operations section. The MCS forwards a logistic task order (LTO) to the appropriate maintenance section via FBCB2. The section responds to the LTO with one of the acknowledgment messages. The requesting operator/crew receives a copy of the acknowledgment message so that the operator is always kept informed on the status of the CFS. When the LTO is accepted, the section NCOIC synchronizes/coordinates support with the requesting unit and sends a mechanic to the location identified, coordinated, and agreed upon to repair the system. If the mechanic does not have the combat spare on-hand to complete the repair, he sends a message via FBCB2 to the MCS requesting the required repair parts. When the parts are readily available, the mechanics replaces the part forward at the breakdown site or at the UMCP. When required repair parts are not on-hand, the MCS orders appropriate parts through ULLS-G (organizational) or SAMS (direct support). When parts are not available or when the part has a long order ship time, the unit recovers the vehicle to the supported battalion/squadron's support area or the BSA. As necessary, the MCS coordinates with the BSB support operations section to evacuate the system to a UEx sustainment brigade's unit for repair.

Area Support Platoon

3-118. The headquarters section of the base support platoon provides command and control of assigned and attached personnel and supervision for the administrative functions of the other sections. Through the direction of higher headquarters, it coordinates all training activities for assigned personnel.

3-119. The area support platoon performs direct support to the brigade base elements (mechanical maintenance, automotive and track, in addition to limited back-up to FSCs).

Mechanical Maintenance Section

3-120. The automotive maintenance section provides field maintenance (automotive and track) for the BSB, BTB, and the brigade headquarters. As directed by the MCS, this section also provides maintenance on an area support basis to units operating within the BSA. The flow of maintenance is the same as described in the MCS section.

Recovery Section

3-121. The recovery section provides welding and recovery/lift support to the BSB and other units operating in the BSA. The section provides limited recovery/lift support, on an area basis, to all other units within the BSA. The section also provides backup support to the FSC.

3-122. Items that cannot be repaired on-site are recovered to the unit maintenance collection point (UMCP) or BSA. The use of FFCB2 enables recovery vehicles to identify the exact location of an inoperable piece of equipment. Units in the brigade rear/unassigned area need to establish a detailed maintenance SOP in coordination with the BSB for how they receive maintenance support. Normally the operator of the non-mission capable vehicle in the brigade rear/unassigned area sends a cryptographic file system (CFS) message to his1SG to be forwarded to the BSB support operations section that sends a LTO to the MCS of the base maintenance platoon. The MCS sends a LTO via FFCB2 to the section NCOIC. Upon notification, the section sends an acknowledgment message to the MCS. The operator and crew receive a message from the maintenance activity accepting the maintenance request for recovery at the same time. Through the entire sequence of events, the operator/crew is updated on the status of the FFCB2 CFS.

Base Support Platoon

3-123. The headquarters section of the base support platoon provides command and control of assigned and attached personnel and supervision for the administrative functions of the other sections. Through the direction of higher headquarters, it coordinates all training activities for assigned personnel.

3-124. The base support platoon performs consolidated maintenance on selected (low density) equipment and limited back-up support to the brigade. The flow of maintenance is the same as described in the MCS section.

Ground Support Equipment (GSE) Repair Section

3-125. The GSE section provides field maintenance on non-vehicular environmental control, power generation, water purification, POL, CBRN, and engineer equipment to the HBCT headquarters, the BTB, the BSB and on an area basis for units operating in the BSA. Provides back-up field maintenance support for maneuver brigade elements as required. The flow of maintenance is the same as described in the MCS section.

Missile/Electronics Repair Section (ELM)

3-126. The ELM section provides field maintenance to the brigade's missile and electronic equipment/weapon systems for those units (battalions) that don't have capability embedded in FSCs. It conducts float management of communications/electronic items to the FSCs. The ELM section centralizes and consolidates all MI and signal repairs for brigade troops and units without embedded capabilities in FSCs. Provides back-up field maintenance support for maneuver brigade elements as required. The flow of maintenance is the same as described in the MCS section.

Armament Section

3-127. The armament section provides field maintenance for weapons assigned to the BTB brigade headquarters, the BSB and on an area basis for units operating in the BSA. Provides consolidated low density equipment armament support to the HBCT's units as required. The flow of maintenance is the same as described in the MCS section. The flow of maintenance is the same as described in the MCS section.

BRIGADE SUPPORT MEDICAL COMPANY

ORGANIZATION AND MISSION

3-128. The overall mission of the brigade support medical company (BSMC) is to provide Level I and Level II FHP to all HBCT units operating within the brigade AO. The company

also provides Level I FHP on an area basis to all HBCT units that do not have organic medical assets. It provides C2 for organic elements and attached medical units. The BSMC is dependent on appropriate elements of the sustainment brigade, aviation brigade, the HBCT and BSB for patient evacuation (including air ambulance), FHP operations planning and guidance, and for legal, finance, and personnel and administrative services. It is also dependent on the distribution company of the BSB for food service and the HHC of the BSB for religious support and the BSB's maintenance company for maintenance. The BSMC is organized into a company headquarters, a medical treatment platoon, an evacuation platoon, a PVNTMED section and a mental health (MH) section. For more detailed information on the operations and functions of the BSMC see FM 4-02.6, *The Medical Company Tactics, Techniques, and Procedures*. See Figure 3-5 for the BSMC organization.

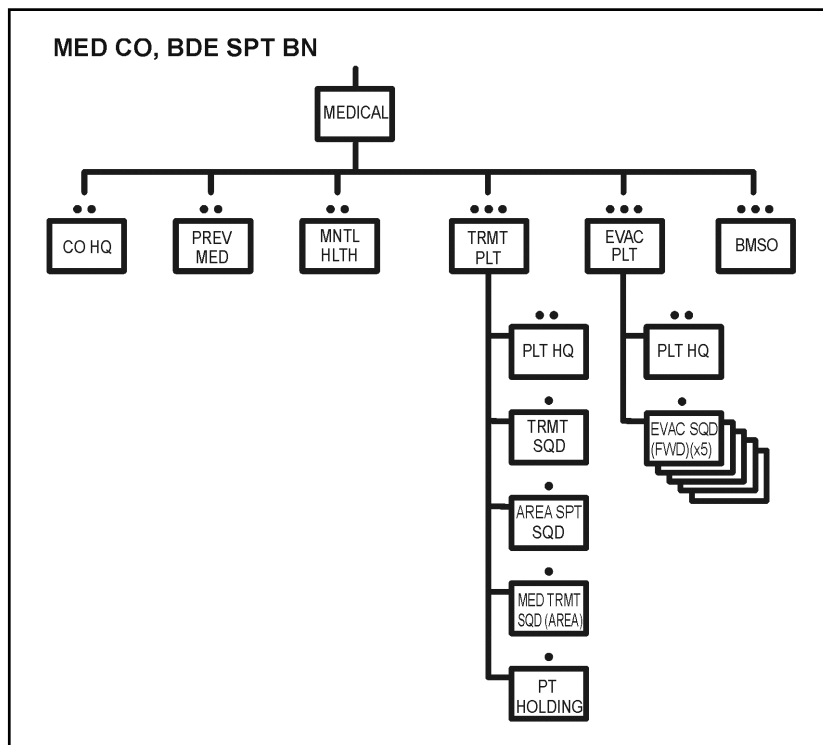


Figure 3-5, Brigade Support Medical Company

3-129. The company performs these functions:

- Treatment of patients with disease and non-battle injuries (DNBI), combat stress/battle fatigue, and trauma injuries.
- It provides routine sick call, triage of mass casualties, advanced trauma management (ATM), surgical resuscitation/stabilization (when the forward surgical team (FST) from the supporting medical brigade is deployed/collocated with the BSMC), and preparation of patients incapable of returning to duty for further evacuation.
- Ground ambulance evacuation for patients from battalion aid stations (BASs) and designated patient collecting points.
- Operational (emergency and essential) dental care.
- Class VIII resupply and medical equipment maintenance for supported units.

- Medical laboratory and radiology services commensurate with Level II/brigade-level treatment.
- Outpatient consultation services for patients referred from Level I medical treatment facilities.
- Patient holding for up to 20 patients able to return to duty (RTD) within 72 hours.
- Limited reinforcement and augmentation to supported maneuver battalion medical platoons.
- Coordination with the UMT for required religious support.
- Preventive medicine consultation and support.
- Combat operational stress control to include management of battle fatigue and stress related casualties.

COMPANY HEADQUARTERS

3-130. The company headquarters is organized into a command element, a supply element, and an operations and communications element. The company headquarters provides C2 for the company and other medical units/elements that may be attached. It also provides general and medical logistics supply/resupply, arms maintenance, CBRN operations, and CE support to organic and attached elements. For communications, the company headquarters employs AM and FM tactical radios, units level computers, FBCB2, and a manual switchboard.

Command Element

3-131. The command element is responsible for providing billeting, security, training, administration, and discipline for assigned personnel. This element provides C2 of its assigned and attached personnel. It is typically staffed with a company commander, an executive officer, and a first sergeant (1SG).

3-132. **Medical company commander.** Currently, the BSMC commander positions are documented 05A, Army medical department (AMEDD) immaterial, meaning any qualified AMEDD officer can assume command. When the BSMC commander is not a physician, the BSMC treatment platoon leader (who is a physician) provides technical supervision of assigned medical personnel. The BSMC commander keeps the BSB commander informed on the FHP aspects of BSB operations and the health of the command. He regularly attends BSB staff meetings to obtain information to facilitate the execution of medical operations. He provides staff estimates and assists the medical operations officer and the brigade surgeon's section (BSS) medical planner as required, with the development of the BSB and brigade FHP plan. Specific duties of the BSMC commander include:

- Ensuring implementation of the FHP section of the TSOP.
- Coordinating and synchronizing the execution of the brigade's FHP plan while ensuring efficient and effective utilization of medical assets.
- Supervising the technical training of medical personnel and combat lifesavers in the BSB and supported units as required.
- Determining procedures, techniques, and limitations in the conduct of routine medical care, emergency medical treatment (EMT), and ATM.
- Monitoring requests for medical evacuation from supported units to ensure appropriate platform is used.
- Informing the BSB SPO HSS Cell and BSS of the BSMC's tactical and medical situation.
- Supervising the activities of subordinate physicians.

- Providing technical supervision of all PAs and medical section NCOs organic to supported units in the absence of their assigned physician.
- Monitoring the health of the command and advising the commander of preventive medicine measures (PMM) to counter DNBI.
- Providing the FHP information to the HSS cell for use in developing the FHP estimates.

EMPLOYMENT OF THE BRIGADE SUPPORT MEDICAL COMPANY

3-133. The BSMC locates with the BSB HDC in the BSA. The BSMC participates in the initial reconnaissance of a new setup area and assists with site selection for establishment of the BSMC.

3-134. Treatment teams from the BSMC may deploy, as required, to geographical locations of supported maneuver medical platoons or collocate with an ambulance exchange point (AXP) or any other METT-TC supported locations. The BSMC headquarters element coordinates for convoy clearances and security for the movement of treatment teams through the BSB support operations section.

3-135. Site selection is an important factor impacting on the accomplishment of the BSMC's missions. Improper site selection can result in inefficiency and possible danger to unit personnel and patients. For example, if there is insufficient space available for ambulances to turnaround, congestion and traffic jams around the medical treatment facility (MTF) can result; or, if the area selected does not have proper drainage, heavy rains may cause flooding in the unit and treatment areas. The MTFs established by the BSMC should not be placed near high-value Level 1 threat targets, hazardous materiel (such as petroleum, oil, and lubricants (POL) and ammunition), or storage areas and motor pools. The selected site is not located near potential areas of filth such as a garbage dump, landfill, or other waste disposal site. The site is at least 1.5 kilometers from breeding sites of flies and mosquitoes and 1.5 kilometers from native habitation, when possible.

3-136. The site should provide good drainage during inclement weather. Care must be taken to ensure that the site selected is not in or near a dry river or stream bed, has drainage that slopes away from the MTF location and not through the operational area, and that there are not any areas where water can pool. The ground, in the selected area, should be of a hard composition that is not likely to become marshy or excessively muddy during inclement weather or temperature changes. This is particularly true in extreme cold weather operations where the ground is frozen at night and begins to thaw and become marshy during daylight hours. Further, the area must be able to withstand a heavy traffic flow of incoming and departing ambulances in various types of weather.

3-137. The area selected should be free of major obstacles that will adversely impact on the unit layout (such as disrupting the traffic pattern), cause difficulties in erecting shelters (overly rocky soil), or require extensive preparation of the area before the MTF can be established. The optimal land space required for establishment of the BSMC is approximately 500 meters by 500 meters, equaling 2,500 square meters, or .5 kilometers by .5 kilometers. These 2,500 square meters includes the helipad and motor pool parking requirements. The actual space allotted to the BSMC will be based on METT-TC and the amount of space available to the BSB. The space to establish the treatment and administrative areas of the unit is dependent upon the mission and expected duration of the operation and whether CBRN operations are anticipated. The site should provide adequate space for establishment of all unit elements including possible augmentation. It must be adequate in size to accommodate dispersion of unit assets according to the TSOP. While considering all factors of site selection, remember that terrain can impede line of sight communications systems.

3-138. Outside of the BSA perimeter, sites that are large enough to provide an area for patient decontamination should be identified. The specific site selected to establish the decontamination station must be downwind of the unit and treatment areas (see FM 4-02.7). For definitive information on site selection criteria pertaining to hardstand, drainage, obstacles, and space see FM 4-02.6. The Geneva Conventions afford the medical unit a certain degree of protection from attack. The extent to which the combatants and irregular forces on the battlefield are adhering to the provisions of the Geneva conventions has a bearing on site selection in that it may dictate the degree of required security for the unit.. The standard agreement (STANAG) defines medical facilities as medical units, medical vehicles, and medical aircraft on the ground. Medical aircraft in the air must display the distinctive Geneva emblem. Camouflage of the Red Cross means covering it up or taking it down. The black cross on an olive background is not a recognized emblem of the Geneva Conventions.

Commander's Plan and Mission

3-139. The specifics of the OPLAN, the manner in which it will be executed, and the assigned mission can affect the selection of a site. The requirements for an area that is only to be used for a short period of time can differ significantly from an area that is expected to be used on an extended basis. For example, if the BSMC's mission requires that it relocate several times a day, complete treatment and holding areas will not be established; only essential services, shelters, and equipment will be used. On the other hand, if it is anticipated that the unit will be located at one site for an extended period of time, buildings or pre-established shelters, if available, may be used.

Routes of Evacuation and Accessibility

3-140. Although air ambulance is the primary and preferred method in the medical evacuation system, ground ambulances are required and used. The BSMC's MTF must be situated so that it is accessible from a number of different directions and/or areas. It should be situated near and be accessible to main road networks, but not placed near lucrative targets of opportunity. The site should not be so secluded that incoming ambulances have difficulties in locating the Level II MTF. Whether or not a route has been cleared or is being used by combat units should also be considered. Brigade designated MSR's should be identified and used in site selection planning.

Expected Areas of Patient Density

3-141. To ensure the timely delivery of FHP, the BSMC's Level II MTF must be located in the general vicinity proximate to the supported units. Without proximity to the areas of patient density, the evacuation routes will be unnecessarily long, resulting in delays in both treatment and evacuation. The longer the distance that must be traveled, the longer it takes for the patient to reach the next level of care. Further, this time delay reduces the number of ambulances available for medical evacuation support.

Establishment of the Company Headquarters

3-142. The company headquarters must ensure that communication is established with the units within the BSB and BSA. All security precautions and requirements must be met according to BSB and BSA operating procedures. Only essential equipment is set up to support the medical company operations. If the failure to camouflage endangers or compromises tactical operations, the camouflage of the Level II MTF may be ordered by a NATO commander of at least brigade level or equivalent. Dispersion of tents and equipment is accomplished to the maximum extent possible. A controlled entry into the BSMC area is established.

3-143. The command element supervises the establishment of the company. The commander monitors all elements as the company sets up. He ensures the BSMC is established according to the unit layout and the TSOP. The field medical assistant/XO and the 1SG assist the company commander. The field medical assistant/XO supervises and monitors the establishment of the company area for compliance with BSB TSOP and brigade guidance. The field medical assistant/XO coordinates with supporting units/elements for short-and long-term support requirements. Both the commander and field medical assistant/XO should synchronize FHP with supported units as soon as possible. This interface includes:

- Sick call operations.
- Force health protection requirements (displacement of ambulance and treatment teams to remote sites in support of units within the company's AO.)
- Medical evacuation support and procedures.
- Dental sick call.
- Mass casualty plan.
- Chemical, biological, radiological, and nuclear patient decontamination support.
- Preventive medicine.
- Combat operational stress control.
- Medical threat.
- Return-to-duty policies/procedures.
- Class VIII resupply.
- Area damage control

3-144. The MC4 system will provide the commander and staff with enhanced command and control of subordinate platoons and the capability to collect and process medical information resulting from treatment encounters. Medical planners will be provided with near real-time medical situational understanding to enhance their ability to plan CHS operations in support of the maneuver battalion.

3-145. When CBRN patient decontamination support is required, the supported units are responsible for providing non-medical personnel to perform patient decontamination procedures (under medical supervision). This is accomplished according to FMs 3-11.5 FM 4-02.7 and FM 4-02.285. The non-medical personnel are identified and trained on patient decontamination procedures with medical company personnel. Additional personnel from the BSA base cluster may be trained to transport patients by litter. All Level II medical companies are authorized five chemical patient treatment and three patient decontamination medical equipment sets (MESs). Each chemical patient treatment MES is stocked with enough supplies to treat 30 patients. Each patient decontamination MES is stocked with enough supplies to decontaminate 60 patients.

3-146. The 1SG focuses his attention toward ensuring all unit security requirements are accomplished. The 1SG supervises the establishment of the company headquarters and the troop billeting areas. He monitors field sanitation team activities. The operations element assists in establishing the company headquarters. The NBC NCO supervises the company CBRN team by monitoring its activities and use of unit CBRN-monitoring equipment. He coordinates with other BSB units and monitors the placement of early warning devices for the detection of chemical agents. He supervises and monitors unit personnel for compliance with correct wear of MOPP clothing and equipment according to the current MOPP level and TSOP. The NBC NCO coordinates with PVNTMED section in cases of possible CBRN contamination of food.

3-147. Unit personnel set up communications equipment and establish the net control station (NCS) for the company. They establish contact with the battalion headquarters and with supporting and supported units. Unit personnel also establish the internal wire

communications net. They connect to the MSE area system at the wire subscriber access point operated by the area support signal element.

3-148. The supply element establishes both the unit and medical supply area. They ensure all supplies are secured, properly stored, and protected from the environment. They establish the unit POL and water points. The supply element supports the company during establishment and provides additional items such as sandbags, tent pegs, and other standard equipment normally associated with establishing the company.

PLATOON FUNCTIONS

Treatment Platoon

3-149. The treatment platoon operates the BSMC's Level II MTF. It receives, triages, treats, and determines the disposition of patients based upon their medical condition. This platoon provides professional services in the areas of ATM, internal medicine, general medicine, and general dentistry. In addition, it provides basic diagnostic laboratory and radiological services and patient holding support. It is further broken down into a medical treatment squad, medical treatment squad (area) an area support squad and a patient holding squad.

Medical Treatment Squad

3-150. The treatment squad provides emergency and routine sick call treatment to Soldiers assigned to supported units. This squad can perform its functions while located in the company area, or can operate independently of the BSMC for limited periods of time. The squad has the capability to split and operate as separate treatment teams for limited periods of time. While operating in these separate modes, they may operate two separate treatment stations. It can be assigned to reinforce or reconstitute battle losses.

Area Support Squad

3-151. The area support squad includes the dental and diagnostic support elements of the Level II MTF. The diagnostic element is composed of a medical laboratory and has field x-ray capability. It provides for basic services commensurate with Level II medical treatment. The area support squad is typically staffed with a dental officer, a dental specialist, a medical laboratory sergeant and specialist, and an x-ray sergeant and specialist. The dental officer supervises the activities of the area support squad.

DENTAL ELEMENT

3-152. The dental element provides operational dental care (to include emergency treatment. Refer to FM 4-02.19 for definitive information on dental support.

MEDICAL LABORATORY ELEMENT

3-153. The medical laboratory element performs clinical laboratory and blood banking procedures to aid physicians and physician's assistants (PAs) in the diagnosis, treatment, and prevention of diseases. Laboratory functions include performing elementary laboratory procedures consistent with the Level II laboratory MES. When collocated with a FST, the medical company performs medical laboratory procedures in support of the FST mission. See FM 8-10-6 for additional information. This element is responsible for:

- Storing and issuing blood (liquid red blood cells).
- Performing hematocrit procedures.
- Performing/estimating total white blood cell count and differential white blood count procedures.

- Performing urinalysis (macroscopic and microscopic) and occult blood procedures.
- Conducting Gram's stain of clinical specimen procedures.
- Collecting and processing clinical specimens for shipment.
- Performing platelet estimates.
- Performing thick and thin smears for malaria.
- Maintaining the blood inventory status.

RADIOLOGY ELEMENT

3-154. The radiology element operates radiological equipment consistent with the Level II x-ray MES. This element performs routine clinical x-ray procedures to aid physicians and PAs in the diagnosis and treatment of patients. When collocated with a FST, the medical company performs x-ray procedures in support of the FST mission. Specific functions performed by this element include:

- Interpreting physicians' orders, applying radiation and electrical protective measures, operating and maintaining fixed and portable x-ray equipment, and taking x-rays of the extremities, chest, trunk, and skull.
- Performing manual and automatic radiographic film processing (darkroom) procedures.
- Assembling x-ray film files for patients who are evacuated to Level III hospitals.

AREA TREATMENT SQUAD

3-155. The area treatment squad is the base medical treatment element of a Level II MTF. It provides sick call services and initial resuscitative treatment (ATM and EMT) for supported units. For communications, the squad employs FM radios and is deployed in the BSMC's radio and wires communications nets.

PATIENT-HOLDING SQUAD

3-156. The patient-holding squad operates the holding area of the brigade Level II MTF. The holding area is staffed and equipped to provide care for up to 40 patients. Normally, only those patients awaiting evacuation or those requiring treatment of minor illness or injuries are placed in the patient-holding area. Neuropsychiatry patients and battle fatigue (BF)/stress-related casualties who are expected to be RTD within 72 hours may also be placed in the patient-holding area. The patient-holding squad works under the direct supervision of a physician or PA. The medical-surgical nurse assigned to the patient holding squad provides nursing care supervision. Since Level II facilities such as the BSMC do not have an admission capability, patients may only be held at this facility and are not counted as hospital admissions. If recovery and RTD, is not expected within 72 hours, the patients are evacuated to a UEx or UEy hospital for admission as soon as practical.

EMPLOYMENT OF THE TREATMENT PLATOON

3-157. The treatment platoon establishes its elements using the BSMC layout plan. Platoon personnel set up patient treatment and holding areas. Some platoon personnel are detailed, as necessary, to assist with unit security and other unit activities associated with establishing and conducting company operations. Treatment section personnel assist the platoon with establishing the Level II MTF and preparing for further deployment of treatment teams according to the brigade FHP OPORDs/OPLANs. The platoon headquarters element supervises the establishing of platoon operations. The platoon leader directs setup operations and supervises the displacement of treatment squads/teams, when necessary. The field medical assistant assists the platoon leader in supervising establishment operations and coordinates the displacement of treatment squads/teams with company headquarters

and supported units. He ensures all platoon elements perform preventive maintenance checks and services (PMCS) on their assigned equipment and reports any deficiencies that are not correctable to the platoon leader, who reports them to the company commander. The treatment platoon sergeant is responsible for assisting the platoon leader and field medical assistant with establishing platoon operations. He supports the 1SG by providing platoon personnel to assist with security, establishment, and other operational activities of the company headquarters.

3-158. The area support section establishes all treatment areas as directed by the treatment platoon leader. A treatment team from the treatment section is tasked with providing medical support for the company until the Level II MTF is established. The area support section is also tasked with clearing and marking helicopter landing areas and the ambulance turnaround point. The area treatment squad establishes and operates the MTF. Attached UE x medical units normally establish in the vicinity of the MTF. The Level II MTF maintains its integrity at all times. For suggested layout for the Level II MTF, see FM 4-02.6 and FM 4-02.24.

3-159. The dental treatment facility is established adjacent to the Level II MTF. The dental officer supervises the placement of dental supplies and equipment within the dental treatment area.

3-160. The laboratory and radiology elements are normally established within the Level II MTF area. Precautions for operating radiological equipment must be observed. Radiation hazard areas adjacent to the radiology area must be clearly marked and blocked so company personnel are prevented from crossing.

3-161. The patient-holding squad sets up the patient-holding area. The patient-holding area is normally adjacent to the Level II MTF. The treatment platoon leader based on the commander's guidance, troop concentration, and patient estimates determines the number of cots to set up. If the commander directs that only 20 cots are to be set up, this may dictate that only one general-purpose large tent is erected. In the vicinity near a patient-holding area, a water point (collapsible fabric drums), a latrine, and a hand washing area should be established for the convenience of those patients being held at this facility. These facilities should be established at a minimum of 100 feet away.

3-162. Field surgeons direct the activities of the two treatment squads. They identify the treatment team tasked with providing medical support for the BSMC during movement and establishment operations. Personnel assigned to this section are involved in assisting with establishment of the medical treatment platoon area and/or preparing for further deployment when require.

EVACUATION PLATOON

3-163. The evacuation platoon performs ground evacuation and en route patient care for supported units.

Evacuation Platoon Headquarters

3-164. The evacuation platoon headquarters element provides C2 for evacuation platoon operations. It maintains communications to direct ground ambulance evacuation of patients. It provides ground ambulance evacuation support for the maneuver battalions of the supported maneuver brigade and to units operating in the brigade AO. Ground ambulance evacuation provided is either from BASs of maneuver, fire or reconnaissance battalions or from BSMC treatment squad/teams locations back to the BSMC located in the BSA. Further evacuation to UEy combat support hospital is the responsibility of the UEy ground ambulances and/or air ambulances from the general support aviation battalion's air ambulance company. Personnel assigned to the ambulance platoon headquarters include the

platoon leader and platoon sergeant. The ambulance platoon headquarters element directs and coordinates ground evacuation of patients. This element supervises the platoon and plans for its employment. It establishes and maintains contact with supported units and treatment squad/teams of the BSMC. The ambulance headquarters element performs route reconnaissance and develops and issues graphic overlays to all ambulance teams. It also coordinates and establishes ambulance exchange points (AXPs) for both air and ground ambulances, as required.

AMBULANCE SQUADS

3-165. The ambulance squads provide ground evacuation of patients from forward areas back to the BSMC/EAB MTF. The ambulance squads consist of five emergency care NCOs and twenty-one aid/drivers. Ambulance squad personnel perform EMT, evacuate patients, and provide for their continued care en route. They also operate and maintain assigned radios. Ambulance squad personnel provide the EMT that is necessary to prepare patients for movement and also provide en route care. They operate vehicles to evacuate the sick and wounded and perform PMCS on ambulances and associated equipment. Ambulance squad personnel maintain supply levels for the ambulance MESs. They ensure that appropriate property exchange of medical items (such as litters and blankets) is made at sending and receiving MTFs (Army only).

Employment of the Ambulance Platoon

3-166. The BSMC ambulance platoon locates with the treatment platoon for mutual support. The ambulance platoon is mobile because all of its assets may be totally dispatched at any given time. Each ambulance team carries an on-board MES designed for medical emergencies and en route patient care. Ambulances either deploy forward to support maneuver battalions' BASs or with treatment squads/teams of the BSMCs or to AXPs. The ambulance platoon leader and platoon sergeant conduct reconnaissance of the area of support to establish primary and alternate evacuations routes, to verify locations of supported units, and to field site ambulance teams as necessary. The platoon leader and platoon sergeant coordinate support requirements with supported units for ambulance platoons placed in DS. Ambulance platoon personnel obtain appropriate dispatch and road clearances prior to departing company or supported unit areas. The platoon leader ensures maps and overlays are provided to platoon personnel. If time and fuel permit, the platoon leader or platoon sergeant may take ambulance drivers on a rehearsal of the evacuation routes.

3-167. The platoon leader/sergeant coordinates/establishes AXPs as required by the medical evacuation mission. Track ambulances are usually positioned forward with the BASs of the maneuver battalions. Track ambulances normally evacuate patients from the BASs back to AXPs where patients are placed in a wheeled or air ambulance for further medical evacuation back to the BSMC. Wheeled ambulances are used for area support missions and for medical evacuation mission where patients do not require the added protection that an armored ambulance provides. Ambulance platoon personnel assist with establishment of the BSMCs and provide available personnel as tasked by the 1SG.

3-168. The platoon leader and platoon sergeant organize and direct any attached non-standard evacuation platforms provided by non-medical units for casualty evacuation (CASEVAC) operations. For definitive information on medical evacuation operations, see FM 4-02.6 (8-10-6).

PREVENTIVE MEDICINE SECTION

3-169. The PVNTMED section assists the commander with ensuring PVNTMED measures (PMM) are implemented to protect brigade personnel against food, water, arthropodborne

diseases, as well as environmental injuries (for example, heat and cold injuries). This section is responsible for the BSA and units in forward areas. Its missions are monitored according to the UEx and brigade FHP plans and coordinated as appropriate by the BSS. The PVNTMED section provides advice and consultation in the areas of environmental sanitation, epidemiology, and entomology, as well as conducts occupational and environmental health (OEH) surveillance and medical surveillance and provides limited sanitary engineering services and pest management. Taskings for this section will be provided by the BSS through the FSB medical operations officer or from the sustainment brigade medical branch through the FSB medical operations officer. Additional information pertaining to PVNTMED staff and specific functions is discussed in FM 4-02.17.

Employment of the Preventive Medicine Section

3-170. Preventive medicine activities begin prior to deployment to minimize DNBI. Actions taken include:

- Ensuring command awareness of potential medical threats and implementation of appropriate protective measures.
- Ensuring the deployment of a healthy and fit force.
- Ensuring pre-deployment health assessments are conducted and documented (DD Form 2795, *Pre-deployment Health Assessment*).
- Monitoring the command's immunization status (see AR 40-562).
- Monitoring potable water supplies.
- Monitoring the status of individual and small unit PMM (see FMs 4-02.17 and 4-25.12).
- Monitoring heat and cold injuries and food, water, and arthropodborne diseases (see FM 4-02.33 and FM 8-250, TM 5-632, TB MED 81, 507, 530, and 577).
- Ensuring training in PVNTMED that will assist in countering the medical threat.
- Monitoring the use of prophylaxis such as anti-malarial tablets.
- Ensuring adequate unit field sanitation supplies.

3-171. Lessons learned from past conflicts have shown that more Soldiers have been rendered non-effective from DNBI than from injuries received as a direct result of combat. Often the victor in battle has been the force with the healthiest and fittest troops. Consequently, PVNTMED operations are characterized by presumptive actions, increased Soldier and commander involvement, and awareness with priority to combat units. To accomplish this, the BSMC PVNTMED section will focus its support to specific areas of troop concentrations within the brigade AO.

3-172. The brigade surgeon, the BSMC commander, and the environmental science officers must be proactive and initiate action on presumptive information to reduce the medical threat early. Based on medical threat information provided through the UEx or the BSS from the PVNTMED officer of the UEx main surgeon section, the PVNTMED section must be proactive. They cannot wait until the incapacitation of troops occurs before taking action, for example:

- If mosquito borne-diseases are endemic to troop assembly areas, and known or suspected vectors are present, the section initiates control measures.
- Inadequate sanitation practices must be corrected before the first case of enteric disease appears.
- Site surveys are conducted prior to the establishment of bivouac locations to ensure they meet environmental and health standards, when possible.

3-173. It should be anticipated:

- That sanitation breakdowns will occur while troops are still in debarkation assembly areas.
- That Soldiers are at risk for arthropod transmitted diseases upon entry to the AO.
- That lack of or delay in implementing preemptive actions can significantly impact on the deployment forces' ability to accomplish its assigned mission. Refer to FM 8-51), 8-250, FM 4-02.17, and FM 4-25.12 for additional information.

3-174. The PVNTMED section sets up near the BSMC CP. Pre-deployment activities are concluded or integrated into the PVNTMED support operations. Preventive medicine support operations are prioritized based on the mission, medical threat, assessment of data collected (through monitoring, inspecting, and reporting observations), taskings from the UEx PVNTMED officer, or requests for PVNTMED support. Preventive medicine section operations and activities may include:

- Assisting the BSMC commander and staff to prepare the FHP estimates by identifying the medical threat.
- Assisting the BSMC commander in determining disease prevalence in the AO.
- Assisting the BSMC commander and UEx PVNTMED officer in assessing the health status of unit Soldiers.
- Conducting surveillance of supported units to ensure implementation of PMM at all levels, to identify actual or potential medical threats and to recommend corrective action as required.
- Assisting supported units by providing training in PMM against heat and cold injuries and occupational hazards, as well as food, water, and arthropodborne diseases.
- Monitoring field food service operations to prevent food-borne diseases and illnesses.
- Monitoring the command immunization program.
- Monitoring the health-related aspects of water and ice production, distribution, and consumption.
- Monitoring disease and injury incidence to optimize early recognition of disease trends and initiation of preemptive disease suppression measures.
- Conducting epidemiological investigations of disease outbreaks and recommending PMM to minimize effects.
- Monitoring the level of resupply of disease prevention and related supplies and equipment, including water disinfectants, insect repellents, and pesticides, for the supported AO.
- Conducting limited entomological investigations and control measures.
- Monitoring the animal bite program to prevent the transmission of rabies to Soldiers.
- Monitoring environmental and meteorological conditions to assess their health-related impact on supported unit operations and recommending PMM to minimize heat and cold injuries, as well as selected arthropod borne diseases.
- Assessing the effectiveness of field sanitation teams.

3-175. Supported units can request PVNTMED support through command channels or request support from the BSS or the BSB support operations section. If requests are received by the BSMCs, the BSB headquarters is notified of the requests. The medical operations officer and BSS coordinate missions for either requested or preemptive actions. To avoid health and environmental problems historically encountered by deploying troops; it is imperative that PVNTMED assets be deployed in advance of the main body/forces.

MENTAL HEALTH (MH) SECTION

3-176. The BSMC MH section consists of a behavioral science officer and a MH specialist. The MH specialist assists the behavioral science officer with the accomplishment of his duties. The behavioral science officer participates in staff planning to represent and coordinate MH/ combat operational stress control (COSC) activities throughout the AO. The behavioral science officer and MH specialist are especially concerned with assisting and training small unit leaders, which include:

- Company commander and platoon leaders.
- Unit ministry teams and staff chaplains.
- Battalion medical platoons.
- Patient-holding squad and treatment squad personnel of the BSMC.

Employment of the Mental Health Section

3-177. The BSMC MH section provides training and advice in the control of stressors, the promotion of positive combat stress behaviors, and the identification, handling, and management of misconduct stress behavior and battle fatigue (BF) Soldiers. It coordinates combat operational stress control (COSC) training for supported units through the BSMC commander and UEx psychiatrist, as required. The section collects and records social and psychological data and counsels personnel with personal, behavioral, or psychological problems. General duties for personnel assigned to this section include:

- Assisting in a wide range of psychological and social services.
- Providing classes in stress control.
- Compiling caseload data.
- Providing counseling to Soldiers with emotional or social problems.
- Referring Soldiers to specific hospital neuropsychiatry (NP) services or COSC unit facilities, physicians, or agencies when indicated.
- Conducting or facilitating group debriefings, counseling, and therapy sessions, and leading group discussions.
- Providing individual case consultation to commanders, NCOs, chaplains, battalion surgeons, and PAs within the supported AO.
- Collecting information from units regarding unit cohesion and morale, which include:
 - Obtaining data on disciplinary actions.
 - Collecting information with questionnaires.
 - Conducting structured interviews.
 - Collecting information on individual BF cases pertaining to the prior effectiveness of the Soldier, precipitating factors causing the Soldier to have BF, and the Soldier's RTD potential.

3-178. The company MH section uses the BSMC Level II MTF as the center for its operations, but may deploy out to supported units as required, to support the COSC mission. The section's priority functions are to promote positive stress behaviors, prevent unnecessary evacuations, and coordinate RTD, not to treat cases. Through the treatment and ambulance platoon leaders and company commander, the section keeps abreast of the tactical situation and plans and projects requirements for COSC support when units are pulled back for rest and recuperation. For definitive information on COSC operations see FM 8-51.

BRIGADE MEDICAL SUPPLY OFFICE

3-179. The function of the BMSO is to provide Class VIII resupply and medical equipment to include unit-level maintenance and repair and to execute the brigade MEDLOG plan.

Personnel of this section plan, coordinate, and manage a variety of functional areas pertaining to technical materiel, equipment, and services used in support of the FHP mission. For definitive information on MEDLOG employment and operations, see FM 4-02.1.

COMBAT BATTALION HHC AND STAFF LOGISTICS RESPONSIBILITIES

3-180. It is important to understand the relationship of the FSC and its interface with the HHC and the battalion staff i.e. battalion S1 and S4 for the planning, preparing for, executing and assessing logistics. The following discussion outlines the responsibilities of these agencies so that the FSC commander and his myriad of duties are put in a context that there is a battalion staff charge with duties that remove many planning activities from the FSC's requirements. The FSC may assist the battalion staff in planning and quite often the maintenance control officer (MCO) will be the officer assisting with maintenance planning due to the other duties of the FSC commander precludes his involvement all the time. It is not always a clear distinction and the battalion commander will implement command and control as he sees best for his command.

3-181. The XO is still responsible for coordinating all logistics in the combat battalion/squadron, and the S4 identifies the logistical requirements for the battalion maneuver plan and provides the requirements to the FSC commander. The FSC provides all logistics (less medical) to the combat battalion and is the senior logistics commander within the battalion. The principal source of external support to the combat battalion/squadron is the BSB and its four companies: headquarters and headquarters company (HHC), distribution company (DC), field maintenance company (FMC) and the brigade support medical company (BSMC).

3-182. The increasing use of assured communications and improvements in information technology provides the logistics leader or staff officers in the FSC or HHC and the battalion S1 and S4 the information dominance and digital tools needed to tailor the logistics package. Through near real-time information, the combat battalion battle staff is able to make timely adjustments in its support requirements. If equipped with BCS3 and FBCB2, they are combat multipliers that provide logistics status and information in support of logistics planning and operations. Requesting of supplies and other logistical services is accomplished using standard Army management information systems (STAMIS) such as unit-level logistics system-general (ULLS-G)—soon to be ULLS-Enhanced, standard Army retail supply subsystem (SARSS), satellite automatic monitoring system (SAMS), supply property book system-revision (SPBS-R)—soon to be PBUSE, and SIDPERS—soon to be eMILPO followed by DIMHRS. The S1 and S4 use their FBCB2 logistics reports to provide input to both the brigade S1 and S4 and their supporting FSC.

3-183. The primary logistics functions required by the combat battalion/squadron is to include casualty treatment and evacuation, sustainment operations using logistics packages (LOGPACs) via combat logistics patrols, maintenance activities, and human resources support. The battalion S1 and S4 sections collocate to form the combat trains command post (CTCP) with appropriate staff elements in the main CP. The following battalion staff sections/units have the primary responsibility for logistics at battalion or HHC level.

3-184. **S1 Section.** The S1 human resources section is responsible for personnel services and the general administration of the battalion. The S1 section has personnel at both the combat trains CP and the field trains located in one of several ways given METT-TC conditions. It is ultimately the commander's decision where to place his logistics assets. The S1 and his staff in the combat trains CP primarily perform the critical tasks of strength accountability and casualty reporting as well as command post functions. The S1 personnel in the field trains perform replacement operations, administrative services, personnel actions, legal services, and finance services. The S1 also has primary staff responsibility for EPW operations and medical planning. He coordinates with the S2 for interrogation of prisoners and the S4 for

processing captured equipment and transportation requirements. The S1 coordinates with the medical platoon leader to ensure that patient treatment and evacuation is planned and coordinated throughout the battalion area. The S1 also coordinates for religious support with the battalion UMT section consisting of one chaplain and one chaplain's assistant. The S1 assumes public affairs responsibilities since no public affairs office (PAO) assets are available to aid the commander at battalion level. The PAO responsibilities include the following:

- Monitoring the need for command information in the battalion to counter enemy propaganda and rumors, to maintain morale, and to maintain the will to fight.
- Coordinating with higher headquarters PAO to receive needed command information support.
- Identifying unescorted news media in the battalion's area of operations, verifying their credentials, and coordinating their presence with higher headquarters PAO or the media escort.
- Observing OPSEC and responding to news media inquiries concerning battalion activities only.
- Referring other inquiries to the higher headquarters PAO or the media escort.

3-185. **Medical Platoon.** The medical platoon located in the HHC provides force health protection (FHP) for the battalion using its organic capabilities. The medical platoon is dependent on the health service support (HSS) system for augmentation/reinforcement. The medical platoon is organized with a headquarters section, a treatment squad, two ambulance squads, and a combat medic section. The medical platoon is responsible for providing Level I medical care. This care includes emergency medical treatment for wounds, injuries or illness, advanced trauma management, and sick call services. It also includes casualty collection and medical evacuation from the supported maneuver company to the battalion aid station (BAS). The medical platoon habitually establishes the BAS where it can best support the battalion. The BAS is under the tactical control of the battalion S4 and normally operates under the direction of the CTCP.

3-186. **S4 Section.** The S4 focuses on planning logistics, identifying requirements, and coordinating for support through the FSC commander. The battalion S4 concentrates on seven classes of supply: Classes I, II, III, IV, V, VII, and IX, hence the FSC commander and his distribution and maintenance platoon leaders coordinate the requisition, receipt, preparation, and delivery of all classes of supply minus Class CIII. The HHC commander might have his XO assist with this operation but it is METT-TC dependant upon where it is best to use his talents. The battalion S-4 has overwatch responsibilities to ensure the mission is progressing as planned i.e. situation reports (SITREPs) are expected to be turned in periodically to the CTCP for his use in maintaining a logistical common operating picture. In addition, the S4 section does the ordering and the FSC is responsible for receiving water and maps. Water is delivered by the BSB distribution company from the water supply point in or near the BSA. Maps are stocked at the UEx or UEy level. After the FSC receives the maps, the S2 is responsible for distributing maps as required. Classified maps are obtained through S2/G2 channels.

SECTION IV – FSC'S ORGANIZATION AND FUNCTIONS

FORWARD SUPPORT COMPANY

ORGANIZATION

3-187. The FSC commander is the senior logistics commander at battalion level (not the planner as he assists the battalion S1/4 with the battalion's logistics planning) for the

combat battalion/squadron for supply (minus Class VIII), transportation and maintenance. The medical assets are assigned to the HHC of the battalion. The FSC commander is responsible for executing the logistics plan in accordance with the maneuver battalion commander's guidance as developed by the battalion S1/4. The FSC commander responds directly to the battalion XO who serves as the battalion logistics integrator and assists the battalion S1/4 in logistics synchronization and troubleshooting. Many functions described in this section are a coordination effort with the FSC commander providing information, input or feedback to the battalion S1/4 for their use in planning, coordination and also providing the battalion commander a logistical common operating picture (LCOP). The FSC is assigned/organic to the battalion, but it must also regularly interface with the BSB in order to provide logistics support to the battalion.

3-188. The BSB has a direct support role in support of the combat battalion and coordinates with the battalion S1/4 for the support it provides. The maneuver battalion provides Level I medical care to its supporting FSC. The FSCs accomplish their core functions through centralization of support. Centralization of support within the maneuver battalion provides an increased efficiency and effectiveness in the flow of support and supplies. Centralization of support is enhanced through the employment of FBCB2 and BCS3. The FSC has the capability to command, control, and integrate attached units such as engineer support teams or teams from sustainment brigade assets or the BSB. FBCB2 and its capability to assist with providing near real-time situational understanding on the battlefield greatly assist in the sustainment effort.

3-189. The FSC is a multi-functional unit that includes a distribution platoon and a maintenance platoon organized to provide support to a maneuver battalion. The FSC is as mobile as the unit it supports. This mobility provides greater flexibility for the maneuver commander. The FSCs may locate four to fourteen kilometers behind their combat battalion's support area in the combined arms or fires battalion or reconnaissance squadron support area; CABSA, FBSA and RSSA, respectively. The combat battalion support areas or the unit's field trains can also be located in the brigade support area (BSA). Location is METT-TC dependent and is always the combat battalion/squadron commander's decision, unless directed otherwise by the HBCT commander.

3-190. The maneuver unit company supply sergeants and are generally most often located in the combat battalion's support area. They assemble their logistics packages (LOGPACs) and then move forward via their combat logistics patrol to the company logistics release point (LRP). The company first sergeant (1SG) or his representative meets the LOGPAC and guides it to the company resupply point. An option to consider is the battalion commander might use the HHC XO for operational liaison, support and advice to the FSC commander. This is a METT-TC decision on the best utilization of this officer and the needs of the FSC versus the battalion HHC.

3-191. The FSCs do not have a support operations cell to collocate with its supported battalion's S1/S4 at the combat trains command post (CTCP). It is incumbent upon the battalion S1/4 to conduct the requisite planning with the combined arms or fires battalion or reconnaissance squadron staff, as applicable. The battalion S4 ensures the battalion's orders and requirements are passed to the FSC commander, who has supported the battalion S1/4 with requisite information during the planning process. One scenario for high intensity linear operations, is for the CTCP to be located within the FSC forward location, one to four kilometers behind the battalion (combat trains). Based on METT-TC, the FSC based upon guidance from the maneuver battalion has the flexibility to locate the unit maintenance collection point (UMCP), recovery, emergencies re-supply of Class III and V, and other assets from the combat battalion's support area in this FSC forward location (combat trains). The maneuver units will normally locate their battalion aide station (BAS) (Level I MTF) within the combat trains location for force protection and proximity due to control considerations. FMTs from the FSCs are placed forward with each maneuver company under the control of

the maneuver 1SG. The maneuver 1SG also has under his operational control the medical personnel operating in the company AO. As stated earlier, there are a number of options available for placement of the FSC's assets.

3-192. Figures 3-6, 3-7 and 3-8 shows the FSC organization for the combined arms and fires battalion and the reconnaissance squadron. The FSC depends upon the maneuver battalion/squadron and other units for the following support:

- Personnel administration support.
- Religious support.
- BSB support operations section for a COP for logistics outside the FSC's AO (i.e. integrated materiel management, movement, maintenance, and distribution management direction).
- Maneuver battalion S2 for intelligence.
- Maneuver S1/S4 for common tactical picture and supported unit/echelon logistics picture.
- Appropriate elements of the UEx sustainment brigade for legal, force health protection, finance, personnel, and administrative support.
- The BSB or EAB for resupply assets to maintain the require quantity of materiel for push forward to the supported battalion.
- All supplies as required by METT-TC.
- The MEDCO, BSMC, for force health protection and patient evacuation. The maneuver battalion provides Level 1 medical support to their FSC.
- Sustainment brigade mortuary affair teams for MA support.
- The BSB Distribution company for water distribution to the FSC and its maneuver battalion.
- Sustainment brigade communications and electronics (COMMEL) assets to augment COMMEL maintenance.

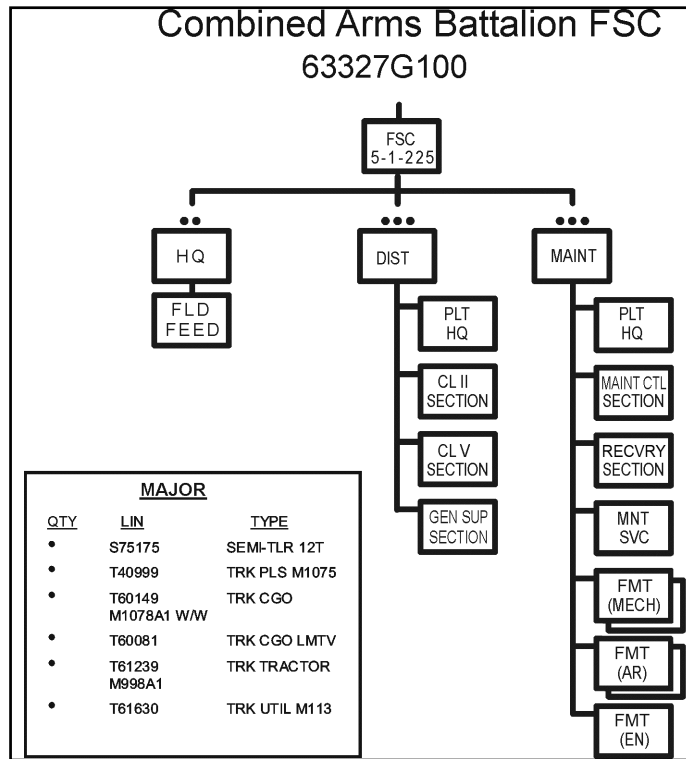


Figure 3-6, Combined Arms Battalion Forward Support Company

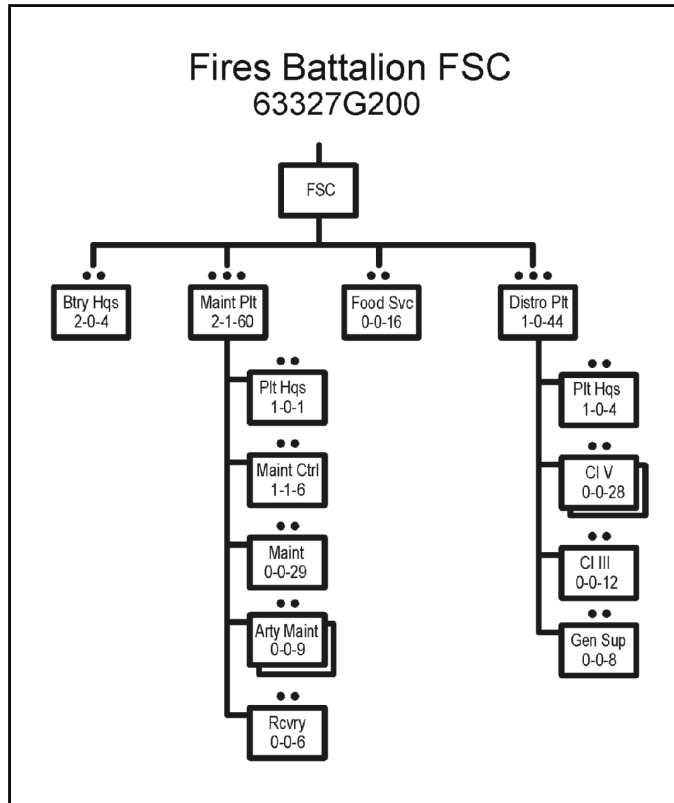


Figure 3-7, Fires Battalion Forward Support Company

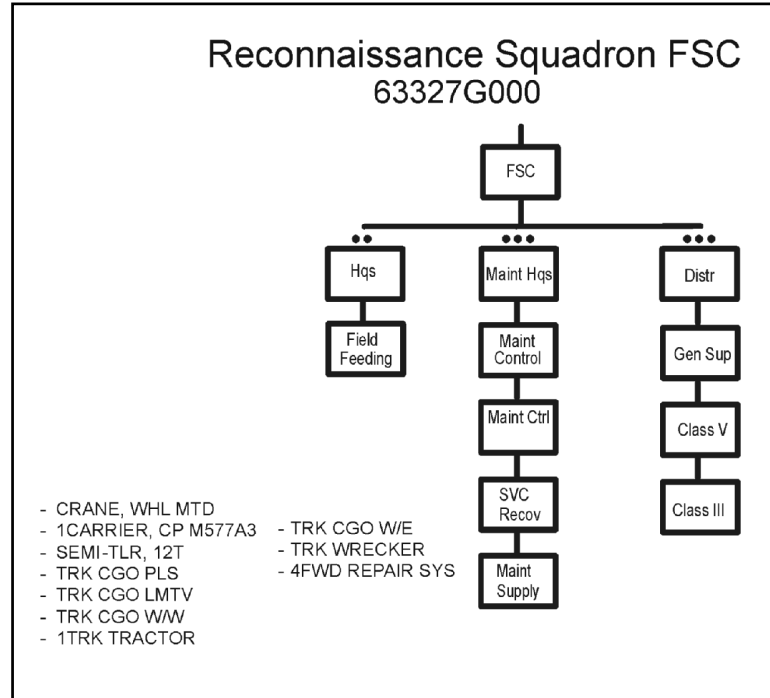


Figure 3-8, Reconnaissance Squadron Forward Support Company

PLATOON/SECTION FUNCTIONS

COMPANY HEADQUARTERS

Headquarters Section

3-193. The HQ section of the FSC provides C2 to assigned and attached personnel. It ensures that subordinate elements follow the policies and procedures prescribed by the FSC commander and the maneuver battalion commander. It directs the operations of its subordinate sections as well as the overall logistics operations, less medical, in support of the battalion. The company commander is the single logistics operator for the conduct of all logistics operations, less medical, in support of the battalion.

Company Commander

3-194. The FSC company commander is responsible to the maneuver battalion commander for the discipline, combat readiness, and training of the FSC, distribution and maintenance support for its maneuver battalion, and for the maintenance of FSC equipment.

3-195. The commander is responsible for everything the FSC does or fails to do. He must be proficient in the tactical employment of the company and its assigned and attached logistics elements. The commander must also know the capabilities and limitations of the company's personnel and equipment in performing the sustainment mission as well as those of the logistical elements attached to him. Additionally, his responsibilities include leadership, discipline, tactical employment, training, administration, personnel management, supply, maintenance, communications, and sustainment activities of the company.

3-196. These duties require the commander to understand the capabilities of the company's Soldiers and equipment and to know how to employ them to best tactical and logistics advantage. At the same time, the commander must be well versed in enemy organizations, doctrine, and equipment.

3-197. Using this knowledge, the commander prepares his unit for combat operations using troop-leading procedures. Ultimately, he must know how to exercise command effectively and decisively. He must be flexible, using sound judgment to make correct decisions quickly and at the right time based on the higher commander's intent and the tactical situation. He must be able to issue instructions to his subordinate leaders in the form of clear, accurate combat orders and then he must ensure that the orders are executed.

3-198. The company commander's responsibility in combat is threefold. He will:

- Accomplish all missions assigned to the FSC in accordance with the maneuver commander's intent and support the commander's scheme of maneuver with logistics.
- Sustain the fighting capability of the supported battalion and the FSC.
- He must maintain continual communications with higher, lower, and adjacent units and retain connectivity of STAMIS with the BSB and other sustainment organizations that provide reachback support e.g. sustainment brigade.

Executive Officer

3-199. The XO is the principle assistant to the company commander. As second in command, he must understand both operations that provide support to the maneuver battalion and the other functions of the forward support company. He supervises the company headquarters personnel and coordinates assigned missions with subordinate elements. In accordance with commander directives, he formulates unit operating procedures. He also supervises CP operations.

SUPPORT OPERATIONS FUNCTIONS

3-200. The support operations functions are performed by the executive officer or one of the other company officers. The support operations duties include the following:

- Continuous battle tracking.
- Establish maneuver battalion CTCP functions if the battalion CTCP is destroyed.
- Ensure accurate, timely tactical reports are received by the FSC CP.
- Assume command of the company as required.
- Assist in preparation of the company OPORD for the commander and ICW the battalion S1/4 assist with developing the concept of support for the battalion OPORD.
- Conduct tactical and logistical coordination with higher, adjacent, and supported units as appropriate.
- Overwatch the development of the daily LOGPACs by the distribution platoon and the company supply sergeants.
- Ensure that troop leading procedures (TLP) are used by the distribution platoon leader to plan, prepare for, execute and then assess the combat logistics patrol that takes the LOGPACs out to the supported companies.
- As required, assist the commander in issuing orders to the company, headquarters, and attachments.
- Conduct additional missions as required. These may include serving as OIC for the quartering party, company movement officer, or company training officer.
- Assist the commander in preparations for follow-on missions.

Support Operations Requirements

3-201. The tasks that were accomplished previously by a support operations officer and cell are still valid. However the tasks are now accomplished by other leaders. This is a recommendation by leader in the FSC as to how those tasks could now be accomplished—these are not to conflict with the battalion S1/S4 in their roles as the battalion’s planners for logistics/human resources:

- **FSC Commander.**
 - Provides input to the battalion log estimate and logistics annex ICW the battalion S1/S4.
 - Keeps the BSB support operations section abreast of the logistics statuses and requests backup support when needed ICW the battalion S4.
 - Recommends support priorities ICW the battalion S4 and enforces priorities received from higher headquarters.
 - Coordinates with the maneuver battalion S2/S3 on support locations ICW the battalion S1/S4.
 - Plans and executes contingency operations as required.
 - Plans, coordinates, and controls allocation of available resources ICW the battalion S4 and as directed by the battalion commander’s priorities of support.
 - Coordinates and provides technical logistics supervision to the battalion and advises the battalion S4 of any issues.
 - Monitors battalion LOGSITREP/ LOGSTAT and coordinates efforts with the battalion S4.
 - Plans future operations ICW the battalion S1/S4.
 - Establishes the logistics synchronization matrix ICW the battalion S1/S4.
- **FSC Executive Officer.**
 - Advises the commander on requirements versus available assets. Ensures this information is provided to the battalion S1/S4 for situational understanding by the battalion commander.
 - Determines logistics requirements in coordination with the BSB support operations, battalion S1/S4, the BSB S2/3, and the logistics representatives from other customer units. The battalion S1/S4 are the staff agencies responsible for logistics planning. The FSC is in a support role but does coordinate logistics requirements as already indicated.
 - Tracks available assets through supported companies, the BSB support operations, battalion S4, and other supported units.
 - Prepares and distributes the FSC support SOP ICW the battalion S4.
 - Coordinates with the battalion S3 on routes in the combat battalion’s support area e.g. LOC routes.
 - Provides LOGSPOT reports IAW unit SOP.
 - Establishes and maintain tactical and logistics overlays for the FSC.
- **Distribution and Maintenance Platoon Leaders.**
 - Coordinates and provides technical supervision for the unit’s logistics mission.
- **FSC Commander Maintenance Tasks.**
 - Recommends allocation of maintenance assets in coordination with company commanders to the battalion S4 IAW commander’s prioritization of support.
 - Monitors FMT operations and Class IX, line replaceable unit (LRU) and major assembly replenishment.
 - Reviews and recommends ASL changes to BSB support operations officer and HBCT S4 through the battalion S4.

- Forecasts and monitors the workload for all equipment by type.
- Monitors maintenance shop production and job status.
- Intensively manages non-mission capable (NMC) high priority jobs (critical combat power producing jobs) ICW the battalion S4
- Coordinates additional requirements through BSB support operations branch ICW the battalion S4.
- Coordinates critical parts status with BSB support operations officer ICW the battalion S4.
- Coordinates for personnel with special MOSs to support slice units equipment, e.g., combat engineers, ADMO, and FA ICW the battalion S1/S4 and the BSB SPO.
- Monitors maintenance activities at the UMCP.
- Monitors SLANT reports and ICW the battalion S4 allocates support IAW commander's prioritization of support.
- **FSC Commander Supply and Services Tasks.**
 - Coordinates supply and field services support with BSB support operation and the battalion S4.
 - Coordinates with BSB support operations section for augmentation as required ICW the battalion S1/S4.
 - Plans and supervises resupply operations ICW the battalion S4.
 - Determines requirements and plans for air resupply operations ICW the battalion S4.
 - ICW the battalion S4, monitors unit combat loads to anticipate replenishment actions.
 - Supply status report collection.
 - Maintains current status of critical supplies.
 - Monitors the CSR and supported units' combat loads.
 - Requests through the battalion S4 and coordinates with the BSB support operations for field services requirements and augmentations.
 - Monitors activities within battalion for compliance with the battalion service support annex established by the battalion S4.
- **FSC Commander Distribution Platoon's Transportation Tasks.**
 - Coordinates and monitors the movement of replenishment stocks and services for the FSC.
 - Monitors retrograde of flatracks.
 - Monitors retrograde of aerial delivery equipment (fixed and rotary wing).
 - Coordinates retrograde of equipment and supplies with the BSB support operations officer or BSB movements NCO ICW the battalion S4. Coordinates delivery priorities with the battalion S4.
 - Coordinates supplemental transportation in support of the battalion ICW the battalion S4.
 - Coordinates aerial resupply for critical items ICW the battalion S4.

FSC FIRST SERGEANT

3-202. The 1SG is the company's senior NCO and normally is its most experienced Soldier. He is the commander's primary logistics and tactical advisor and he is an expert in individual and NCO skills. He is the company's primary internal logistics operator and helps the commander and support operations officer to plan, coordinate, and supervise all logistical

activities that support the company's mission. He operates where the commander directs or where his duties require him.

3-203. The 1SG's specific duties include the following:

- Provides the battalion commander information on the status of enlisted matters.
- Ensures the health, morale, and welfare of the unit.
- Serves as the company's senior enlisted master trainer. The 1SG is critical to identifying training requirements for individuals, crews, battle staff, units and leaders. The 1SG ensures training solutions are resourced, executed, and assessed to satisfy METL and battle tasks.
- Responsible for individual Soldier training proficiency in field crafts and basic Soldier skills.
- Recommends enlisted assignments to the FSC commander.
- Plans and supervises the company defense effort before, during, and after the battle.
- Executes and supervises routine operations. The 1SG's duties may include enforcing the tactical SOP; planning and coordinating training; coordinating and reporting personnel and administrative actions; and supervising supply, maintenance, communications, and field hygiene operations.
- Supervises, inspects, and/or observes all matters designated by the commander.
- Assists in planning, rehearsing, and supervising key logistical actions in support of the tactical mission. These activities include resupply of Class I, III, and V products and materiel; maintenance and recovery; medical treatment and evacuation; and replacement/RTD processing.
- Assists and coordinates with the support operations in all critical functions.
- As necessary, serves as quartering party NCOIC.
- Using FBCB2 transmit company rollup reports LOGSITREP and PERSITREP. Transmit call for support (CFS) for immediate resupply for Class III/IV/V or recovery missions using FBCB2 (as required).
- Conducts training and ensures proficiency in individual and NCO skills and small-unit collective skills that support the company's mission essential task list (METL).
- Receives incoming personnel and assigns them to subordinate elements as needed.
- Responsible for the medical evacuation of sick, injured, and wounded Soldiers to the supporting medical treatment facility.
- Responsible for the evacuation of Soldiers killed in action to the supporting graves registration collection point.
- In conjunction with the commander, establishes and maintains the foundation for company discipline.

SUPPORTED BATTALION AND FSC SUPPLY SERGEANTS

3-204. The supply sergeant requests, receives, issues, stores, maintains, and turns in supplies and equipment for the company. He coordinates all supply requirements and actions with the 1SG and the FSC CP. Normally, the supply sergeant will be positioned in the CABSA where he is supervised by the company 1SG and assisted with management for daily operations by the battalion S4 NCOIC. He communicates with the company using the company designated net. The supply sergeant's specific responsibilities include the following:

- Control the company cargo truck, resupplies the water trailer, and supervise the supply clerk/armorer.

- Monitor company team activities and/or the tactical situation; anticipate and report logistical requirements using FBCB2; and coordinate and monitor the status of the company's logistics requests.
- Coordinate and supervise the issue or delivery of supplies to the platoons or sections.
- Provide order, receipt, and issue capability for Class I, II, III (P), IV, V, and VI through supply STAMIS (either ULLS-S4 or GCSS-A).

CBRN NCO

3-205. The CBRN NCO assists and advises the company commander in planning for and conducting operations in a CBRN environment. He plans, conducts, coordinates, and/or supervises CBRN defense training with the 1SG and covers such areas as decontamination procedures and use and maintenance of CBRN-related equipment. Specific duties include the following:

- Assist the commander in developing company operational exposure guidance (OEG) in accordance with OEG from higher headquarters.
- Make recommendations to the commander on CBRN survey and/or monitoring, decontamination, and smoke support requirements.
- Requisition CBRN -specific equipment and supply items.
- Assist the commander in developing and implementing the company team CBRN training program.

3-206. The CBRN NCO ensures that the training program covers the following requirements:

- First-line supervisors provide effective sustainment training in CBRN common tasks.
- CBRN -related leader tasks are covered in sustainment training.
- CBRN -related collective tasks are covered in overall unit training activities.
- CBRN factors are incorporated as a condition in the performance of METL tasks.
- Inspect company elements to ensure CBRN preparedness and report to the commander the findings.
- Process and disseminate information on enemy and friendly CBRN capabilities and activities, including attacks.
- Advise the commander on contamination avoidance measures.
- Coordinate, monitor, and supervise decontamination operations.

ARMORER

3-207. The armorer performs organizational maintenance on the company's small arms and is responsible for evacuating weapons as necessary to the maintenance platoon or to the base support company for field maintenance. In addition, he normally assists the supply sergeant in his duties. As an option, the armorer may serve as the driver of the 1SG's vehicle to make him more accessible for weapons repair and maintenance in areas beyond the CP.

FOOD SERVICE SECTION

3-208. Class I is provided by the food service section. This section provides food service and food preparation for the battalion and organic personnel. It distributes prepackaged and/or prepared food. The food service section has the ability to prepare one heat-and-serve meal and one cook-prepared (A or B) meal per day.

DISTRIBUTION PLATOON

3-209. The platoon provides supply and transportation support to the maneuver battalion. The distribution platoon provides Class I (to include food service support), II, III (P, B), IV, V, VI, and VII, to the maneuver battalion. The distribution section has the ability to conduct simultaneous Class III, V retail support to the maneuver companies, maneuver HHC and the FSC itself. and deliver hot meals to the maneuver company area. The distribution platoon operates FBCB2 and the STAMIS to support supplies ordering and receipt.

3-210. Duties and responsibilities of the distribution platoon leader include:

- Providing command and control of the distribution and food service sections of the distribution platoon.
- Managing property accountability for the commander for all equipment assigned to the platoon.
- Manage the distribution of supply Classes I, II, III (B), III (P), V, and VI to the battalion.
- Providing retail Class III (B) unit distribution to battalion maneuver units and supply point to CABSA units.
- Providing Class V unit distribution to battalion maneuver units and supply point to CABSA units.
- Providing order, receipt, and issue capability for Classes II, III (P), IV, and VI through supply STAMIS (either SARSS or GCSS-A).
- Managing transportation assets of distribution section to include LOGPAC operations.
- Providing food service support to the battalion.

3-211. The distribution platoon leader of the FSC takes over the responsibilities previously held by the support platoon leader in the maneuver units. The key activity of the distribution platoon is the conduct of LOGPAC operations to the battalion and getting replenishment sustainment stocks from Sustainment Brigade units at the LRP through CRO and SRO.

3-212. The distribution platoon sergeant is the platoon's second in charge and is accountable to the platoon leader for the leadership, discipline, training, and welfare of the platoon's Soldiers. He coordinates the platoon's maintenance and logistical requirements and handles the personal needs of individual Soldiers. The platoon sergeant (PSG) executes the support mission of the platoon in concert with the concept of support, the operations order and platoon leader's guidance. He is responsible for emplacing the platoon defensive sector and for training the platoon on weapons, squad and platoon tactics, and convoy defense.

Platoon Headquarters Section

3-213. The distribution platoon HQ manages the distribution of supplies and food service coming from or passing through the FSC in support of a mechanized infantry, fires, armor battalion or reconnaissance squadron.

STOCK CONTROL SECTION WITHN PLATOON HEADQUARTERS

3-214. The stock control section utilizes the pertinent Army STAMIS to provide supply receipt and issue management.

3-215. The stock control section is collocated with the platoon CP to facilitate on-site item management. The stock control section will:

- Operate the Army STAMIS system for ordering and receiving.
- Maintain a current listing for all on-hand commodities.

- Process receipts, issues and turn-ins.
- Process turn-ins to maintenance (for reparable items).
- Establish limited storage, receipt and issue facility for all supported commodities.
- Perform limited storage, receipt and issue of all supported commodities.
- Deliver issued assets (LOGPAC) and pickup retrogrades (turn-ins to maintenance and/or for disposal).

General Supply Section

3-216. The general supply section is responsible to transport I, II, III (P), IV, and VII to the maneuver battalion units coming from or passing through the FSC in support of a mechanized, fires or armor battalion or the reconnaissance squadron. Coordination with the company supply sergeants for Class I is normally conducted for company breaks of food rations on the unit's supply vehicle.

Class III Section

3-217. The Class III section conducts CRO and SRO for refueling coming from or passing through the FSC in support of a combined arms, fires battalion or the reconnaissance squadron.

Class V Section

3-218. The Class V section conducts CRO and SRO for ammunition resupply coming from or passing through the FSC in support of a combined arms, fires battalion or the reconnaissance squadron.

3-219. Major differences between support of a combined arms battalion/reconnaissance squadron and the fires battalion are that the fires battalions require more ammunition short tons (STONS).

MAINTENANCE PLATOON

3-220. The FSC's maintenance platoon provides field maintenance (AOE organizational and DS level) to itself and its maneuver battalion. The platoon consists of a headquarters section, maintenance control section (MCS), recovery section, maintenance and service section, and the field maintenance teams (FMT). The maintenance platoon provides command and control and reinforcing maintenance to the FMTs. The FMTs provide field maintenance and battle damage assessment and repair (BDAR) to the maneuver companies. As a maneuver commander task organizes the force, all or part of a FMT goes with the company teams in order to maintain habitual support. The platoon maintains a limited quantity of combat spares (PLL, shop and bench stock) in the MCS. The maintenance platoon's supply section is capable of providing Class IX support (combat spares) to each maneuver company, the engineer company and the HHC. It maintains the company's combat spares (PLL, shop and bench stock) for the company/HHC it is supporting. It also provides exchange of reparable items.

3-221. The FSC operates the UMCP in what is known today as the combat battalion's support area (e.g. combined arms battalion support area (CABSA) or CTCP area depending on METT-TC). In the offense you would probably find them in the combat trains, while in the defense you could find much of the UMCP in the CABSA. Depending upon METT-TC conditions, the commander could locate much of the FSC in the BSA. Maintenance advances such as the multi-capable mechanic, advances in diagnostics and prognostics maintenance capabilities, and the introduction of the forward repair system (FRS) enhances the FSC maintenance platoon's capabilities.

3-222. The maintenance platoon, using ULLS-G (to be replaced with ULLS-Enhanced), performs all transportation maintenance management system (TAMMS) functions, dispatching, and scheduled service operations for the maneuver battalion and FSC. The FSC maintenance platoon's priorities are determined by the MCO in coordination by the FSC commander with the maneuver battalion chain of command. The maintenance platoon operates and controls the battalion UMCP. The platoon performs on-system maintenance. It replaces forward by using diagnostics/prognostics to diagnose major component failure and then replaces that component. These components can include line replaceable units (LRU), major assemblies, or other sub-components. The extent of repair is METT-TC dependent. If time, tools, test equipment, and repair parts are available, repairs are done on site. Mechanics perform BDAR IAW applicable technical manuals. As directed, mechanics perform controlled exchange to expedite repairs. The battalion commander is the approval authority for controlled exchange actions and cannibalization is normally in accordance with the HBCT commander's policy. The FSC maintenance platoon coordinates backup and pass-back maintenance requirements with the FSC commander.

3-223. During combat, the maintenance platoon's first priority is to reinforce the FMT's mission. The platoon headquarters coordinates with the FSC commander to integrate and support battalion operations. The headquarters section maintains situational understanding of battalion operations. It also maintains FM communications capability with both the battalion command and logistics nets and capability to link to FBCB2 devices. This ensures the maintenance platoon maintains asset visibility and tactical as well as logistical situational understanding.

3-224. Use of FBCB2 provides the roll-up of critical information required by the BSB to anticipate and meet the battalion maintenance requirements. The FSC maintenance platoon also coordinates backup and pass-back maintenance requirements through the FSC support operation officer to the BSB.

3-225. Combined arms, fires battalions and the reconnaissance squadron and all other units in the HBCT remain responsible for operator and crew level maintenance. Operators/crews may perform BDAR through the use of onboard BDAR kits and will use self-recovery techniques to greatest extent possible.

3-226. Operators and crews annotate PMCS shortcoming/deficiencies on DA Form 5988-E. The DA Forms 5988-E are consolidated, reviewed, and verified by the chain of command and FMT. Shortcoming/deficiencies are corrected immediately unless parts are required at which time parts are placed on order through ULLS-G or SAMS-1.

3-227. The FSC MCO coordinates the maintenance priorities with the battalion S4 and MCS. The MCO task organizes the maintenance platoon based on analysis of current and anticipated mission requirements. He is concerned with providing the appropriate support at the UMCP and to the combat companies. The UMCP is under the control and is work-loaded by the MCS. It is task organized with the maintenance control section, the maintenance section and the service and recovery section. Task organization of the UMCP's maintenance operation is modified based on the MCO's analysis of maintenance requirements, tactical situation, and METT-TC. Anything that is not repaired in the UMCP, or that is not towed by UMCP assets, is recovered to the CABSA or evacuated to the BSA or EAB.

3-228. The maintenance control section is the management center for all maintenance actions. The FSC's ULLS-G boxes are collocated in the MCS. The MCO uses ULLS-G to produce the AMSS readiness reports. The AMSS replaces manual readiness reporting on the front-side of DA Form 2406. The maneuver commander is responsible for the operator/crew maintenance functions in his unit. The MCO is responsible for preparing the readiness report for the maneuver commander's signature.

Maintenance Platoon Headquarters Section

3-229. The maintenance platoon headquarters section provides command, control, and supervision for all administrative functions of the platoon. With guidance from higher headquarters, it plans and conducts all necessary training activities.

Maintenance Platoon Leader

3-230. The maintenance platoon leader is responsible for controlling and directing the accomplishment of the platoon's mission. He is responsible to the MCO for ensuring the completion of maintenance jobs and priority of support as provided to the MCO from the commander is followed. Normally you will find the maintenance platoon leader in the CABSA, but due to the nature of his requirements he with his PSG will be found throughout the battalion battlespace checking on Soldiers, the status of maintenance jobs completion and ensuring appropriate force protection measures are in place with the supported unit. He is responsible for the readiness of the platoon's personnel and equipment. He is also responsible for maintaining the health, welfare, and morale of platoon personnel. The unit commander primarily establishes the platoon leader duties. They include but are not limited to the following:

- Training of platoon personnel.
- Leading recovery team operations, forward repair elements, or other on-site maintenance missions.
- Reviewing and evaluating operator/crew preventive maintenance checks platoon equipment.
- Determining platoon equipment operators licensing requirements.
- Participating in the analysis, planning, and supervising the execution all maintenance activities.
- Managing property accountability for the commander for all equipment assigned to the platoon.
- Understanding the battalion maintenance priorities and ensuring maintenance platoon adhere to the established priorities and guidance.
- Serving as maintenance control officer in his absence.

Maintenance Platoon Sergeant

3-231. The maintenance platoon sergeant is the platoon's second in command and is accountable to the platoon leader for the leadership, discipline, training, and welfare of the platoon's Soldiers. He coordinates the platoon's maintenance and logistical requirements and handles the personal needs of individual Soldiers.

3-232. The PSG executes the support mission of the platoon in concert with the concept of support, the operations order and platoon leader's guidance. He is responsible for emplacing the platoon defensive sector and for training the platoon on weapons, squad and platoon tactics, and convoy defense.

Maintenance Control Section (MCS)

3-233. The MCS is the primary manager for all field maintenance in the FSC and supported battalion. The MCS performs all TAMMS functions and dispatching operations and tracks scheduled services using ULLSG for the maneuver battalion and the FSC. Services are not a responsibility to be performed by the HBC T but they will be recorded. All maneuver company ULLS-G boxes are collocated with the maintenance control section; and the MCS supervises the ULLS-G operators. The ULLS-G clerks operating each company box process the DA Form 5988-E completed by the operator or crew and verified by the FMT.

3-234. Field maintenance is the new two level maintenance that combines the AOE organizational level and AOE DS levels of maintenance. This doctrine has mechanics fixing both organizational and DS level mechanical deficiencies. The organizational and DS repair parts (CI IX) ordering is performed by the same clerk. Until the new program comes out that allows ordering both levels of parts on one machine the following practice will be followed. If a vehicle is NMC for organizational level maintenance, the ULLS-G operator enters that information into the ULLS-G computer. ULLS-G assigns an organizational work order number (ORGWON). If the vehicle requires DS level maintenance, an organizational work order DA Form, 5990-E (*Maintenance Request*), is generated by ULLS-G. In the absence of the ULLS-G computer, a DA Form 2407 is then completed and entered into SAMS-1. The SAMS-1 assigns a DS work order number. The MCS provides maintenance information management to the FSC support operations. It also provides maintenance information to the BSB support operations section by transmitting data, wireless transmission e.g. Combat Support Services Automated Information System Interface (CAISI), very small aperture terminal (VSAT) or Secure Mobile Anti-jam Reliable Tactical Terminal (SMART T) to the greatest extent possible (other communication technique to be determined), from the MCS's SAMS-1 box to the BSB support operation section's SAMS-2 box. When that is not available they will use a disk to transfer data.

3-235. The MCS uses three management tools; SAMS-1 and SAMS-2, ULLS-G, and FFCB2. The MCS receives CFS and LTO messages through FFCB2. With the introduction of GCSS-Army, maintenance functionality will be consolidated in the maintenance module.

3-236. The MCS tracks the CFS and LTO through the orders/request functions in FFCB2. In turn, the CFS and LTO are entered into SAMS-1 (for AOE DS level jobs) and ULLS-G (for AOE organizational level jobs) as appropriate.

3-237. The maintenance flow begins when the operator sends a CFS maintenance/recovery request using FFCB2. This message includes the vehicle location and the action requested. The message is sent simultaneously to the 1SG for action and to the FSC support operations section for information.

3-238. When the 1SG receives the CFS from the operator, he sends the logistic task order to the FMT for action. The FMT responds to the LTO with one of the acknowledgment messages. The operator requesting the maintenance support receives an information copy of the acknowledgment message. When the FMT is unable to provide the necessary support to accomplish the task in the CFS, the 1SG forwards a CFS to the FSC support operations section. The FSC commander sends a LTO to the MCS for action.

3-239. When the MCS receives a LTO from the FSC commander, it forwards the LTO to the appropriate section (another FMT, maintenance and service section, or recovery section) via FFCB2. The appropriate section responds to the LTO with one of the acknowledgment messages. Again, the requesting operator receives a copy of the acknowledgment message. When the LTO is accepted, the maintenance section NCOIC uses FFCB2 to synchronize/coordinate mission support and sends a mechanic to repair the vehicle. If the mechanic does not have the necessary combat spares on hand, he sends a message to the MCS via FFCB2 requesting additional repair parts. If the repair parts are not on hand at the MCS, they are ordered through ULLS-G (AOE organizational parts) or SAMS-1 (AOE direct support parts). If the repair part arrives in a timely manner, the vehicle is repaired on-site or at the UMCP. If the part is not available or has a long order ship time, the vehicle is recovered to the FSC, BSA or EAB as appropriate.

Maintenance Control Officer (MCO)

3-240. The maintenance control officer is the principal assistant to the commander, both battalion and FSC, on all matters pertaining to the field maintenance mission. The MCO

serves as maintenance officer for the maneuver battalion and FSC using SAMS-1, SAMS-2, BCS3 and FBCB2. He is also is the senior person in the UMCP and is responsible for the local security requirements and tying in with adjacent units. He is responsible to the commander for the management of the combined efforts of the maintenance control section, maintenance section and service and recovery section, and the maintenance system teams to include:

- Evaluating and ensuring the quality of maintenance completed by the maintenance platoon.
- Developing a training and cross-training plan for maintenance personnel.
- Coordinating for the recovery of battalion equipment.
- Monitoring the status of equipment under-going repairs and determining status of Class IX repair parts required to complete the repair.
- Planning for continuity of maintenance support during periods of movement.
- Managing production control, to include the assignment of work to shop sections and the compilation of prescribed reports and records.
- Coordinating maintenance section and recovery and service section and maintenance system teams requirements for the use of the recovery section assets.
- Coordinating the activities of the inspectors and maintenance personnel to ensure adherence to the maintenance standard.
- Executing maintenance priorities as established by the maneuver battalion commander.
- Anticipating expected workloads, shop progress, difficulties encountered during repair actions, and maintenance supply actions.
- Analyzing and planning all maintenance activities.
- Coordinating field maintenance requirements with maneuver battalion S-4 and BSB SPT OPNS as appropriate.
- Developing the maintenance services plan for battalion equipment.
- Developing and executing the battalion licensing program.
- Integrating BSB and sustainment brigade maintenance teams into the FSC.

Maintenance Control Supervisor

3-241. The maintenance control supervisor is the best-qualified noncommissioned officer in the platoon, selected on the basis of leadership skills as well as technical ability. He is the principal assistant to the maintenance control officer in matters pertaining to the field maintenance mission of the organization. The maintenance control supervisor is responsible for management of the combined efforts of all maintenance sections and teams and the day-to-day operations of the maintenance control section to include:

- Maintaining all records essential to the operations of the maintenance section and teams.
- Assigning daily workload to maintenance and service section and the recovery section.
- Knowing the status of equipment undergoing repairs.
- Managing equipment service schedule.
- Assisting in the troubleshooting, use of test, measurement, and diagnostic equipment (TMDE) and tools, and replacement of parts.
- Managing ULLS-G and SAMS-1 and SAMS-2 STAMIS (replaced by ULLS-E in the future).
- Managing the maintenance platoon stockage of combat spares.
- Ordering required repair parts and replenishing combat spares as required.

- Managing, and when necessary, conducting cross training for mechanics in the FSC.

Automotive Maintenance Officer (915E)

3-242. The maintenance warrant officer provides technical expertise on all aspects of the field maintenance mission. They use their advanced diagnostics and troubleshooting skills to isolate system faults and expedite the repair and return of major weapon systems to operation. Because of his technical expertise, the maintenance warrant officer advises the commander and MCO on all matters pertaining to BDAR. His responsibilities include, but are not limited to the following:

- Provides input to the FSC's and maneuver commander's plans.
- Organizes and allocates resources to execute the field maintenance mission in support of wheeled vehicles, tracked vehicles, ground support equipment, armament systems, small arms, fire control, and power driven chemical equipment.
- Evaluates and inspects maintenance operations and develops and implements corrective action plans where necessary to comply with regulatory and statutory requirements applicable in garrison and field environments.
- Identifies technical training shortfalls and when necessary trains maintenance personnel to accurately diagnose/troubleshoot mechanical, electrical, pneumatic and hydraulic malfunctions accurately using the latest equipment, technical publications, and procedures available.
- Provides management oversight and technical guidance on the establishment of unit stockages of combat spares IAW applicable supply regulations.
- Coordinates for, or as necessary, provides technical training for ULLS-G, SAMS-1 and 2 and FBCB2 operators and repair parts specialist (92A).
- Assists in the development and updating of the field maintenance SOP as it pertains to the conduct of field level maintenance operations.
- Oversees the unit's calibration and the Army oil analysis programs and ensures the programs are covered in the field maintenance SOP and meet the regulatory guidance.
- Directs, and when required trains the recovery vehicle operators on safe and correct recovery operations. Ensures that recovery vehicle operators are properly trained and certified to perform recovery operations.
- Utilizes automated maintenance management systems to provide maintenance information to the commander and maintenance control officer.
- Assists in the planning, scheduling, and publishing of the scheduled service plan for all assigned equipment per the applicable technical manual/lubrication order.
- Conducts technical inspections of unit equipment to determine the equipment maintenance status.
- Enforces the maintenance of up-to-date technical publications for use by maintenance personnel.
- Establishes the commander's quality assurance program for maintenance and repairs. Oversees all quality control inspections and inspectors to validate their capability to identify improper repairs and scheduled services.
- Serves as the unit's point of contact for automated readiness reporting and mileage reporting issues.

Maintenance Section

3-243. The maintenance section provides field maintenance for the FSC and maneuver battalion HHC. This section also provides maintenance support to elements attached to the

battalion and provide reinforcing maintenance to the FMTs. The FMT sends a CFS to the MCS via FBCB2 requesting support. The MCS sends a LTO to the maintenance and service NCOIC who responds with one of the acknowledgment messages. The maintenance flow is the same as described in the MCS.

3-244. This section is also responsible for assisting with organizational services on selected pieces of equipment organic to the FSC and the maneuver battalion HHC, and assists the FMTs in completing the services for the maneuver companies. However, services are not performed by the FSC on its vehicles. This requirement is supported by the sustainment brigade through its maintenance units or through contracted services. While performing services, the mechanic completes a DA Form 5988-E with the assigned operator and his supervisor and turns it into the ULLSG operator within the MCS.

Recovery Section

3-245. The recovery section provides recovery support to elements of the FSC. This section also provides limited reinforcing recovery support to FMTs. When reinforcing recovery support is required, FMTs send a CFS to the MCS. The MCS then sends a task order to the recovery section to provide backup support to the FMT.

3-246. Items that cannot be repaired on site must be recovered to the UMCP or BSA. The unit must first decide if the vehicle can conduct self recovery or if not then use of like vehicle recovery. If the unit can not perform either of these options for vehicle recovery the 1SG submits a CFS. The use of FBCB2 enables recovery vehicles to locate the exact location of the inoperable piece of equipment. The crew/operator forwards a call for support message through FBCB2 to the 1SG. This message includes the type of request, action requested, mission, and vehicle location. When the FMT recovery assets are not available to perform the recovery mission, the company/team 1SG sends a CFS to the FSC commander. The FSC commander forwards a LTO to the MCS. The MCS forwards the LTO to the recovery section NCOIC. Upon notification, the section NCOIC acknowledges the LTO. However, if unable to perform the mission, the NCOIC redirects the message back to the MCS. The MCS returns the LTO back to the FSC support operations. The operator/crew receives a message from the maintenance activity accepting the maintenance request for recovery. When the FSC exceeds its organic recovery capability, the FSC commander may request assistance through the BSB support operations section by forwarding the original CFS by FBCB2. The BSB support operations section responds to the message by sending a LTO to the recovery section. The recovery section responds with an acknowledgment message. If the BSB recovery section is unable to perform the mission, the BSB support operations section forwards the original CFS to EAB. Through the entire sequence of events the operator/crew is always updated on the status of his call for support in the FBCB2.

Field Maintenance Teams

3-247. The combined arms and fires battalions and the reconnaissance squadron's first level of support comes from the FSC FMTs which are organized to provide field maintenance (organizational and direct support maintenance levels) for all combat platforms organic to maneuver companies/troops/batteries. The company commander and the MCS set the FMT's priorities IAW the battalion commander's guidance. The FMT operates under the operational control of the maneuver 1SG and is supervised by the FMT's maintenance NCOIC.

3-248. The scope and level of repairs are based on METT-TC. The FMTs perform repairs as far forward as possible returning the piece of equipment to the battle. During combat, FMTs will perform BDAR, diagnostics, and on-system replacement of line replaceable units LRUs. Emphasis is placed on troubleshooting, diagnosing malfunctions and fixing the equipment by component replacement. If the tactical situation permits, FMTs focus on completing jobs on

site. The FMTs carry limited on board 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 assist the maneuver company and may as necessary recover inoperable equipment to the UMCP or designated linkup point. The FMTs are fully integrated into the maneuver units' operational plans.

3-249. Habitually associated FMTs with the associated ULLS-G boxes move with a supported unit in order to maintain support to the company. The ULLS-G box and the operator will normally stay in the UMCP.

3-250. Organizational and DS work orders are tracked by the MCS. This requirement is in place until the new program that combines these administrative functions into one to support the field maintenance concept.

3-251. The MCS gives the FMT a block of work order numbers to track equipment repair. The FMT NCOIC uses the free text message on the CFS via FBCB2 to update the MCS on work order status. The FMT opens a job order. The FMT sends paper work back to the MCS on part runs.

3-252. The operator/crew initiates maintenance requests in a CFS to the maneuver company 1SG or his designated representative. The maneuver company 1SG sends a LTO to the supporting FMT.

3-253. The FMT NCOIC sends an acknowledgment message to the maneuver company 1SG and dispatches the appropriate assets to complete the mission. If the FMT exceeds its capability, it sends a can't comply (CANTCO) message to the maneuver company 1SG.

3-254. The maneuver company 1SG reinitiates the platform's CFS up to the FSC support operations section. The FSC support operations section sends a LTO to the MCS. The FSC maintenance platoon maintains limited combat spares and provides backup maintenance and recovery support. The MCS checks the status of the maintenance and service/recovery section and the remaining FMTs to support the mission. If all FSC assets are committed, the MCS sends a CANTCO message to the FSC CP. The FSC CP then reinitiates the CFS to the BSB support operations.

3-255. The FSC is assigned/organic to the maneuver battalion and therefore is command and controlled by the maneuver battalion commander and his staff. This is a change from the AOE and the FXXI methodology. Therefore, it is important for the FSC commander and his leaders to understand how the maneuver battalion operates and understands the art and science of battle command exercised in the maneuver battalion's battlespace. This is discussed in the Chapter 4.

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Chapter 4

Battle Command

The Army is pursuing the most comprehensive transformation of its forces since World War II. To remain relevant within the context of the contemporary operational environment (COE), the Army must maintain force readiness and simultaneously transform into a lethal, agile force enabled by enhanced situational awareness. The development and implementation of digitized battle command is the common thread supporting Army; the transformation into a capabilities-based, execution centric, full-spectrum force. To achieve information dominance, The Army must find, gather, and report data (see first); transfer, disseminate, and manipulate the data in order to comprehend information (understand first); make decisions (act first), and act on those decisions (finish decisively).

Battle command is the exercise of command in operations against a hostile, thinking opponent. Decision-making and leadership are the two key components of battle command. Principally, battle command is an art that employs skills developed by professional study, constant practice, and considered judgment. As the senior logistics leader of the command, the logistics commander directly applies the leadership element of combat power. Subordinate commanders and small-unit leaders reinforce that element.

Command of a brigade support battalion remains a personal function. Commanders direct operations in terms of the battlefield operating systems and directly influence operations by their physical presence. The existence of an operational mission against enemies who actively attempt to accomplish their mission (while logistics commanders attempt to accomplish theirs of providing support to the combined arms, fires and reconnaissance units) distinguishes battle command from all other cases of command. In these situations, thinking, competitive, adaptive enemies consciously attempt to disrupt friendly operations such as logistics package (LOGPAC) operations conducted during combat logistics patrols, are expected to be a common target.

Commanders lead their forces through times of uncertainty and fear to defeat enemies quickly at minimum cost to their own forces while conducting sustainment operations. This aspect of operations underscores the importance and need to generate relevant information (RI) as an integral part of battle command. The capabilities provided via satellite communications, digital information systems as well as intelligence, surveillance, and reconnaissance (ISR) within the command and control

(C2) system allow rapid sharing of enemy and friendly information among all forces within the area of operation and enhance combat power by making combat forces more lethal, survivable, and sustainable. In addition, digitization provides the commander with an ability to lead and make decisions from anywhere on the battlefield while remaining linked to ongoing planning and preparation in the command post (CP). The logistics commander can put that information to great use in the Operations Process that plans, prepares for, executes and assesses operations for sustainment and force protection operations.

SECTION I – THE ART OF COMMAND

4-1. Command is the authority that a commander lawfully exercises over subordinates by virtue of rank and assignment. Leaders possessing command authority strive to use it with firmness, care, and skill. Command is more an art than a science, although it exhibits characteristics of both. The art of command requires expert performance of a specific skill using intuitive faculties that the leader cannot gain solely by study or education. Command also requires a conscious and skillful exercise of authority to fulfill command responsibilities through decision-making and leadership.

ROLE OF THE COMMANDER

4-2. The heavy brigade combat team (HBCT) brigade support battalion commander's knowledge, experience, and personality determine how he interacts with his unit through the C2 system. The commander decides what he needs to do to accomplish the unit mission and the best method to use to do it, and he leads his unit to accomplish the mission. The commander drives the process through mission command. He establishes a command climate for his unit; prepares his unit for operations; and commands his unit during operations while coaching, teaching and mentoring subordinates. The commander establishes and maintains systems to meet the unique demands of the unit, the abilities and personalities of his subordinates, and the capabilities of the equipment in the battalion. The commander refines the battle command systems to match unit missions and personalities.

MISSION COMMAND

4-3. Mission command is the conduct of military operations through decentralized execution based on mission orders for effective mission accomplishment. Mission orders leave the how of mission accomplishment to the subordinates by allowing them maximum freedom of planning and action to accomplish missions. Successful mission command results from subordinate leaders exercising disciplined initiative within the commander's intent to accomplish missions. It requires an environment of trust and mutual understanding. The four elements of mission command follow:

- Commander's intent.
- Subordinate initiative.
- Mission orders.
- Resource allocation.

COMMANDER'S INTENT

4-4. The commander's intent is a clear, concise statement of what key tasks the unit must do and what conditions it must meet to succeed with respect to the enemy, terrain, and the desired end state. The commander formulates and communicates his intent to ensure unity of effort during operations, allowing subordinates to exercise disciplined initiative.

SUBORDINATE INITIATIVE

4-5. Initiative is the assumption of responsibility to decide and initiate independent actions when the commander's concept or order is no longer applicable or when an unanticipated opportunity leading to the accomplishment of the commander's intent presents itself. Subordinates decide how to achieve their assigned missions within the delegated freedom of action and the exercise of disciplined initiative during execution. However, they have an absolute responsibility to fulfill the commander's intent.

MISSION ORDERS

4-6. A mission order is a technique for completing combat orders to allow subordinates maximum freedom of planning and action in accomplishing missions. The commander intervenes to direct coordination, restore operations, or exploit success. At a minimum, mission orders state the following:

- Task organization.
- Commander's intent and concept of operations.
- Unit mission.
- Subordinate unit missions.
- Mission-essential coordinating instructions.

RESOURCE ALLOCATION

4-7. The commander allocates appropriate resources to subordinates to accomplish their missions. The commander must also consider information systems (INFOSYS) as resources and allocate them through all levels of his command.

LOCATION OF THE COMMANDER

4-8. In the past, commanders have been torn between the conflicting requirement to visualize the battlefield by being out on the battlefield and the requirement for their presence in the CP to participate in the military decision-making process (MDMP). This dilemma slowed the planning and execution of operations while frustrating the commander's efforts to get out of the command post.

4-9. All commanders in the brigade support battalion have the ability to visualize their battlespace in all dimensions and to share a common operational picture (COP) and logistics common operating picture (LCOP) through digitization. Perhaps the largest and most immediate impact of digitization is its effect on the operations process that requires the commander to plan, prepare for, execute, and assess operations. Digitization streamlines planning and preparation by allowing the near-simultaneous transfer of information to all leaders. This transfer of information facilitates parallel planning and preparation.

4-10. Using digitized INFOSYS should compress the planning cycle for commanders and allow planning at all levels to begin sooner. With digitization, commanders have the ability to locate and track targets precisely and conduct simultaneous operations employing lethal and nonlethal means while operating with joint and multinational forces. In addition, digitization gives commanders the ability to recognize and protect their friendly forces. The commander, however, cannot, fully visualize the battlefield while directing and synchronizing the efforts of his battalion from a computer screen at the CP. He must move from the CP to assess the situation face-to-face with subordinate commanders and Soldiers. The C2 system in the battalion permits a commander to position himself where he can best command without depriving himself of the ability to respond to opportunities and changing circumstances.

4-11. The commander can virtually be anywhere on the battlefield to best affect ongoing sustainment or force protection operations without disrupting the planning and preparation for future operations. Near-real-time information updates, continuous assessment, and command decisions can be briefed, approved, and disseminated from battalion to company level via the available information systems with the battle command system. See paragraph 4-143 and Chapter 9 for a more full discussion of the BSB commander's location.

SECTION II – COMMANDERS AND BATTLE COMMAND

4-12. Commanders are the key to battle command. They drive a dynamic decision making process to guide and execute winning decisions. Effective battle command demands superior decisions—decisions both more timely and more effective than those of the enemy. The outcome of battles depends on not only superior information, but also on superior decision-making based on that information. This is an important aspect of information as an element of combat power.

4-13. Commanders, helped by staffs, visualize operations, describe them in terms of the commander's intent and planning guidance, and direct the actions of subordinates within their commander's intent. Commanders use the visualize-describe-direct methodology as their personal contribution to decision-making, whether they have a staff or not. Logistics leaders must master these skills, to be forward looking—seeing the terrain, the threat, and their own unit and their supported units before the battle, to visualize the fight and its sustainment requirements, its outcomes that generate sustainment operations and the keys to success that lie within a carefully crafted course of action (COA):

- Commanders must provide an onsite personal presence for their soldiers and leaders. He must provide them the reassurance that only a commander can provide, meanwhile conducting his own gut check of the readiness of his command.
- Effective logistics commanders see the terrain, the infrastructure, and indigenous population and understand its importance. Leaders envision:
 - Where the terrain, infrastructure, and civilian population affect support of the HBCT, maneuver into and out of the area of operations (AO), weapons effects observation, and force protection (cover and concealment).
 - Where the enemy Avenues of Approach will be most vulnerable to detection, defeat or destruction with Force Protection operations.
 - Where the terrain provides friendly forces an opportunity to conduct sustainment operations to best support the HBCT.
- Effective leaders see and understand the threat pertinent to their Area of Operation or those can influence their AO, his intentions, patterns, strengths, and weaknesses. Leaders envision:
 - The critical tasks the threat commander has to accomplish to impact sustainment operations.
 - The nature of the threat force (e.g., formation-based and organized, dispersed and disorganized, paramilitary forces, guerrillas, or a terrorist network).
 - The economic and governmental infrastructure and other societal and human factors that will affect his sustainment operations.
 - How the threat commander will employ his forces and effects to achieve his critical tasks that impact upon sustainment operations.
 - The threat's pattern of operations—the sequential and simultaneous actions the threat commander will take to shape his battlefield, decide the outcome, and sustain his operations.

- Decisive points, critical threat assets, and locations and most opportune time of destruction of high-value targets (HVT) and high-payoff targets (HPT). Quite often logistics units are viewed as HVTs or HPTs.
- What has to be done to disrupt the synchronization of the threat's intentions and forces?
- Effective commanders see themselves. They are experts in the capabilities and limitations of their organic logistics forces and systems e.g., BCS3, distribution assets, ULLS-Enhanced (performs all of ULLS-G and SAMS functions), SARSS-1, evacuation platforms, and they are able to quickly adapt to, integrate, and employ joint/combined assets and capabilities. Logistics leaders demonstrate mastery of the skills and procedures required to synchronize and control sustainment assets to support the HBCT. They envision how to effectively use their diverse capabilities to shape the logistics battlefield by collecting logistics information via a LCOP, by systems like battle command sustainment support system (BCS3), combat information, assessing reconnaissance reports, cueing multiple sustainment assets that paint a COP and LCOP, protecting the force, and establishing logistical conditions for success in the HBCT's decisive fight.
- Effective commanders use integrated, information-age technologies, such as BCS3 and MTS and associated tactics, techniques, and procedures (TTPs), to confirm and share a COP and LCOP that fosters situational understanding (SU) concerning the logistical status of the HBCT, terrain, threat, and themselves. This high-speed sharing of relevant information (RI) enables logistics commanders to make better decisions faster that help the maneuver commander decide quicker than the enemy.
- The use of assured communications, digitization of all logistics echelons, digitization of battlefield distribution (BD) platforms, and lastly, modular organizational structures, provides the brigade support battalion (BSB) commander and brigade S4 the information dominance and digital tools needed to tailor the sustainment package. Through near real-time situational understanding, the brigade battle staff is able to make timely adjustments in its support requirements. The use of enablers on the battlefield allows the BSB battle staff to anticipate changes in requirements and rapidly make recommendations on the redirection of assets or, if necessary, make recommendations to surge capability by the HBCT commander via the BSB commander and the BSB support operations officer (SPO).

4-14. Commanders must combine the art of command with the science of control to maximize their influence over subordinates and operations. Using their command and control (C2) systems, commanders exercise C2 to direct and control operations. Control is the regulation of forces and battlefield operating systems to accomplish the mission in accordance with the commander's intent. It includes collecting, processing, displaying, storing, and disseminating relevant information to create the COP and LCOP. Control allows commanders to direct the execution of sustainment operations to conform to their commander's intent. Control extends over the entire force and includes the airspace over the AO commanders, aided by staffs, use control to regulate forces and the functions of subordinate and supporting units. Staffs give commanders their greatest support in providing control. In the broadest terms, control helps commanders answer two fundamental questions:

- What is the actual situation compared with the desired end state?
- Are adjustments to the plan necessary to reconcile the situation with the desired end state?

SECTION III – THE ART OF BATTLE COMMAND

4-15. FM 6-0 provides the doctrinal basis for the C2 of Army forces and promotes a common understanding of the fundamentals and concepts of C2 in Army operations, and by supporting joint and Army doctrine.

COMPONENTS OF BATTLE COMMAND

4-16. Battle command can be broken down into two primary components—decision making and leadership:

- **Decision-making** - Decision-making is selecting a COA as the one most favorable to accomplish the mission. It translates the products of the commander's visualization into action. Decision-making includes knowing if to decide, then when and what to decide, and understanding the consequences of decisions. It is both art and science. Commanders use visualizing, describing, and directing to determine and communicate their decisions. Effective battle command requires that reconnaissance commanders make informed and faster decisions than their threat. The outcome of engagements, battles, and major operations depends on superior decision making based on shared and accurate information.
- **Leadership** - Leadership is influencing people—by providing purpose, direction, and motivation—while operating to accomplish the mission and improving the organization (FM 22-100). Commanders lead through a combination of example, persuasion, and compulsion. The leadership of commanders ultimately includes force of will. Battle command imposes a premium on a commander's leadership skills, actions, and location that contribute to effective decisions and motivating subordinates. Commanders provide focus to an operation through personal attention and presence. Commanders positioned with their unit gain firsthand appreciation for the terrain, enemy, and the situations. By their presence, they direct emphasis to critical spots and focus efforts on them. The following basic factors influence the decision on the location of logistics leaders; they are common to all levels of command:
 - Need to see and experience firsthand.
 - Need to motivate and lead.
 - Access to information to make timely, accurate decisions.
 - Ability of the commander to judge the condition and morale of his forces.
 - Communication to subordinate, adjacent, and higher formations.
 - Security, including physical protection.
 - Time and location of critical events.

DECISION MAKING

4-17. A large portion of the art of command involves decision-making. Commanders use the *visualize-describe-direct* methodology as their personal contribution to decision-making, whether they have a staff or not. Staffs support commanders with running estimates. Visualizing is primarily an aspect of the art of war. Describing balances the art and science of war, with the art expressed primarily in the commander's intent and planning guidance. Directing is primarily science. Visualizing and describing are addressed below. Directing is addressed briefly below and covered in detail in FM 5-0.

ANALYTIC DECISION MAKING

4-18. The traditional view is decision-making is a structured, analytic process based on generating several alternative solutions, comparing these solutions to a set of criteria, and

selecting the best COA. The analytic approach aims to produce the optimal solution to a tactical problem from among those solutions identified. It emphasizes analytic reasoning processes guided by experience, and it is used when time is available. It serves well for decision-making in complex or unfamiliar situations.

4-19. Analytic decision-making is time-consuming but produces an optimal, more fully coordinated plan. It is not appropriate to all situations, especially decision-making during execution. The Army's analytical approach is the MDMP. (See FM 5-0.)

INTUITIVE DECISION-MAKING

4-20. The other way commanders make decisions is intuitive decision-making. Intuitive decision-making is the act of reaching a conclusion that emphasizes pattern recognition based on knowledge, judgment, experience, education, intelligence, boldness, perception, and character. This approach focuses on assessment of the situation vice comparison of multiple options. It focuses on assessing the situation rather than comparing multiple COAs. It is used when time is short or speed of decision is important. It relies on the experienced commander's (and staff officer's) intuitive ability to recognize the key elements and implications of a particular problem or situation, reject the impractical, and select an adequate COA to solve the problem. Intuitive decision-making replaces methodical analysis of options with assessment, obtains a satisfactory solution rather than an optimal one, and uses analysis to refine the decision.

LEADERSHIP

4-21. Leadership is influencing people—by providing purpose, direction, and motivation—while operating to accomplish the mission and improve the organization. Leadership is about taking action. Commanders are responsible for the success of their organizations and have special accountability to their superiors, the institution, and the nation. To maintain their balance among all the demands on them, they must exemplify Army values. The nation, as well as the members of the Army, holds commanders accountable for accomplishing the mission, keeping the institution sound, and caring for its people. See FM 22-100 for a detailed doctrinal explanation on the fundamentals and characteristics of leading Army units in battle.

VISUALIZE, DESCRIBE, AND DIRECT

4-22. A large portion of the art of command involves decision-making. Commanders use the visualize-describe-direct methodology as their personal contribution to decision-making, whether they have a staff or not. Staffs support commanders with running estimates. Visualizing is primarily an aspect of the art of war. Describing balances the art and science of war, with the art expressed primarily in the commander's intent and planning guidance. Directing is primarily science.

4-23. Battle command, in the information age, requires commanders and staff officers to sort through and assimilate enormous amounts of information as they visualize the operation, describe their intent, and direct their subordinates' actions. Visualizing, describing, and directing are aspects of leadership common to all commanders (see Figure 4-1). As emerging technologies increase our ability to gather information, the logistics commander and staffs will more likely face information overload challenges.

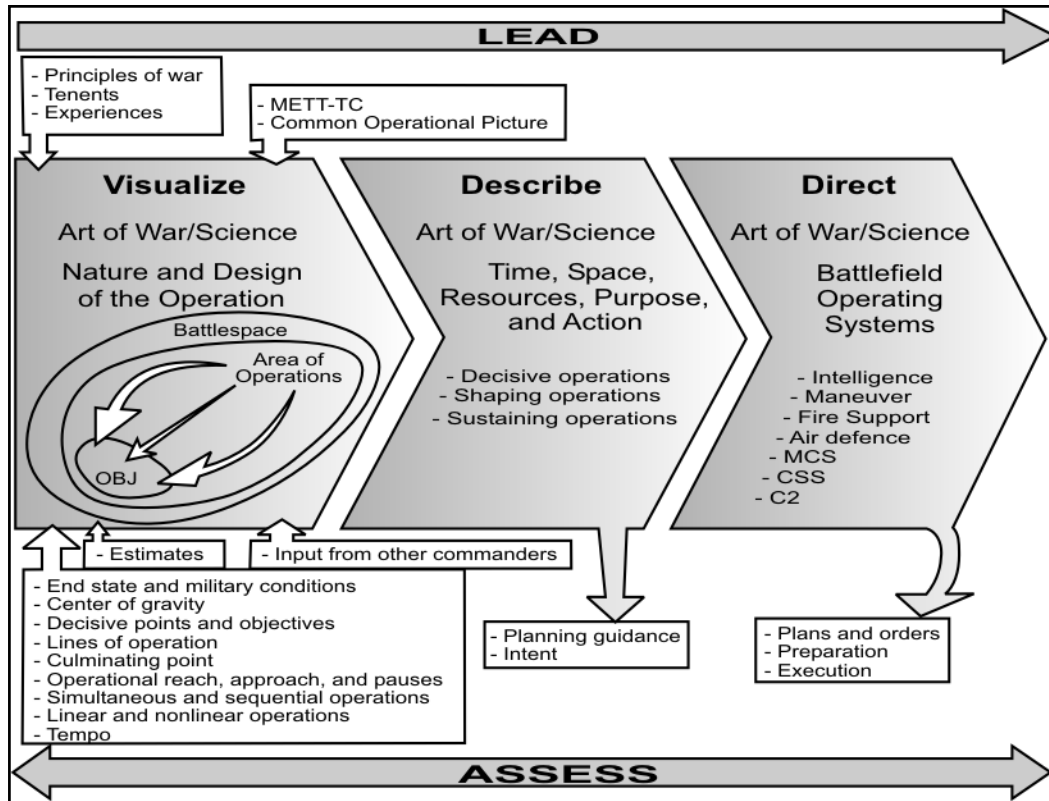


Figure 4-1, Aspects of Leadership and Battle Command

VISUALIZE

4-24. Commander's visualization is the core mental process that commanders use in decision-making. (See Figure 4-2) They use it to determine how to get forces from their current state or position to the end state that represents mission accomplishment. Military operations are dynamic; therefore, commander's visualization is continuous. During execution, commander's visualization helps commanders determine when, where, and if to make a decision. It can also help commanders see where and how they can best lead and motivate soldiers, and see the battlefield, their own forces, the enemy, and the end state.

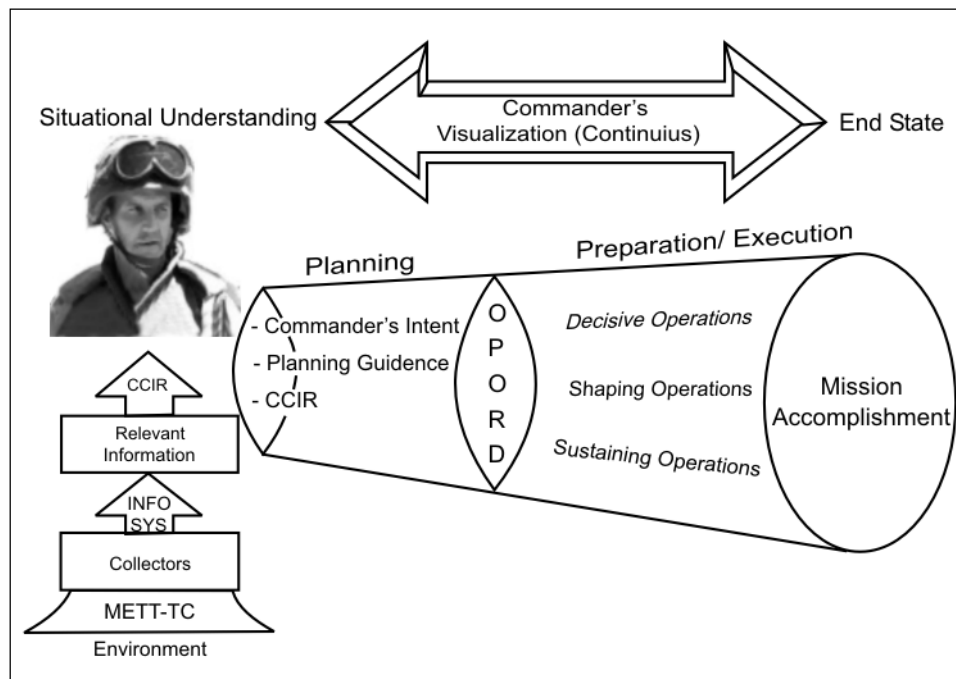


Figure 4-2, Visualization in Operations

4-25. After receiving a mission, commanders develop their initial commander's visualization. They continually confirm or modify it throughout the operation. They use RI (categorized by the factors of mission, enemy, terrain and weather, troops and support available, time available, and civil considerations (METT-TC)), basic tactical concepts, staff running estimates, and their experience and judgment to form this visualization. They determine the desired end state. They then use their commander's visualization to compare the analyzed COAs and decide which COA to approve.

4-26. While various information systems (INFOSYS) such as BCS3, Force XXI Battle Command for Brigade and Below (FBCB2), MTS, and MC4 can provide support in rapidly assessing trends and suggesting previously unexplored COAs, commanders use these tools carefully. Commanders do not unquestioningly accept their products. When using INFOSYS, commanders apply judgment and experience before making a decision and describing it to subordinates.

4-27. As the commander receives staff analysis of the mission, he develops a mental picture of the friendly forces in relationship to the threat, the environment, and the end state of the mission. The staff supports this visualization by developing and maintaining the COP. The commander's visualization is his assessment tool that takes him from acknowledging the presence and accuracy of information (what is) to understanding the significance and impact of that information (what it means).

4-28. Upon receipt of a mission, commanders at all levels conduct a mission analysis. As stated previously, the logistics commander uses the BCT commander's vision, factors of METT-TC, elements of operational design, input from his staff and subordinate commanders, and his experience to develop his vision. However, company commanders and platoon leaders/platoon sergeants also must apply visualization to the force level they influence. To form an accurate and complementary vision of the desired outcome, the commander must have the following:

- A shared understanding of his higher commander's vision.

- Information concerning his supported commander's CCIR and EEFI.
- Clear understanding of the other factors that can influence the situation in his battlespace.

THE FACTORS OF METT-TC

4-29. METT-TC refers to factors that are fundamental to visualizing and assessing—mission, enemy, terrain and weather, troops and support available, time available, and civil considerations. All leaders use METT-TC to start their visualization. At the sustainment level, staff estimates may address individual elements of, and add to, the commander's visualization. At the company and platoon level, the commander will likely seek the advice, counsel, and experience of his senior NCOs to help shape his vision.

4-30. **Mission.** The mission is determined through an analysis of the higher commander's intent and orders; the specific tasks found in the intent, orders, or other guidance; and implied tasks. The results of the analysis yield the essential tasks that, together with the purpose of the operation, indicate the action required. The mission includes what tasks must be accomplished; who is to do them; and when, where, and why the tasks are conducted.

4-31. **Enemy.** The analysis of the enemy includes current information about his strength, location, activity, and capabilities. Commanders and staffs also assess the most likely threat COAs. In stability operations and support operations, the analysis includes the enemy that may actually be shooting at you as well as any threat presented by potentially hostile parties. Therefore, commanders must consider unconventional and conventional threats. Threats may include the spread of infectious diseases, regional instabilities, or misinformation.

4-32. **Terrain, Infrastructure, and Weather.** Terrain, infrastructure and weather have pronounced effects on ground maneuver and therefore sustainment operations. Analysis of terrain, infrastructure, and weather helps commanders determine ability to support the HBCCT with requisite support sites, establish observation and fields of fire, avenues of approach, key terrain, obstacles, and cover and concealment (OAKOC). Terrain includes manmade features such as cities, airfields, bridges, railroads, and ports. To find tactical advantages that support the sustainment and tactical missions, commanders and staffs analyze and compare the limitations of the environment on friendly, threat, and neutral forces.

4-33. **Troops and Support Available.** Commanders assess the number of troops available, their training level, and their psychological state. For example, if a company commander knows his maintenance personnel have been conducting 24-hour operations without relief for an extended period of time, he has a duty to inform the battalion commander of the risk presented by, and consequences of this information. The analysis includes the availability of critical systems and other available support. Commanders examine all BOS assets. An example would be tailoring units from the Sustainment Brigade under the modularity concept.

4-34. **Time Available.** Commanders assess the time available for planning, preparing, and executing the mission. They must also consider what can be achieved by enemy forces in the time available. Proper use of the time available can fundamentally alter the situation. Time available is explicitly defined in terms of the tasks assigned to the unit and implicitly defined by threat capabilities.

4-35. **Civil Considerations.** Civil considerations relate to civilian populations, culture, organizations, and leaders within the AO. Commanders consider the natural environment to include cultural sites, in all operations affecting civilian populations. Commanders include civilian political, economic, and propaganda information as well as more immediate civilian activities and attitudes. Civil considerations at the tactical level generally focus on the

immediate impact of civilians on the current operation; however, they also consider larger, long-term diplomatic, economic, and informational issues.

INPUT FROM OTHER COMMANDERS AND STAFF

4-36. The logistics commander relies on his staff and subordinate commanders to advise and assist in supervising operations. They must be able to execute the commander's intent during his absence, when communications fail, or if the situation changes. The logistics commander relies equally upon his company commanders and first sergeants.

4-37. The logistics commander's staff assists him in planning by acquiring, analyzing, and coordinating his IR, EEFI and CCIR. Information requirements represent a broader collection of data required for the mission than CCIR and EEFI. CCIR are limited to a focused set of information requirements in question form the commander needs answered to make critical execution decisions. The commander has the responsibility to refine and limit his CCIR to a manageable number specifically tied to decision points. The staff is responsible to screen the mass of available information and present only relevant information tied to a recommendation so the commander can gain decision superiority over the enemy. Although EEFI are not part of CCIR, they become a commander's priorities when he states them.

DESCRIBE

4-38. During MDMP, commanders begin to describe their commander's visualization by developing, posting, and clarifying their commander's intent, planning guidance, EEFI and CCIR. These initial products all guide and focus the C2 system as it supports decision-making and communicates the commander's decision for execution.

4-39. Commanders describe an operation in terms suited to their experience and the nature of the mission. Commanders visualize time and space within the operational framework: the battlespace, AO, and battlefield organization. Using the operational framework, commanders describe how they intend to conduct operations to achieve the end state. A major aspect of this description is the mission statement. Commanders construct mission statements using the vocabulary for task and purpose contained in FM 3-90.

4-40. Rehearsals can also help commanders and staffs prepare for an operation. They are an excellent opportunity for commanders to describe the commander's visualization. Commanders use rehearsals to accomplish the following:

- Further describe the commander's intent and concept of operations.
- Identify and discuss options at decision points.
- Synchronize activities within the force and among subordinate forces.
- Add to and update the commander's visualization.

COMMANDER'S INTENT

4-41. The commander's intent focuses effort throughout the operations process. It is the statement describing the commander's visualization—not the product of any process. During planning, the commander's intent drives the MDMP.

4-42. The logistics commander's intent links the mission and concept of support. It describes the end state and key tasks that, along with the mission, are the basis for subordinates' initiative. Commanders may also use the commander's intent to explain a broader purpose beyond that of the mission statement. The mission and the commander's intent must be understood two echelons down.

4-43. Commanders begin constructing the commander's intent with the end state and the current state of friendly forces relative to the enemy and the environment from the

commander's visualization. From the visualization of these dynamics, commanders determine the key tasks necessary to achieve the end state.

4-44. Key tasks are those tasks the logistics unit as a whole must perform, or conditions the unit must meet, to achieve the end state and stated purpose of the operation. Key tasks are not tied to a specific COA; rather, they identify what the unit must do to achieve the end state. Acceptable COAs accomplish all key tasks. In changed circumstances—when the concept of support no longer fits the situation—subordinates use key tasks to keep their efforts focused on achieving the commander's intent. Examples of key tasks include terrain that must be secured for mission staging operations (MSO), conducting sustainment replenishment operations (SRO) with specified units or conducting casualty evacuation (CASEVAC) operations. Key tasks are not specified tasks for any subordinate unit; however, they may be sources of implied tasks.

4-45. Commanders personally prepare their commander's intent. They make their independent, and sometimes intuitive, assessment of how they intend to win. When possible they deliver it personally, along with the order. Face-to-face delivery ensures mutual understanding of what the commander wants by allowing immediate clarification of specific points.

COMMANDER'S CRITICAL INFORMATION REQUIREMENTS (CCIR)

4-46. Commanders use CCIR to focus information collection on RI they need to support the commander's visualization and make critical decisions. CCIR change as the decisions commanders must make change. The initial CCIR address information commanders need to make decisions during planning. These information requirements (IR) often concern information commanders need to select a COA. During preparation and execution, the CCIR address information commanders require to make decisions anticipated in the plan. These decisions may or may not be associated with decision points. CCIR may also concern information commanders require to decide whether to execute a branch or sequel. Commanders limit the number of CCIR in effect at one time. This practice sets priorities staffs use to allocate resources manage information. CCIR address only near-term decisions, not every anticipated decision. As commanders make decisions, their CCIR may change to support other anticipated decisions. CCIRs spare the commander from receiving information overload or irrelevant information. They also protect subordinate headquarters from receiving excessive requests for information. BSB commanders often have two or an integrated set of CCIR: one for the tactical mission and the other for the sustainment mission or integrated into one set of mission CCIR.

4-47. Logistics CCIR examples would be:

- A HBCT battalion is black on fuel.
- Mass casualty (MASCAL) occurs.
- Combat power drops below the requisite percentage necessary for the mission.

4-48. Tactical CCIR examples would be:

- Enemy reaches phase line A. (Requires possible decision to relocate.)
- Enemy platoon size element spotted in brigade support area (BSA) sector of responsibility.
- Enemy artillery is within firing range of BSA. (Requires possible decision to relocate.)

DIRECT

4-49. Commanders direct throughout the operations process (Figure 4-3). Their directions take different forms during planning, preparation, and execution. Commanders make decisions and direct actions based on their situational understanding. They keep their

situational understanding current by continuously assessing the situation. Commanders state the information they need to make assessments by establishing the CCIR. They receive RI upon which to assess the situation (answers to the CCIR) through their C2 systems.

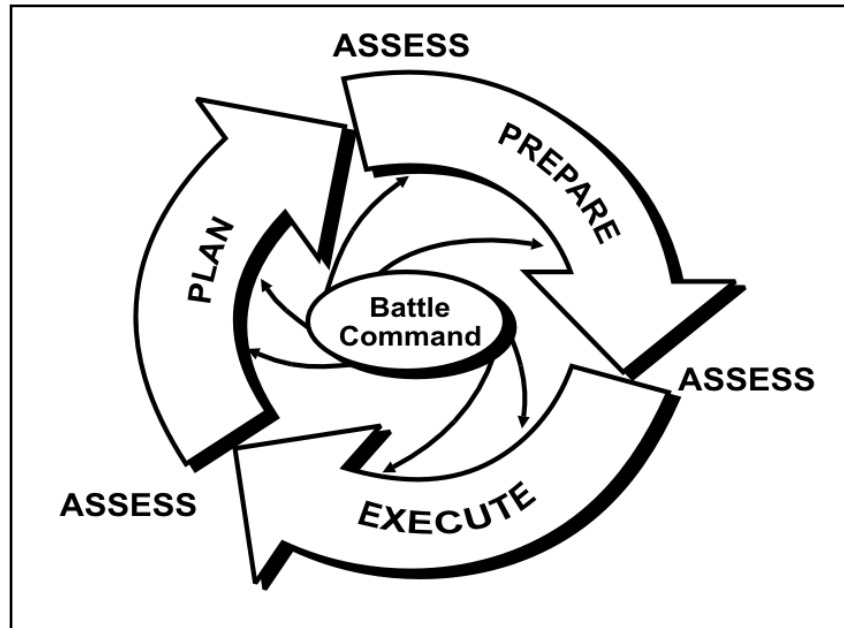


Figure 4-3, The Operations Cycle.

PLANNING

4-50. Commanders direct during planning by guiding staffs through MDMP, preparing mission orders, and establishing control measures.

4-51. **MDMP.** During the MDMP, commanders direct when they select a COA and communicate that decision to subordinates in a plan or order. They or their staffs analyze each possible COA for suitability, feasibility, and acceptability to select COAs for further analysis. After COA analysis and COA comparison using criteria of success derived during the war game, commanders select or approve the COA. Commanders also direct when they issue and revise planning guidance.

4-52. **Mission Orders.** Mission orders stress not only the tasks required of subordinates but also understanding their context and purpose. While clear direction is essential to accomplishing the mission, commanders strike a balance between necessary but minimum direction and overly detailed direction. Subordinates who act first (within the commander's intent) and report later often achieve far more than those who delay action to wait for the commander's confirmation.

4-53. **Control Measures.** Control measures direct by establishing specific responsibilities and limits. Their purpose is to facilitate coordination and prevent units from impeding one another. They may be permissive or restrictive. Permissive control measures are preferred in mission command. Commanders impose the minimum control measures needed for essential coordination and deconfliction among units. They remove restrictive control measures as soon as possible. Control measures may be graphic, written, or procedural. (See FM 3-90 for control measures associated with each type of operation. See FM 1-02 for a list of doctrinal control measures and rules for constructing them.) Some logistics control measures might be main supply route (MSR) or logistics release point (LRP).

4-54. Well-conceived control measures facilitate current and future operations. As operations evolve, commanders adjust them as necessary to maintain synchronization and freedom of action.

PREPARATION

4-55. During preparation, commanders continue to use the visualize-describe-direct methodology for decision-making. They continually update and validate their commander's visualization as they receive intelligence based on the results of ISR operations and friendly information from reports. Significant new information requires commanders to make one of three assessments:

- The new information validates the plan with no further changes.
- The new information requires adjusting of the plan.
- The new information invalidates the plan.

4-56. During preparation, logistics commanders take every opportunity to improve their situational understanding about their supported units and the enemy and the overall environment. Logistics commanders collect all relevant information of the status of their supported units and their future requirements. For the force protection mission, logistics commanders integrate reconnaissance missions and surveillance means to form an integrated ISR plan that capitalizes on their different capabilities. Reconnaissance, whether for the logistics or tactical mission, is often an important part of this activity, providing information that contributes to answering the CCIRs. Besides the tactical mission of reconnaissance, a logistical reconnaissance for the logistics commander also means visiting their own units and the units he supports plus ensuring the logistics reports are accurately received in order to collect the requisite information to ascertain the level of combat power and determining what assets are available to generate needed combat power for the HBCT's mission.

4-57. Commanders direct tactical reconnaissance using the ISR annex to the order. (See FM 5-0.) Commanders consider requesting assistance from sources outside of their control. They synchronize reconnaissance missions with the other ISR components to continuously update and improve their situational understanding. The logistical collection of data within the HBCT or log reconnaissance is directed by the logistics commander and his choice of prioritization of desired items for examination. The intent of FM 5-0 provides a template on how to construct what the logistics commander should be looking to accomplish but must be interpreted from a sustainment perspective of looking for information within the HBCT. In addition, the logistics commander should have his own tactical reconnaissance plan that supports Force Protection. FM 5-0 provides the doctrinal template to construct what should be accomplished by the tactical reconnaissance.

EXECUTION

4-58. Logistics commanders must be in the critical place of the battle as determined by the logistical or tactical situation and its relative importance at that moment of the battle or in preparation of follow-on sustainment missions. Knowing when to leave the tactical operations center (TOC) is just as important as knowing when to stay in the TOC. Combining the art of command with the science of control through visualizing, describing, and directing is most evident during execution, as is leading. Commanders exercise judgment and initiative continuously. They assess the situation and make decisions, often with incomplete, conflicting, and vague information. Waiting for perfect information is rarely an option. During execution, commanders, supported by their C2 systems in the TOC or when mobile at the critical point for sustainment or force protection, continually evaluate the sustainment operation's progress. They act to ensure subordinate units execute actions appropriate for the actual situation. They adjust the disposition of their units to ensure the

requisite support is provided or adjust units in accordance with the tactical situation, the tasks assigned to subordinates, and the priorities for support to achieve the greatest effect at minimum cost. They modify some tasks, even if the operation unfolds as expected. A major part of the art of command is knowing when to change the plan and determining the right changes to assure success. Critical to command is determining what criteria indicate needed changes and deciding which changes will obtain the maximum contribution to achieving the higher commander's intent.

4-59. Commanders fight the enemy, not the plan, hence logistics commanders must be flexible to respond to the maneuver units they support and respond tactically for their own force protection. No plan survives intact once contact is made, hence the logistics commanders has the necessity to maintain situational understanding in order to ensure the appropriate sustainment is provided to their supported units. The enemy rarely acts exactly as predicted. This is the principal cause of fog and friction in battle, and commanders modify their plans to counter enemy reactions, hence the flexibility requisite for sustainment is necessary. Tactical and sustainment flexibility requires mental agility and training: well-trained, flexible units with sound battle drills; flexible leaders capable of adapting to rapidly changing circumstances; and staffs able to recognize significant changes in the situation, prepare the necessary fragmentary orders (FRAGOs), and resynchronize the support and tactical operation by coordinating the changes to alter plan. A clear commander's intent allows prompt and effective exercise of subordinates' initiative. This ability greatly enhances the capability of the overall force to react effectively and quickly to changes in the situation.

4-60. Execution is much more than putting a decision—communicated through orders or plans—into action. Throughout execution, commanders continuously assess the progress of the operation based on the tactical COP and logistical COP and answers to the CCIR (tactical and logistical) that drive winning decisions. This assessment keeps their situational understanding current and allows them to continuously validate or update their commander's visualization. When the situation varies from the commander's visualization, commanders direct adjustments to ensure support to their supported units. CCIR—continuously updated as commanders make some decisions and anticipate others—shape commanders' situational understanding by establishing which RI they receive.

MISSION COMMAND

4-61. Mission command is the conduct of military operations through decentralized execution based on mission orders for effective mission accomplishment. Successful mission command results from subordinate leaders at all echelons exercising disciplined initiative within the commander's intent to accomplish missions. It requires an environment of trust and mutual understanding. Successful mission command rests on the following four elements:

- Commander's intent.
- Subordinates' initiative.
- Mission orders.
- Resource allocation.

4-62. Mission command makes it easier for commanders to make timely decisions and take actions that create and exploit this advantage. Effective logistics commanders do the following:

- Take supported unit's plans, capabilities, and reaction times into account when making decisions.
- Take enemy plans, capabilities, and reaction times into account when making decisions.
- Make decisions quickly—even with incomplete information as the supported commander is moving quickly to gain advantage of implementing faster decision making dominance. Commanders who can make and implement decisions (meaning

the logistics commander has to figure out a way to support or inform the maneuver commander the risk involved) faster than the enemy, even to a small degree, gain an accruing advantage that becomes significant over time,

- Not delay a decision in hopes of finding a perfect solution to a battlefield or support problem. Adopt a satisfactory COA with acceptable risk as quickly as possible.
- Delegate decision-making authority as low as possible to obtain faster decisions in battle. Decision-making at lower echelons is faster and more direct. Support decentralized execution by communicating (describing) with subordinates and adjacent commanders frequently.

RESOURCE ALLOCATION

4-63. Commanders allocate enough resources for subordinates to accomplish their missions. In the context of mission command, commanders consider information a resource—comparable to more traditional ones, such as soldiers and materiel—and share it through all levels of command.

EXERCISING MISSION COMMAND

4-64. Mission command concentrates on the objective of an operation, not on how to achieve it. It emphasizes timely decision-making, understanding of the higher commander's intent, and the clear responsibility of subordinates to act within that intent to achieve the desired end state. With the commander's intent to provide unity of effort, mission command relies on decentralized execution and subordinates' initiative. Mission command requires a common understanding of Army doctrine, as well as of the situation and commander's intent.

4-65. The fundamental basis of mission command is creating trust and mutual understanding between seniors and subordinates. This is more than just control: commanders must establish a command climate of trust and mutual understanding that encourages subordinates to exercise initiative. Mission command applies to all operations across the spectrum of conflict.

4-66. Mission command tends to be decentralized, informal, and flexible. Orders and plans are as brief and simple as possible, relying on implicit communication—subordinates' ability to coordinate and the human capacity to understand with minimal verbal information exchange. By decentralizing decision-making authority, mission command increases tempo and improves the subordinates' ability to act in fluid and disorderly situations. Moreover, relying on implicit communication makes mission command less vulnerable to disruption of communications than detailed command.

PRINCIPLES OF COMMAND

4-67. Commanders use the principles of command to guide how they employ elements of command to fulfill their fundamental responsibilities of command: mission accomplishment and people. Figure 4-4 graphically relates these responsibilities to the principles of command.

4-68. A commander's use of the principles of command must fit the requirements of the situation, his own personality, and the capability and understanding of his subordinate commanders. Command cannot be stereotyped. Moreover, the command principles and applying mission command must guide and stay abreast of the capabilities of emerging technology.

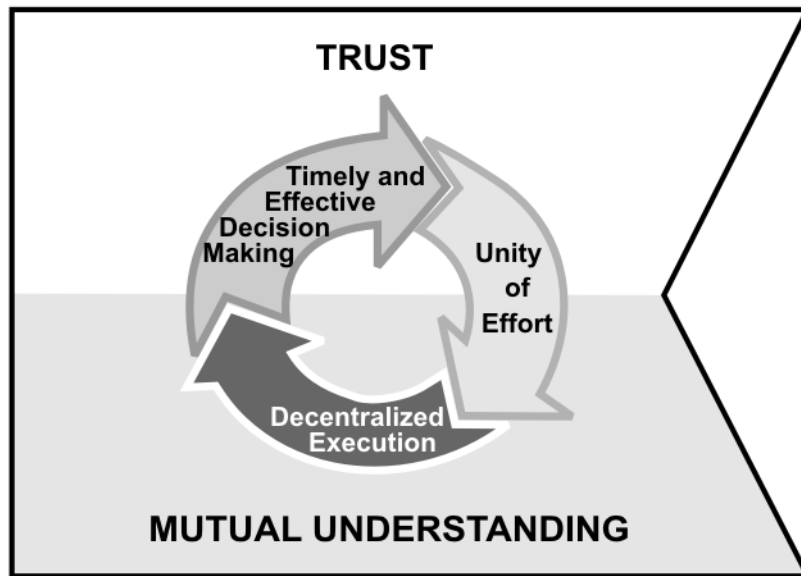


Figure 4-4, Principles of Command

4-69. Mission command reconciles the absolute requirement for unity of effort at all levels with decentralization of execution by emphasizing the commander's intent. Decentralization of execution is sustained by and contributes to timely and effective decision-making through subordinates' initiative. Mission command can only work in an environment of trust and mutual understanding. Mission command provides a common baseline for command not only during operations but also in peacetime activities. To employ mission command successfully during operations, units must understand, foster, and frequently practice the principles of command during training. Indeed, using command principles during peacetime overcomes institutional obstacles to mission command. The principles of command apply to all levels of command.

ENSURE UNITY OF EFFORT

4-70. Unity of effort is coordination and cooperation among all military forces and other organizations toward a commonly recognized objective, even if the forces and nonmilitary organizations are not necessarily part of the same command structure. Under mission command, commanders give a clear commander's intent to provide sense of purpose and achieve unity of effort within the force. The commander's intent provides a focus for separate but coordinated efforts by subordinates. It describes the limits of the decision-making authority the commander has delegated to them. Designating priorities in operations also aids unity of effort and is part of the commander's intent. Failure to achieve unity of effort leads to confusion and missed opportunities; the effects can be catastrophic.

4-71. Unity of command is the Army's preferred method for achieving unity of effort. Commanders always adhere to unity of command when task organizing Army forces. Under unity of command, any mission falls within the authority and responsibility of a single, responsible commander. Commanders receive orders from only one superior, to whom they are accountable for accomplishing the mission.

EMPLOY DECENTRALIZED EXECUTION

4-72. Decentralized execution, central to mission command, requires delegating specific decision-making authority. Determining what authority to delegate is an essential part of the art of command. This delegating may be explicit, as in the specified tasks outlined in orders, or implicit, as in the implied tasks and commander's intent found in mission orders. Delegating authority also provides a means of handling the information produced by modern technology and operations. It reduces the number of decisions made at the higher levels and increases agility through reduced response time at lower levels. Delegation not only applies to subordinate commanders but also to staff members. Detailed command requires more decisions at higher levels, often overloading those commanders.

4-73. When delegating authority to subordinates, commanders do everything in their power to set the necessary conditions for success by the subordinate. They allocate enough resources for them to accomplish their missions. These resources include information as well as forces, materiel, and time. Forces include combat, combat support, and combat service support units and systems. Information resources include RI, ISR assets, and priority of access to higher-level collection means. Because of the need for economy of force, allocating resources is not just a management or scientific matter, but one requiring the art of command.

4-74. Commanders must still synchronize subordinates' activities. Synchronization of effects during execution results from integrating fragmentary information and complex combat functions during planning and preparation. A single, unifying concept of operations, together with a keen understanding of time-space dynamics, is needed to synchronize effects. Delegating authority to subordinates, who exercise initiative within the commander's intent, allows them to initiate activities that synchronize their units with those of the rest of the force without consulting the commander.

Develop trust and Mutual Understanding

4-75. Trust is one of the cornerstones of leadership. It is essential to successful mission command. Like loyalty, it must go up and down the chain of command; like respect, it must be earned. To function effectively, commanders must trust their subordinates, and subordinates must trust their commander.

4-76. Mutual understanding both supports and derives from trust. However, like trust, it requires time to establish. From their experiences, commanders understand the issues and concerns of subordinates. Professional knowledge and study give subordinates an insight into command at higher levels. Commanders develop mutual understanding, both implicit and explicit, in their organizations through training. Good commanders ensure that they understand their subordinates and that subordinates understand them. Mutual understanding is essential for conducting successful operations under mission command. Activities that can lead to mutual understanding include officer professional development meetings, terrain walks, and professional discussions.

Make Timely and Effective Decisions and Act

4-77. A tempo advantageous to friendly forces can place the enemy under the pressures of uncertainty and time. Throughout the operations process, making and communicating decisions faster than the enemy can react produces a tempo with which the enemy cannot compete. These decisions include determining the information the commander requires for decisions; assigning missions; prioritizing, allocating, and organizing forces and resources; and selecting the critical times and places to act. Finally, commanders must anticipate the activities and effects that occur because of their decisions, including unintended second-order

effects, effects caused by the enemy's reaction to friendly actions, and effects on future operations.

4-78. Mission command makes it easier for commanders to make timely decisions and take actions that create and exploit this advantage. Effective commanders do the following:

- Take enemy plans, capabilities, and reaction times into account when making decisions.
- Take supported unit's plans, capabilities, and reaction times into account when making decisions.
- Make decisions quickly—even with incomplete information. Logistics commanders must be able to support in this type of environment and be ready to inform a commander when the desired course of action entails more risk than is currently desired in the commander's intent. This will allow the maneuver commander to adopt a satisfactory COA with acceptable risk as quickly as possible.
- Delegate decision-making authority as low as possible to obtain faster decisions in battle. Decision-making at lower echelons is faster and more direct. Support decentralized execution by communicating (describing) with subordinates and adjacent commanders frequently.

4-79. Commanders change and combine intuitive and analytical decision-making techniques as the situation requires. Because uncertainty and time drive most decisions, commanders emphasize intuitive decision-making as the norm, and develop their subordinates accordingly. Time permitting, commanders can have their staffs validate intuitive decisions, even while refining them, ensuring they are at least suitable, feasible, and acceptable i.e. commanders and staffs use the MDMP, a highly analytical technique.

4-80. Commanders and staffs constantly assess where the operation is in relation to the end state and estimate how best to adjust that operation to accomplish the mission and posture the force for future operations. The commander's visualization and the staff's running estimates, maintained continuously, are the primary assessment tools to know if the unit is postured to conduct future operations. Examples of items that could be in the running estimate are combat power, supply levels of Class III (bulk), and Class V or water. Keeping running estimates current is key to keeping commanders aware of feasible options.

4-81. Effective tactical decision-making by calm, competent, confident commanders synchronizes operations. It is refined through the war-gaming process. Synchronization is continuous, as execution requires constant adjustment to unfolding battlefield events, including branches and sequels

SECTION IV – CONTROL

4-82. Control serves commanders, allowing them to regulate forces and battlefield operating systems. Control is mostly science, but also includes some art. It employs objective data, analytic processes, and scientific methods and theories in assessing, planning, preparing for, and executing operations. Control allows commanders to monitor their forces, the enemy, and the environment during operations. Through this monitoring, they identify new decision points, opportunities to exploit success, and threats to mission accomplishment. Control permits commanders to adjust operations to account for changing circumstances by modifying one or more of the results of their commander's visualization and directing the changes necessary to address the new situation.

4-83. Control is the regulation of forces and battlefield operating systems to accomplish the mission in accordance with the commander's intent. It includes collecting, processing, displaying, storing, and disseminating relevant information for creating the COP (LCOP as well), and using information, primarily by the staff, during the operations process. Control allows commanders to direct the execution of operations to conform to their commander's

intent. Unlike command functions—which remain relatively similar among echelons of command—control functions increase in complexity at each higher echelon. Control extends over the entire force and includes the airspace over the AO. Commanders, from company to UEx, control their forces and are, in turn, influenced by these forces.

4-84. Commanders, aided by staffs, use control to regulate forces and the functions of subordinate and supporting units. Staffs give commanders their greatest support in providing control. However, for control to be effective, commanders must actively participate in exercising it. One of mission command's strengths is that it provides a measure of self-regulation within organizations executing operations. An effective C2 system allows the commander to:

- Operate freely throughout the AO to exercise C2 from anywhere on the battlefield.
- Delegate authority to subordinate commanders and staff to allow decentralized execution of operations.
- Synchronize actions throughout the AO.
- Focus on critical actions instead of details.

ELEMENTS OF CONTROL

4-85. Control allows commanders to disseminate the two types of information: COP and LCOP-related information and execution information. It also lets them adjust operations to reflect changing reality and enemy actions. This capability allows commanders to modify the commander's visualization with respect to the current state, the end state, or the process of getting from the current state to the end state. Effective control further identifies times and points requiring new decisions during execution. The elements of control are:

- Information
- Communication
- Structure

INFORMATION

4-86. In the general sense, information is the meaning humans assign to data. It is the most important element of control. Information includes all forms of description or representation at any level of the cognitive hierarchy. The levels of the cognitive hierarchy are data, information, knowledge, and understanding. Information gives structure and shape to military operations and the battlespace. Commanders and staff can then give meaning to and gain understanding of the events and conditions in which they make decisions and conduct operations.

4-87. Relevant information is all information of importance to the commander and staff in the exercise of command and control (FM 3-0). Intelligence is a subset of relevant information. An operational picture is a single display of relevant information within a commander's area of interest (FM 3-0). A common operation picture is an operation picture tailored to the user's requirements, based on common data and information shared by more than one command. (FM 3-0). Data and information from all echelons of command and shared among all users create the COP or logistics COP (LCOP) for logisticians. Although ideally the COP or LCOP is a single display, it may include more than one display and information in other forms. By applying judgment to the COP/LCOP, the commanders achieve situational understanding, upon which they base decisions. However, maintain an accurate COP/LCOP is complex and difficult.

Communication

4-88. To communicate means to use any means or method to convey information of any kind from one person or place to another (JP 1-02). Communications are a means of

communicating, such as telephones, FM radio and digital command and control systems. Communications allows units/organizations to disseminate and share information among people, elements, and places. It links information to decisions and decisions to action. No decision in combat can be executed without clear communication between commanders and subordinates. Communication among the parts of a command supports their coordinated action. The communication that characterizes effective control is multi-directional. Effective communication is critical to achieving effective C2.

Structure

4-89. As an element of control, structure is a defined organization that establishes relationships among its elements or a procedure that establishes relationships among its activities. The commander establishes control with a defined organization and its relationships. This structure or organization is both internal (e.g. a headquarters structure—the tactical operations center (TOC)), and external (e.g. command and support relationships among subordinate forces). The most basic organization in control is a hierarchy. In military terms, this relationship is between the commander and staff, and subordinate forces.

4-90. Structure also determines interactions among the elements of the organization, whether units or individuals. The effects of these interactions affect collecting, disseminating, and processing information.

PRINCIPLES OF CONTROL

4-91. The principles of control govern how commanders and their C2 systems use the elements of control to carry out functions of control. Control permits a command to adapt to change. Because of feedback, control is cyclic and continuous, not a series of discrete actions. It is a process of dynamic, interactive cooperation. Control continues throughout the operations process. The principles of control are:

- Allow subordinates maximum freedom of decision and action.
- Create, maintain, and disseminate the COP.
- Use common doctrinal procedures, graphics, and terms.
- Provide for flexibility and adaptability.

Note: Allow Subordinates Maximum Freedom of Decision and Action

4-92. Effective commanders impose minimum constraints on subordinates. They exercise only the control necessary to give subordinates the guidance and resources needed to accomplish assigned tasks. This principle, however, includes exercising the control necessary for proper, if imperfect, coordination.

4-93. This principle directly supports exercising mission command. Mission command relies on mission orders, shared situational understanding, open communication of RI, and flexible procedural control. These techniques allow subordinates freedom of action to exercise subordinates' initiative within the commander's intent.

4-94. Over-control results when commanders establish excessive limits on the subordinates' freedom of action. Some commanders try to achieve the massed effects espoused by the Army's operations doctrine by using detailed command methods. Doing this may result in over-control. Over-control takes two forms: tactical over-control and excessive requests for information.

4-95. Commanders consider the following precepts when deciding how to exercise control:

- Limit control measures to those necessary to effect essential coordination.
- Limit IRs to the minimum needed to exercise C2.

- Give subordinates as much leeway for initiative as possible consistent with keeping operations synchronized and maintaining enough situational understanding to restore the situation, if necessary, or to exploit opportunity.

CREATE, MAINTAIN, AND DISSEMINATE THE COMMON OPERATIONAL PICTURE

4-96. Relevant information provides the basis for constructing the COP. The COP facilitates collaborative planning and helps commanders at all echelons achieve shared situational understanding. Shared situational understanding allows commanders to visualize the effects of their decisions on other elements of the force and the overall operation. Commanders apply judgment to the COP to achieve the situational understanding needed to make decisions. Under mission command, subordinates use the COP in conjunction with the commander's intent to guide their exercise of subordinates' initiative. Digital, analog, or mixed digital/analog forces can use the concept of the COP. Each applies the concept differently based on available resources.

4-97. Commanders achieve situational understanding by applying judgment to the tactical and logistical COP. Doing this is neither simple nor automatic. The COP consists primarily of knowledge, which the staff provides through analysis and evaluation. Accurate, timely compilation of logistical information—a major category of this knowledge that the logistics BOS produces—is indispensable to a complete COP and achieving accurate situational understanding. Sustainment is a critical, integrated part of C2. Its contributions to the COP support all BOSs. Sharing of knowledge through the COP contributes to achieving a more complete, timely, and comprehensive shared situational understanding. An accurate COP ensures commanders' situational understanding accurately reflects the actual situation.

Use Doctrinally-based TTP, Graphics, and Terms

4-98. Language used in communicating should be simple, clear, and easily understood. An understanding of common doctrinal procedures, graphics, and terms contributes to the simplicity and clarity essential to mutual understanding. Using correct doctrinal procedures, graphics, and terms shortens the amount of explicit communication needed to convey or explain an order or plan. However, during stability operations and support operations, staffs may need to create nonstandard graphics or modify existing graphics to portray the environment, an adaptive enemy, or other elements. They should do this only when standard graphics are unsuitable.

4-99. This principle does not imply unthinking adherence to every aspect of doctrine in inappropriate situations. Rather, it means that commanders consider all levels of doctrinal requirements and limitations before directing a nondoctrinal action. When time permits, they explain their reasoning to their subordinates. Soldiers understand a creative, but nondoctrinal, solution to a tactical problem when it is explained using doctrinal TTP.

INFORMATION MANAGEMENT

4-100. Information management (IM) is a component of all C2 systems. It is a contributor to information superiority. IM consists of two elements: INFOSYS and RI. The following section discusses IM with respect to the C2 BOS. Decision-makers in other BOS use BOS-specific IM cycles to develop and manage the RI they need. The intelligence system, for example, uses the intelligence cycle to provide IM for intelligence.

4-101. IM is the provision of relevant information to the commander at the right time in a usable form to facilitate situational understanding and decision-making. It uses procedures and information systems to collect, process, store, display, and disseminate information. IM

provides structure through which to process and communicate information and to put decisions into action.

4-102. IM narrows the gap between RI commanders require and the RI they have. C2 systems manage information for one overriding purpose—to enable commanders to make timely decisions in spite of the fog and friction of operations. All information given to commanders must be RI; that is, commanders should only receive information they need to exercise C2. Staffs ensure this RI is accurate, timely, usable, complete, precise, and reliable.

4-103. The information commanders receive drives how they visualize the operation. How RI fits into the commander's visualization determines its value. In turn, the commander's visualization drives what information commanders seek. Commanders state the RI they need by establishing the CCIR. Staffs must understand the commander's intent and CCIR to provide the information commanders need to make decisions and maintain an accurate SU.

4-104. Effective IM facilitates communications vertically (within the chain of command) and horizontally (among subordinate, adjacent, supporting, and supported units). Redundancy in transmission paths safeguards against disruption and battle damage. However, the transmission path information follows is less important than whether it reaches the right destination at the right time in a usable format. The ability of technical systems to provide RI to commanders and other leaders when needed ultimately depends on continuously updating guidance concerning the information needed to make decisions. For commanders, this means updating the CCIR based on changes in the decisions they expect to make.

4-105. Commanders base their IM guidance on the following factors:

- Degree of willingness to cope with uncertainty.
- Number and type of decisions the commander expects to make personally.
- Whether the needed RI can be obtained.
- Gaps in RI needed for specific decisions.
- Ability of subordinates to understand the commander's intent.
- Availability of liaison officers and informal communications networks.

RELEVANT INFORMATION (RI)

4-106. Information becomes RI if it supports exercising C2 for a mission, and if it is accurate, timely, usable, complete, precise, and reliable. RI provides the basis for creating and maintaining the COP and the substance of execution information. It is the basis for achieving SU.

4-107. Commanders determine IRs and set information management (IM) priorities. If they request too much information, the staff's chances of obtaining the RI decrease. Similarly, staffs should collect, analyze, and disseminate RI that answers CCIR or parts of CCIR ahead of routine reports. Routine or irrelevant details may conceal answers to CCIR and slow processing and communication. The quest for complete information consumes too much time and places an unreasonable burden on information sources. At worst, it corrupts the trust required for mission command. Subordinates who worry over every detail rarely have the resources or desire to take the initiative.

4-108. **Information management** consists of five activities: collect, process, store, display, and disseminate. In practice the different activities overlap, effectively complementing each other.

4-109. **Collect.** As an information management activity, collect is to continuously acquire relevant information by any means, including direct observation, other organic resources, or other official, unofficial, or public sources from the information environment. Commanders set priorities for collecting by establishing CCIR. They continuously revise them throughout the operations process as the situation changes.

4-110. **Process.** As an information management activity, process is to raise the meaning of information from data to knowledge. Processing adds meaning to data and information through progressively higher-level and complex cognitive methods. It contributes to creating the COP. Processing includes lower-level mechanical methods; such as, organizing, collating, plotting, and arranging data and information. However, effective processing requires the higher-level cognitive methods of analysis and evaluation to convert information into knowledge that supports situational understanding. Higher-order processing depends primarily on the insight that well-trained and adaptive analysts available at higher echelons provide. Effective IM and INFOSYS disseminate these products to users throughout the organization. Where commanders do not have access to these products, they do their own analysis and evaluation to process available information into knowledge themselves. Commanders apply judgment to knowledge to achieve situational understanding. That, combined with intuition, enables them to make informed decisions with less-than-perfect information.

4-111. Incoming data are not information until they have meaning added by processing. The logistics staff is the major contributor to processing. In organizations without staffs, commanders themselves explicitly or implicitly raise the meaning of information they receive. For example, a platoon leader collects data by observing replenishment operations in the area of operation or enemy actions. After reporting this observation to the commander, the platoon leader processes the data into information by portraying those actions on a map as graphics, as appropriate. Considering friendly plans and actions, the platoon leader applies existing knowledge of the friendly logistics situation or of enemy operations to the observations and analyzes their meaning to anticipate possible enemy actions. He then evaluates the effects of possible impact of the logistics situation or the enemy actions on his and the higher commander's mission. He also considers the effects on the logistical situation or enemy of any actions his unit might take. These thought processes constitute cognition, the act of learning or integrating various pieces of information. It raises information (the actions portrayed on the map) obtained from processing data (the observation of the logistical situation or the enemy may be sent through FBCB2 or as a situation report (SITREP) with movement tracking system (MTS)) into knowledge. Finally, after applying judgment to understand the situation, the platoon leader decides if he needs to do anything to counter the enemy's actions.

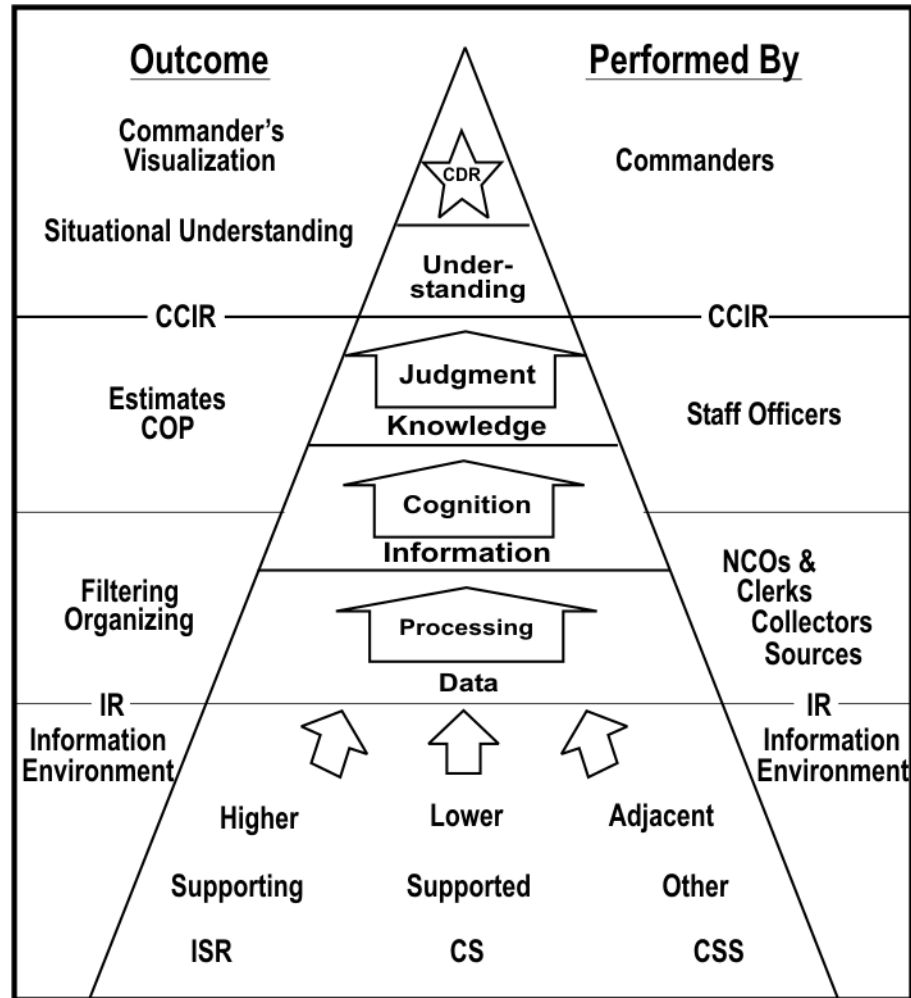


Figure 4-5, Processing Information

4-112. An important processing tool is collaboration. Collaboration involves real-time or near real-time audio and visual communications. At higher echelons it may include video teleconferences and white-boarding. At lower echelons it may involve only radio conversations, emails, STAMIS updates and meetings. Collaboration can serve to discuss the COP or LCOP, update IRs, generate knowledge, improve the commander's visualization, share situational understanding, and improve decision-making. Collaboration disseminates knowledge and improves situational understanding, both horizontally and vertically.

4-113. Processing filters, fuses, and prioritizes information as depicted in Figure 4-5. Filtering means assessing the value of information and removing what is not pertinent or important. Staffs (or commanders personally in units without staffs) filter data and information to identify RI and create the COP. Effective filtering requires specific criteria expressed in these terms: timeliness, accuracy, usability, completeness, precision, and relation to the CCIR and other IRs. Fusing integrates information into an easily usable form at an appropriate level of detail. Prioritizing expedites information flow by indicating and displaying the relative importance of different RI. The prime example of this prioritization is the CCIR. Prioritizing demands a clear commander's visualization and understanding of the commander's intent by subordinates. Effective prioritization allows the staff to quickly identify information that answers the CCIR.

4-114. Commanders apply their education, experience, intuition, and judgment to transform knowledge into understanding. During planning and preparation, situational understanding contributes to the commander's visualization. Accurate situational understanding leads to a commander's visualization that includes a clear commander's intent and comprehensive planning guidance. During execution, accurate situational understanding supports fast decisions and better C2.

4-115. **Store.** As an information management activity, store is to retain relevant information in any form, usually for orderly, timely retrieval and documentation, until it is needed for exercising command and control. C2 systems store information, because not all information collected or processed can be displayed at the same time, or is relevant at all times. The DA Form 1594 (*Daily Staff Journal*) is a primitive storage means. It retains information or analyses of past outcomes for future use; however, it is difficult to rapidly resort, reorder, and analyze data recorded on this form.

4-116. **Display.** As an information management activity, display is to represent relevant information in a usable, easily understood audio or visual form tailored to the needs of the user that conveys the common operational picture for decision making and exercising C2. There are three ways to display information: graphic displays, written reports, and verbal narrative reports. Graphic displays are discussed below. FM 5-0 discusses written reports and verbal narrative reports.

4-117. Graphic displays visually represent current or future operational information. They may use automated or manual means. When possible, commanders and staffs graphically portray quantifiable information using standard formats. Effective graphic displays:

- Should be digital, not analog.
- Use symbols, graphics, and terminology consistent with FM 1-02.
- Show only RI.
- Show information clearly and understandably.
- Include accurate, reliable, and timely information.
- Be promptly and easily updated.
- Be quickly disseminated to higher, lower, and adjacent units.

4-118. **Disseminate.** As an information management activity, disseminate is to communicate relevant information of any kind from one person or place to another in a usable form by any means to improve understanding or to initiate or govern action. It takes two forms: broadcast dissemination and point-to-point dissemination. Effective IM combines broadcast and point-to-point dissemination based on the situation and available INFOSYS.

SECTION V – EXERCISING BATTLE COMMAND

4-119. The logistics commander exercises battle command inside an operations process describing how forces plan, prepare for, and execute operations (concept of support) while continuously assessing the situation, as depicted in Figure 4-6. These activities are sequential but not discrete; they overlap and recur as circumstances demand. FM 6-0 contains a detailed discussion of the operation process and its impact on military operations. This section discusses the key points of the process and expands on their impact on sustainment operations.

PLAN

4-120. Receiving or deriving a mission from an ongoing operation initiates the operations process. Upon mission receipt, commanders and staff conduct analysis, make decisions, and develop plans to coordinate and synchronize the actions of subordinates and BOS functions. This effort is based on guidance from higher headquarters (commander's intent, mission,

scheme of maneuver and thereby support, and fires) and a collaboratively developed and a logistics commander-approved COA. Plans serve as conceptual frameworks and guide subordinates as they progress through each phase of the operation.

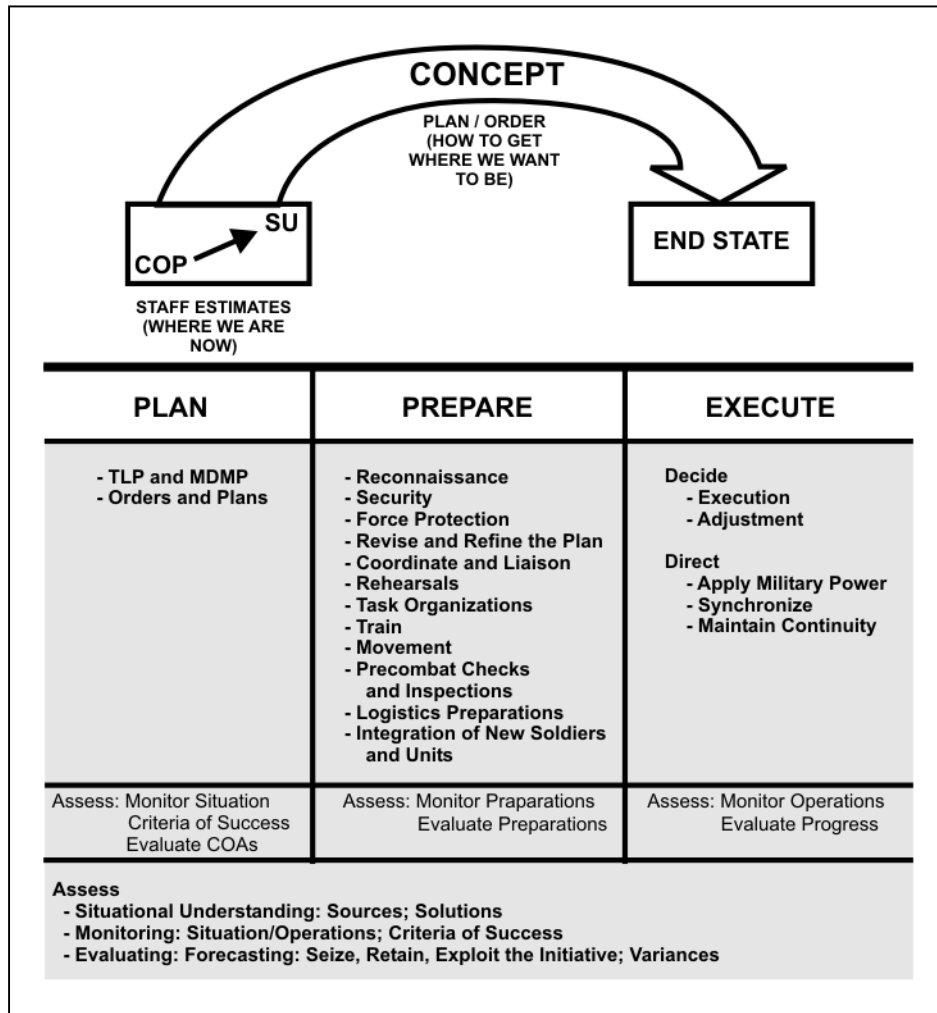


Figure 4-6, Operations Process

4-121. Due to the nature of sustainment operations, the logistics commander will use mission command as his method of commanding and controlling subordinate forces. Mission command is the conduct of operations through decentralized execution based upon mission orders for effective mission accomplishment. Because company commanders will mirror this approach, successful mission command results in subordinate leaders at all echelons exercising disciplined initiative within the commander’s intent. Mission command requires plans that provide commanders the flexibility to exploit opportunities and respond to threats.

4-122. Plans should always be completed as soon as possible to maximize subordinate command planning time. The staff should use frequent WARNO and judicious collaborative planning to facilitate parallel planning with subordinates. In addition, just because time is available does not mean that orders or plans should be detailed or lengthy; mission orders should be as simple as possible and provide maximum latitude for subordinates in execution.

OPERATIONAL AND TACTICAL PLANNING

4-123. At the tactical level of war, planning initially focuses on developing viable COAs based upon the results of the mission analysis, the commander's guidance, and his intent. COAs are then wargamed and compared, and a command decision is made concerning which COA is best. Once a COA is selected, the planning focus shifts to developing most likely and most dangerous branches and sequels.

4-124. The MDMP guides the logistics commander and staff throughout the planning process. It provides a logical sequence of decision and interaction between the commander and staff. While the MDMP may be accelerated, or abbreviated as METT-TC dictates, it provides all staffs with a common framework that supports the maximum use of collaborative planning.

LOGISTICS CONSIDERATIONS FOR THE MDMP PROCESS

4-125. See Chapter 5. Sustainment Operations Planning

BRANCHES AND SEQUELS

4-126. Because operations never proceed exactly as planned, commanders incorporate branches and sequels into the operational design. Visualizing and planning branches and sequels are important because they involve transition changes in mission, in type of operation, and often in forces required for execution.

- A branch enables the logistics to respond/react to alternate COAs. It is a contingency plan or COA (an option built into the basic plan or COA) for changing the mission, disposition, orientation, or direction of movement of the force to aid success of the current operation, based on anticipated events, opportunities, or disruptions caused by threat actions. Logistics units prepare branches to exploit maneuver battalion success and opportunities, or to counter disruptions caused by threat actions or possible actions in logistics AO. Although anticipating every possible action is impossible, branches anticipate the most likely ones.
- Sequels are operations that follow the current operation. They are future operations that anticipate the possible outcomes—success, failure, or stalemate of the current operation. A counteroffensive, for example, is a logical sequel to a defense; exploitation and pursuit follow successful attacks. Logistics leaders consider sequels early and revisit them throughout an operation. Without such planning, current operations leave forces poorly positioned for future opportunities, and leaders are unprepared to retain the initiative. The logistics commander should never be the leader who has failed to consider sequels that provide support with changes in possible outcomes. Coordination with the maneuver commander for his potential sequels is important in order for the logistics commander to develop his own.

4-127. Both branches and sequels should have execution criteria carefully reviewed before their implementation and updated based on assessment of current operations.

CONCEPT OF OPERATIONS

4-128. The concept of operations (support) describes how commanders at all levels see the actions of subordinate units fitting together to accomplish the mission. As a minimum for a logistician, the description includes the scheme of maneuver and concept of sustainment operations. For example, the concept of operations expands the logistics commander's selected COA and expresses how each element of the force will cooperate to accomplish the mission. The logistics commander's intent focuses on the end state; the concept of operations (support) focuses on the method by which the operation uses and synchronizes the

sustainment functions to translate vision and end state into action. Commanders ensure that the concept of operations (support) is consistent with both their intent and that of the next two higher commanders.

RISK MANAGEMENT

4-129. Risk management is the process of identifying, assessing, and controlling risk arising from operational factors, and making an informed decision that balances cost with mission benefits. There are many types of risk management e.g., safety, tactical and operational risk from a sustainment operations perspective. A logistics commander must ensure all facets are addressed. It provides leaders with a systematic mechanism to identify risk associated with a COA during planning. Effective risk management results in mission accomplishment at least cost in potential harm to the soldiers.

ORDERS

4-130. An order is a written or oral directive issued by a commander to subordinate commanders to communicate execution information that directs action. For logistics, the source for any directive is the HBCO commander's decision—either the initial product of planning, or the result of decision point reached amid an operation. It provides a way for the commander to convey his intentions to his subordinates. Orders should be timely and as clear, simple, and concise as each situation permits, conveying the minimum amount of information necessary for execution. They should contain a simple, clearly stated intent and concept of operations.

4-131. Orders translate plans into execution. When possible, commanders issue them personally, face to face. If this is not possible, radio, video teleconference, digital transmission (e.g., via FBCB2) or other communication means can substitute. Mission orders state the task organization, the commander's intent and concept of operation (support), unit mission, the subordinates' mission, and minimum essential coordinating instructions.

PREPARE

4-132. Preparation consists of activities by the unit before execution to improve its ability to conduct the operation including, but not limited to, the following: plan refinement, additional rehearsals, reconnaissance, coordination, inspections (e.g., pre-combat checks), and movement. It requires staff, unit, and soldier actions. The complexity of operations imposes significant challenges. The nature of land operations differs tremendously from situation to situation.

4-133. Command presence is a key factor in the preparation process. Commanders should heed the old adage: An organization does well what a commander checks. The logistics commander, and his staff, must develop a plan that ensures the chain of command inspects at a minimum those critical tasks or assets required for mission success. Critical tasks and preparation requirements must receive command attention and visibility on a routine basis.

STAFF PREPARATION

4-134. Each staff section and element conducts activities to maximize the operational effectiveness of the force. Coordination between echelons and preparation that precedes execution are just as important, if not more important, than developing the plan. Staff preparation includes assembling and continuously updating estimates. For example, continuous intelligence preparation of the battlefield (IPB) provides accurate situational updates for the logistics commander when needed.

UNIT PREPARATION

4-135. Logistics units prepare for sustainment operations as a foundation for the conduct of other military operations. Logistics must readily adapt to multiple transitions between offense, defense, stability, and support operations by maintaining continuous logistical COP that constantly updates and informs the brigade commander's situation understanding. Thus, logistics preparation is a continuous process; it does not stop upon deployment into an AO. Based on the factors of METT-TC and guidance from higher headquarters, logistics leaders continue to prepare and sustain combat and technical skills whenever time permits.

RULES OF ENGAGEMENT (ROE)

4-136. ROE always recognize the individual right of self-defense; the commander's right and obligation to protect assigned personnel; and the national right to defend US forces, allies, and coalition participants against armed attack. Operational requirements, policy, and law define ROE. The Joint Chiefs of Staff standing ROE provide baseline guidance. The standing ROE may be tailored and supplemented for specific operations to meet logistics commanders' needs. Effective ROE are enforceable, understandable, tactically sound, and legally sufficient. Further, effective ROE are responsive to the mission and permit subordinate commanders to exercise initiative when confronted by opportunity or unforeseen circumstances.

4-137. In all operations, whether using lethal or non-lethal force, ROE may impose political, practical, operational, and legal limitations upon commanders. Commanders factor these constraints into planning and preparation as early as possible. Withholding employment of particular classes of weapons and exempting the territory of certain nations from attack are examples of such limitations.

EXECUTE

4-138. Execution is concerted action to seize and retain the initiative, build and maintain momentum, and exploit success. The tenet of initiative is fundamental to success in any operation; yet simply seizing the initiative is not enough. Successful sustainment operations maintain the momentum generated by initiative and exploit successes within the HBCT (and ultimately the UE or JTF) commander's intent. Use of MSO allows maneuver commanders to pulse support to HBCT's that are rotated out of the fight for brigade sustainment. RSO allow maneuver battalions to stay in contact with the enemy, yet maintain adequate combat power for the mission. The logistics commander must be fully involved throughout the planning process to properly execute this expected support.

BUILD AND MAINTAIN MOMENTUM

4-139. Momentum retains and complements initiative. Momentum derives from seizing the initiative and executing shaping, sustaining, and decisive operations at a high tempo. Momentum allows commanders to create opportunities to accomplish the mission from unexpected directions with unanticipated capabilities. Having seized the initiative, the logistics commanders continue support the maneuver commander's ability to control the relative momentum by maintaining focus and controlling the tempo. They ensure that they support the maintenance of momentum by anticipating transitions and moving rapidly between types of operations. When the opportunity presents itself to exploit, the brigade commander will push all available forces to the limit to build on momentum gained and needs his logistics units postured to support the exploitation.

EXPLOIT SUCCESS

4-140. To determine how to exploit tactical and operational successes, commanders assess them in terms of the higher commander's intent. However, success will likely occur in ways unanticipated in the plan. Analysis by the logistics unit of the success by the maneuver units may identify an unexpected opportunity of the decisive forces to gain an objective in an unexpected way. Success signals a rapid assessment to answer these questions:

- Does the success generate opportunities that more easily accomplish the objectives? In addition, what support does it require?
- Does it suggest other lines of operations? What does this mean for sustainment operations?
- Does it cause commanders to change their overall intent?
- Should the force transition to a sequel?
- Should the force accelerate the phasing of the operation?

COMBINE DECISIVE, SHAPING, AND SUSTAINING OPERATIONS

4-141. Ideally, decisive operations occur approximately as planned. However, opportunity and circumstances often alter the sequence and details of the decisive operation. Commanders create or preserve opportunities through shaping operations. The support that logistics provides the brigade commander is a key tool that assists shaping. Shaping operations precede and occur concurrently with the decisive operation. Sustainment operations ensure freedom of action to maintain momentum and exploit success.

LOCATION OF THE COMMANDER

4-142. Command occurs at the location of the commander. One of the fundamental dilemmas facing all commanders is where to position themselves on the battlefield. Commanders lead. There is no ideal pattern of leadership or simple prescription for it; different commanders lead in different ways. Leadership is essentially creative. As far as operational conditions allow, leadership must be where the action is at. Logistics commanders must be in the critical place of the battle as determined by the logistical or tactical situation and its relative importance at that moment of the battle or in preparation of follow-on sustainment missions. Commanders need to see their soldiers and soldiers must see their commander. Commanding at the critical point allows commanders to assess the state of operations face-to-face with their subordinate commanders and their soldiers. It allows them to gather as much information as possible about actual combat and logistical conditions when making decisions in uncertain circumstances. Commanders go where they can best influence operations; however, commanding in a critical area does not mean taking over a subordinate's responsibilities. Leading where your soldiers are at in a critical area improves morale and allows logistics commanders to ensure support at the critical time and place.

COMPLEX OPERATIONAL CONSIDERATIONS

4-143. All operations include challenges. However these complex operational considerations require special attention by commanders and staffs:

- CBRN environments.
- Local populace and displaced persons.
- Unconventional threats.
- Urban and complex terrain.

ASSESS

4-144. Assessment is the continuous monitoring throughout planning, preparation, and execution of the current situation. This process includes the progress of an operation and the evaluation of it against the criteria of success. Decisions and adjustments are based on the assessment.

4-145. Logistics commanders, assisted by the staff, continuously assess the situation and the progress of the operation, and compare it with the initial vision. The logistics commander directs adjustments to ensure that sustainment operations remain aligned with the brigade commander's intent. This takes the form of adjustments to the brigade's sync matrix and its embodiment, the sustainment tasking matrix. Company commanders assess their unit's progress by comparing it with the logistics commander's intent and adjusting their actions to achieve the envisioned end state, particularly in the absence of orders.

4-146. Assessment precedes and guides every activity within the operations process and concludes each operation or phase of an operation. Assessment entails two distinct tasks: continuously monitoring the situation and the progress of the operation (support), and evaluating the operation against measures of effectiveness. Together, the two tasks compare reality to expectations.

SECTION VI – COMMAND AND STAFF RESPONSIBILITIES

THE COMMANDER

4-147. Advanced capabilities of command, control, communications, and computers and ISR, coupled with a staff who understands the systems and the brigade commander's information needs, allow the logistics commander greater options in positioning himself where he can best influence sustainment operations. The commander must have SA, know his end state, and visualize how to get there. Additionally, if the commander knows the capabilities and limitations of these advanced C4 and ISR systems, he can fully exploit them to *see* the battlefield. He then focuses command and staff energy on executing a continuously updated sustainment operations plan and looking toward the future (How do I shape my support plan to achieve my assigned and self-developed ends based on what I know?).

4-148. The digital C2 environment provides a commander more effective information to allow him to focus his staff and provide more detailed guidance than in the past. Continuous information sharing enables the logistics commander to convey his intent immediately with the entire staff and his company commanders, and to update his guidance as often as required with less risk of confusion.

BSB STAFF

4-149. The staff exists to assist the logistics commander in recognizing and anticipating reconnaissance requirements so he can make decisions and act faster than the enemy. Key staff capabilities required for operations include the following:

- Monitor unit status and mission execution to ensure conformity to the commander's intent and scheme of maneuver and support.
- Update CCIR frequently; develop and manage PIR.
- Designate and ensure conformity to FFIR, and essential elements of friendly information (EEFI). EEFI are co-equal to CCIRs and may help create CCIRs as appropriate.
- Refine/adjust both the logistics OPORD and the brigade logistics sync matrix, based on combat power, coordination, and unit status.
- Develop information requirements to support decision points (DP).

- Assess/understand timely information updates, and disseminate decisions early and instantaneously.
- Execute multi-echelon tactical and logistical COP based collaborative planning and information sharing.
- Merge the plan, prepare, and execute phases; blend current and future operations.
- Develop options to prevent the logistics units from presenting predictable patterns to the enemy.
- Accelerate MDMP process as METT-TC requires.
- Employ mission tailoring, reachback, and virtual staffing techniques to incorporate special staff expertise when required.

COMMUNICATIONS AND COMPUTERS

4-150. Logistics units possess a number of enabling technologies and associated concepts to facilitate, strengthen, and accelerate the C2 process. An integrated, fully capable C4 and ISR system is essential for rapid identifying and executing the mission. These key functions must be present with communications and computer devices required to support sustainment missions. See Appendix A for a more full discussion on Logistics Automation Architecture.

Communications

4-151. Communications within the logistics unit are supported by a mobile, joint capable, secure, digital voice, data, and video capability that provides a redundant, reliable, real time, accurate message delivery rate. Frequently, the communications must extend beyond line of sight (LOS) to supported and supporting units.

4-152. The communications system within logistics is founded on a tactical internet, consisting of enhanced positioning location reporting system (EPLRS), single channel ground and airborne radio system (SINCGARS) and Very Small Aperture Terminal or satellite operations known as VSAT. The VSAT provides direct satellite linkage from logistics locations that allow large data file transfer. This satellite-based system will satisfy near-term requirements. The tactical internet provides secure, jam resistant, on-the-move, non-line of sight (NLOS), long-range data communications for multiple subnets, while operating in a frequency-constrained environment. Internal logistics communications systems support stationary and on-the-move distribution of data across the tactical communications network two echelons up and two echelons down (to include adjacent, joint, and allied units).

Computers

4-153. Computers allow logisticians to automatically process multiple types of data) into a tactical and logistical COP. It is this COP that provides the ability to visualize the battlefield e.g. logistics data—location of convoys, use of radio frequency identification (RFID) tags that allow identification down to repair part level as to what shipping container they are located, feature files, satellite imagery, aerial photographs, radar imagery, multi-spectral imagery, and relational data. The COP facilitates visualization of the internal area of operational interest (to include all elements of the combined arms team and joint enablers), and is the foundation on which to build SU and conduct collaborative planning.

Intelligence, Surveillance, and Reconnaissance

4-154. Logistics units do not possess personnel, organizations, and systems that execute reconnaissance, surveillance, and combat information analysis to produce intelligence. They must use their own assets to conduct reconnaissance and surveillance and use their battalion S-2 to obtain the combat information analysis from HBCA assets in order to produce intelligence. Throughout the brigade, all assets have the capability to provide

sensing data. Examples are radars, UAV, PROPHET EW systems, CBRN recon sections, ground scouts, and logistics perimeters defensive positions and convoys.

Chapter 5

Sustainment Operations Planning

Sustainment operations are necessary to fight and win engagements. The HBCT's logistics systems involve the synchronization and control of all support functions required for sustaining Soldiers and their systems. The HBCT commander uses his logistics assets to maintain the momentum of operations and enhance the capabilities of his maneuver forces. C2 digital enablers enhance the capability to conduct sustainment operations.

The failure to adequately plan for military operations has often led to failure in the past i.e. leaders do not plan for failure, but they do fail to adequately plan which can lead to failure. The HBCT-level planning phase is described in this chapter as it relates to logistics. The use of the tools and planning processes available today, should not allow planning failures to occur if our leaders and Soldiers are properly trained in their use. Maintaining the leader's and his staff's war-fighting skills for the battle command requirements to plan for military operations in the contemporary operational environment (COE) is paramount. The challenge in training the battlestaff is not teaching them the processes and how to operate the command, control, communications, computers, intelligence, surveillance, and reconnaissance systems, but to train them to understand the full potential of the processes and digital systems in the planning process. This will allow execution-centric adaptive leadership that is coupled with trust in subordinate decision-making to achieve operational success in sustainment operations.

SECTION I – GENERAL OVERVIEW OF PLANNING CAPABILITIES

5-1. The military decision-making process (MDMP) is an established and proven analytical process; however, it is a detailed, deliberate, and sequential process optimally used when adequate planning time and sufficient staff support are available to develop and thoroughly examine numerous friendly and enemy courses of action. The commander and staff typically conduct this examination when developing the commander's visualization and operation plans, when planning for an entirely new mission, and during extended operations. The underlying concurrent processes of intelligence and logistics preparation of the battlefield, risk assessment (see Appendix D, Risk Management and Fratricide Avoidance and Appendix E, Environmental Concerns), targeting, force protection, and military deception planning provide the information that is used as part of the standardized planning in the MDMP. The MDMP helps the commander and staff to examine a specific situation and reach a logical decision by applying thoroughness, clarity, sound judgment, logic, and professional knowledge. The MDMP is the foundation on which planning in a time constrained environment is based. The products created during the MDMP can and should be used during subsequent planning sessions when time may not be available for a thorough reexamination but when significant parts of existing information and analysis of METT-TC factors have not changed substantially.

5-2. The MDMP relies on doctrine, especially the terms and symbols (graphics) consolidated in FM 1-02. The professional understanding of a defined common lexicon particular to the profession of arms (joint forces) and the Army is essential to the MDMP. Using approved terms and symbols facilitates the rapid and consistent assessment of the situation and the creation and implementation of plans and orders by minimizing confusion over the meanings of terms and symbols used in the process.

5-3. The MDMP must be integrated from top to bottom order to produce a synchronized concept of support that effectively supports the brigade tactical operation (e.g. concept of maneuver). The support battalion commander is responsible to the HBCT commander for collaborating with the development of the supportability of the COAs, supportability of the chosen COA and the production of the logistics annex of the HBCT order. This is all done ICW the HBCT S1/4 and surgeon during the HBCT's MDMP. The BSB commander might choose to be present for the HBCT MDMP with support from his SPO section. Another option is to have the SPO go to the brigade for its MDMP to ensure the requisite collaborative planning with the brigade and the BSB. Another technique is to have a logistics planner (FA 90 officers; 2 for 24 hours operation) from the support operations office (SPO) section, who actively participate with the brigade S1/4 and surgeon during the MDMP and keep the BSB commander and SPO aware of the planning and are provided guidance as needed.

5-4. Whatever method is used, information must flow continuously between the brigade S1/S4, brigade surgeon, the support battalion SPO section, and the battalion S1s/S4s as well as the forward support company commanders. Regarding the use of logistics officers other than the BSB commander and SPO, there should be terms of reference as to what their duties will be, what is expected of them during the MDMP in support of the brigade's process and providing feedback to the SPO and how the HBCT XO will ensure they are integrated into the MDMP.

5-5. At each level of planning in the HBCT, the logistics estimate process should assess sustainment capabilities, develop detailed requirements, and identify shortfalls as well as possible solutions. The logistics estimate process must be continuous and communication between the many logistics planners is essential. An integrated logistics concept of support must provide the details of how a unit will both receive and provide support throughout an operation. It must provide enough detail so commanders know how they will be supported as well as how they and their subordinate units will execute the sustainment portion of their mission.

5-6. The support battalion's challenge during the MDMP is to determine how they will support the brigade in collaboration with the HBCT's planning staff for the brigade's concept of support using a continuous logistics preparation of the battlefield process. Additionally, the support battalion staff must determine how they should support their internal units, how to configure and defend the BSA, based on a continuous intelligence preparation of the battlefield (IPB) process, and if, when, where, and how the BSA should relocate to support the brigade or protect support battalion logistics assets.

5-7. The logistics planners for the HBCT must actively participate during each stage of the HBCT's MDMP, and these planners must not only participate, but they must communicate with each other throughout the process. The following seven steps of the MDMP (FM 5-0) should be completed in order to ensure all units within the brigade produce complete, viable, and well-integrated orders:

- Receipt of mission.
- Mission analysis.
- COA development
- COA analysis (war game).

- COA comparison.
- COA approval.
- Orders production.

SECTION II – ROLE OF THE COMMANDER, STAFF, AND DIGITAL PLANNING TOOLS IN THE MDMP

THE COMMANDER’S ROLE (APPLICABLE TO BATTALION LEVEL AND ABOVE)

5-8. The HBCT commander is in charge of the military decision-making process for the HBCT order and is supported in the logistics aspects of the MDMP by the BSB commander and his SPO section. The HBCT commander decides what procedures within the MDMP to use in each situation, including whether or not to use collaborative planning. The commander’s intent is the driving force behind the MDMP, which hinges on a clear articulation of the commander’s visualization. The information systems (INFOSYS) provide the commander with an unprecedented level and quality of information that help focus his attention on the critical elements of the situation and enable him to understand better the environment in which he is operating. The commander should use warning orders (WARNOs) to provide requisite information to subordinate units to provide advance warning prior to the operation order (OPORD) being published. WARNOs are issued during the MDMP as discussed later in this chapter.

5-9. The commander is personally responsible for planning, preparing, and executing operations. From start to finish, the commander’s personal role is central. His participation in the process provides focus and guidance to the staff; however, there are responsibilities and decisions that are the commander’s alone. The amount of his direct involvement is driven by the time available, his personal preferences, and the experience and accessibility of the staff. The less time available and the less experienced the staff the greater the commander’s involvement. When the commander is linked with his staff by the INFOSYS, he is more accessible and has more tools to provide guidance and to stay involved in the process regardless of his location within the area of operations.

5-10. During the MDMP, the commander uses the entire staff to explore the full range of probable and likely enemy and friendly courses of action and to analyze and compare his own organization’s capabilities with those of the enemy. The brigade’s concept of support will be a maintain determiner of how the support battalion commander provides guidance to his staff. Hence the importance of being involved with the brigade’s MDMP process as it relates to the concept of support can not be understated. The staff effort has one objective: to integrate information collectively with sound doctrine and technical competence, which assists the commander in his decisions and ultimately leads to effective execution. The staff and commander must identify modular units required to accomplish the mission; identify modular augmentees that are excess to the METT-TC requirements of the support battalion and need to return to their parent unit; and prepare a risk analysis that addresses the risk to mission accomplishment if modular augmentation is not executed.

5-11. The commander decides what adjustments to make to the MDMP, giving specific guidance to the staff to focus the process and save time. If the commander has access to only a small portion of the staff or none at all, he will need to rely even more on his own expertise, intuition, creativity, and understanding of the environment and the art and science of warfare. He may have to decide on his COA, mentally war-game the outcome, and confirm his decision to the staff all in a relatively short time. If so, his decision will be based more on his experience than on a formal integrated staff process. The commander may elect to have

the staff spend most of its time developing, refining, and war-gaming his course of action rather than developing multiple COAs.

5-12. The commander should avoid changes to his guidance unless a significantly changed situation dictates major revisions. Frequent minor changes to the guidance can result in lost time as the staff makes constant minor adjustments to the plan.

5-13. The commander may consult with subordinate commanders before making a decision. Subordinate commanders are closer to the fight and can more accurately portray the enemy's situation and that of their own unit. Additionally, consulting with subordinates gives them insight into the upcoming operation and allows them to maximize parallel planning. Using the digital INFOSYS (primarily BCS3 and FBCB2) greatly enhances this concept of maximizing parallel planning between the maneuver battalion and the subordinate units.

5-14. The commander must also give guidance to the staff on what modular augmentees should be considered in future planning. The commander must insure that the request for modular forces required to accomplish the mission is properly addressed to the HBCT and the UEx and includes a risk assessment that addresses brigade support battalion mission accomplishment if the modular augmentees are not available or are late in their employment by the brigade support battalion.

5-15. In situations where the HBCT commander must decide quickly, he should contact his higher headquarters and advise them of his selected course of action, if time is available, because it may affect the branches and sequels that his senior leaders are planning. However, the commander should not sacrifice exploiting an opportunity, if he cannot contact higher headquarters.

THE STAFF'S ROLE

5-16. The executive officer manages, coordinates, and disciplines the staff's work and provides quality control. He must understand the commander's guidance and intent because he supervises the entire process. The XO ensures the staff has the information, guidance from the commander, and facilities that it needs. He determines timelines for the staff, establishes briefback times and locations, enforces the information management plan, and provides any unique instructions to guide the staff in completing the MDMP process.

5-17. Warning orders (WARNOs) are used to facilitate parallel planning. By issuing guidance and participating in formal and informal briefings, the commander and XO guide the staff through the decision-making process. In a collaborative environment, the commander can extend this participation directly to subordinate commanders and staffs. Such interaction helps the staff and subordinates to resolve questions and involves all staff and subordinates in the complete process. The selected course of action and its implementing operation order are directly linked to how well both the commander and the staff accomplish each step of the MDMP.

5-18. The importance of staff estimates increases as time decreases. Decision-making in a time-constrained environment almost always takes place after a unit has entered the area of operations and has begun to execute operations. This means that the logistics and the intelligence preparation of the battlefield (LPB and IPB), an updated COP, and logistics COP, and some portion of the staff estimates should already exist. Detailed planning before sustainment operations provides the basis for information that the commander will need to make decisions as operations continue. Staff members must keep their estimates up-to-date, so that when planning time is limited, they can provide accurate assessments quickly and move directly into course of action development. When time is short, the commander and staff use as much of the previously analyzed information and products from earlier decisions as possible. Although some of these products may change significantly, many, such as the LPB and IPB that are continuously updated, remain the same or require little change.

5-19. The BSB staff must use every opportunity to maximize parallel planning with the brigade headquarters. Maximizing parallel planning can save significant time but if not carefully managed it can also waste time. As a general rule, the staff must never get ahead of the higher headquarters in the planning process. The majority of the planning time should be spent developing the foundation of the plan, such as mission analysis. The staff should not develop and analyze COA without specific guidance and approval from higher headquarters.

5-20. Collaborative planning may be used to further speed up decision-making. Collaborative planning facilitates subordinate parallel planning and takes advantage of the subordinates' intimate knowledge of their area of operations and associated threats and opportunities. The brigade commander may direct that his headquarters and the support battalion headquarters collaborate. Collaborative planning among staffs is plausible; however, there will often be tension between taking a battalion or company commander away from an ongoing sustainment mission and the need to involve him in collaborative planning. Only the higher commander can determine which takes precedence and require a subordinate commander to participate in a collaborative planning session. Normally the BSB SPO will be involved with the brigade in collaborative planning and then advise the BSB commander as necessary of the brigade plan as it evolves with its concept of support plan. However as stated earlier, the BSB commander may involve himself as he sees necessary depending upon the situation.

HBCT LOGISTICS DIGITAL PLANNING TOOLS

5-21. Soldiers and leaders must have a thorough understanding of the decision-making processes that digital applications support as part of battle command. The logistics preparation of the battlefield (LPB) and the military decision making process (MDMP) are examples where C2 systems enable commanders to see, understand, act and finish decisively. Commanders and battlestaffs at all levels must have a through knowledge of these processes to understand how C2 systems enable decision-making as well as to function in the event those systems fail.

5-22. The HBCT's organic brigade support battalion (BSB) provides the HBCT distribution-based, centralized sustainment. The BSB is fully digitally enabled with Battle Command Sustainment Support System (BCS3); Force XXI Battle Command Brigade and Below (FBCB2) and Movement Tracking System (MTS). These digital enablers assist with providing a logistical common operating picture (LCOP) with communications linkages to the Standard Army Management Information System (STAMIS). These systems are critical to enabling the BSB support operations section to gain and maintain oversight of sustainment requirements. The increasing use of assured communications and improvements in digital information technology provide the logistics operator and the unit S4 the information dominance and digital tools needed to tailor the sustainment package. Through near real-time information, the HBCT staff and the BSB staff are able to make timely adjustments in their support requirements.

5-23. These digital enablers allow efficiency and effectiveness. BCS3 and FBCB2 are combat multipliers that provide logistics status and information in support of logistics planning and operations. BCS3 receives subordinate unit logistical reports from the battalion FBCB2 terminals, and it transmits reports and requirements to echelons above brigade support elements. The logistics planners can plug their BCS3 laptop into the local area network (LAN) or tactical Satellite Communications (SATCOM) and immediately view supplies either in-transit or at supply points anywhere in the world. Maps can be viewed down to 5 meter satellite-photo imagery and drill down on either the transporter or supply point icon which enables viewing of equipment, parts and supply stocks down to individual item level of detail. Additionally, using the same procedures, the logistics planner can view ship and air

manifest information, enabling logisticians to have complete asset visibility literally from the factory to the foxhole. BCS3 also provides movement planning, de-confliction of convoys and tracks actual movement of personnel, equipment and supplies. BCS3 provides battle update briefing (BUB) products that are dynamically updated by the system's software and tailored to each command.

5-24. Requesting of supplies and other logistical services are accomplished using the Standard Army Management Information Systems (STAMMIS), such as the Unit Level Logistics System-General (ULLS-G) to be replaced by ULLS-Enhanced (ULLS-E), the Standard Army Retail Supply Subsystem (SARSS), Standard Army Maintenance System (SAMS) to be replaced by ULLS-Enhanced (ULLS-E), the Supply Property Book System-Revision (SPBS-R) to be replaced by property book unit supply enhancement (PBUSE), and the Standard Installation/Division Personnel System (SIDPERS) (to be replaced initially by eMILPO and ultimately by DoD's Defense Integrated Military Human Resource System (DIMHRS). DIMHRS is an internet based single entry integrated military personnel and pay management system for all DoD military Services and components during peace and wartime, including mobilization/demobilization.)

SECTION III – HBCT BATTLESTAFF PLANNING FOR LOGISTICS

5-25. The brigade S4 and the brigade surgeon and BSB SPO, operating from their respective TOCs in the HBCT TOC sustainment cell and the BSB TOC respectively, monitor sustainment operations and ensure appropriate collaboration and synchronization of support. They use the logistics estimate, a product of the logistics preparation of the battlefield (LPB), to determine logistics capabilities, anticipate support requirements, identify and resolve shortfalls, and develop support plans. In addition, they work with their respective S2s to develop the enemy threat conditions to logistics operations from the intelligence preparation of the battlefield (IPB). They integrate all planning to develop, collaborate and synchronize logistics with maneuver and fire plans. Logistics planners must thoroughly understand the mission, tactical plans, and the commander's intent. This culminates during the military decision-making process with a fully developed and integrated logistics/FHP plan. Use of C2 products is very useful for the development of situational understanding (SU) by the logistics planners and the BSB commander. Throughout this entire process is the use of staff estimates to assist with maintaining the commander's situational understanding.

MDMP FOR LOGISTICS PLANNING AT THE HBCT LEVEL

5-26. HBCT tactical operations focus on influencing or changing the behavior or capabilities of enemy formations or selected civilian audiences using the application of selected elements of lethal and non-lethal combat power to achieve desired effects. An effect is defined as a physical, functional, or psychological outcome, event, or consequence that results from specific military or nonmilitary action at the tactical, operational, or strategic level. Hence, the MDMP is focused on achieving the commander's intent through desired effects.

5-27. The MDMP is an 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. Functional expertise such as logistics plays a vital role throughout the planning process. The MDMP is a seven-step process as depicted in Figure 5-1.

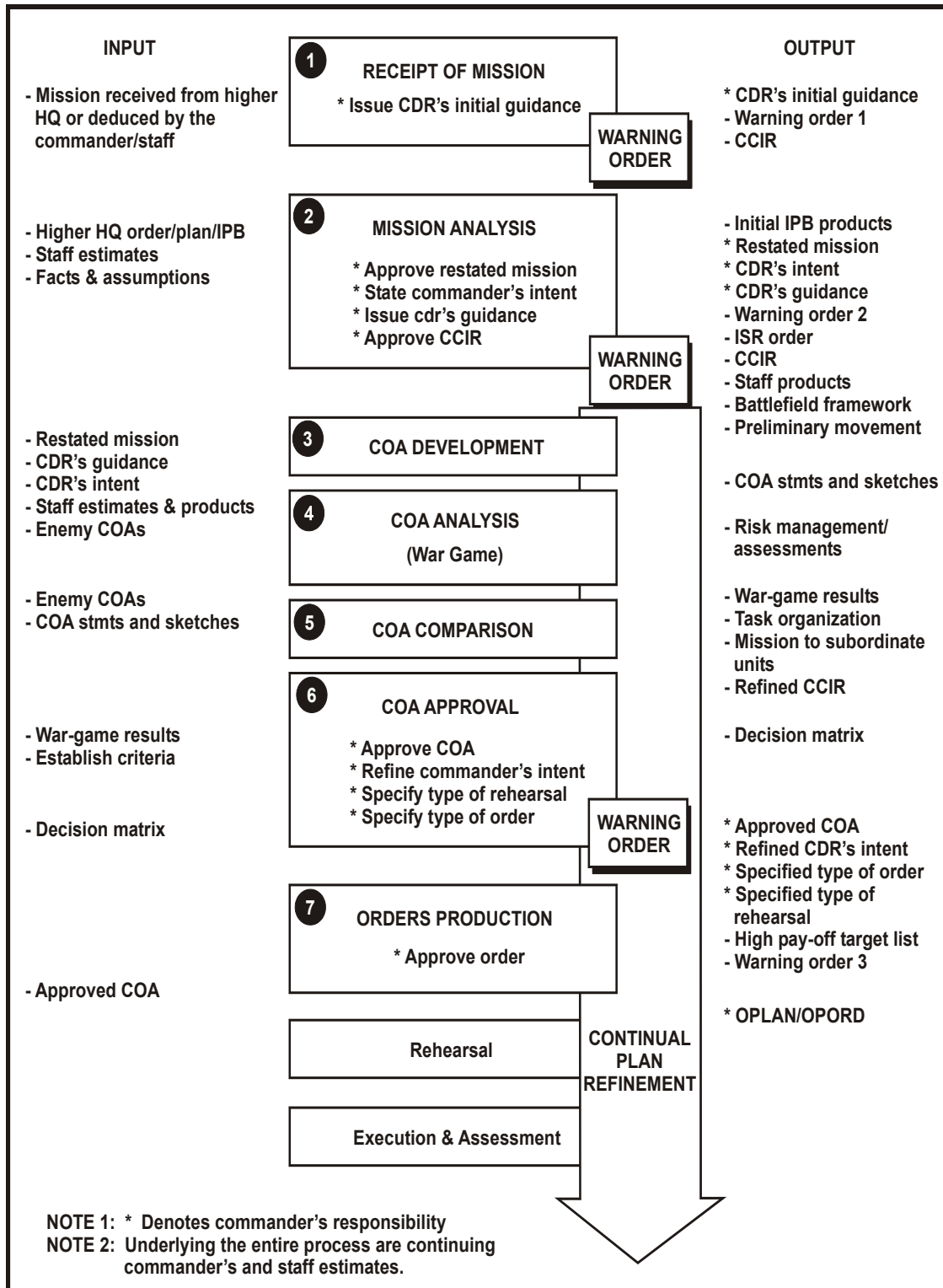


Figure 5-1, The Military Decision-Making Process

5-28. Utilizing the MDMP process to plan and execute combat operations involving both the effects of lethal and nonlethal combat power is not new to Army planners. The application of

lethal effects against enemy formations, augmented by nonlethal effects, to reduce or defeat their combat capability is a long standing, much used technique. In today's contemporary operational environment (COE), what has emerged is a new point of emphasis for the application of nonlethal effects and the target set against which these effects may be directed. Across the operational spectrum nonlethal effects may be focused on various segments of the population in an attempt to achieve the commanders long term desired end-state. Effects directed at the local populace, may involve operations that include projects to provide operational sewage systems, water, energy, academics, trash removal, medical support, and security. The BSB commander and the HBCT's logistics planners will examine all aspects of operational planning to ensure the plans can be supported have risk involved with choosing a course of action (COA) that can not be supported or have higher than desired risk of mission failure. This information is then presented to the HBCT commander. Alternative options will be presented for his consideration during COA comparison and approval.

5-29. The HBCT commander and his staff conduct the MDMP process, ensuring that all desired effects are considered. Desired effects are a set of defined conditions that must be created to achieve the commander's objectives or end state. These desired effects are identified within the commander's intent. The mission statement contains the *who, what, when, where, and why* associated with a specific operation. The *what* is an effect that is desired and measurable, and the *why* provides the mission's purpose or reason.

INTEGRATING LOGISTICS INTO THE MDMP PROCESS

5-30. As described earlier, the HBCT XO leads the MDMP and is charged with the responsibility of ensuring that the HBCT commander's desired effects are fully considered throughout process. The following section presents the seven steps of the MDMP integrating the sustainment operations planning considerations into the process.

STEP 1: RECEIPT OF MISSION

5-31. 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 identify the data and resources necessary to conduct mission analysis. The XO develops the timeline to structure the staff's 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.

5-32. The MDMP begins when a mission is received from higher headquarters. Very rarely will this be in the form of a complete operations order. More likely it will begin after a verbal or written warning order (WARNO) is received. The commander, upon receiving a mission, should provide his staff with guidance as to how they should proceed with their analysis, and a warning order, in five paragraph field order format (FM 5-0), should be issued to subordinate units to allow them to begin to prepare for a new mission.

5-33. Throughout the MDMP, the brigade will be ahead of both the support battalion and the other battalions in the planning process. It is important that the initial HBCT commander's guidance is provided for planning purposes immediately to the brigade support battalion logistics planners in the SPO section and the BSB commander.

5-34. 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 logistics preparation of the battlefield (LPB) and the 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 in and in compliance with the desired end state of higher headquarters.

5-35. LPB products from the UEx or higher joint headquarters serve as the basis of the LPB process by the HBCT S1/4, surgeon and the BSB's logistics planners. The S4 and BSB logistics planners continue the process, focusing on the HBCT area of operation (AO). The S4 and BSB logistics planners should identify and develop requests for information (RFIs) to higher headquarters for information the HBCT is lacking. Through use of these products and through staff preparation, the HBCT commander and his staff gain situational understanding (SU) of HBCT and supporting forces and local governments, local populace, religious leaders, nongovernmental organizations (NGOs), international organizations (IOs), etc.), and elements within their AO. The knowledge base is used to gain SU of all relevant actors in the tactical environment from all appropriate perspectives that will impact upon sustainment operations. The intelligence preparation of the battlefield (IPB) will also be invaluable during this process as it provides information on the enemy threat. The knowledge base does not remain constant, but is updated and revised as future assessments, sustainment updates and intelligence activities are conducted as part of ongoing sustainment operations in support of the HBCT's mission(s). 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, LPB and IPB from higher headquarters, reinforced by the HBCT's LPB and IPB products.

STEP 2: MISSION ANALYSIS

5-36. 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 LPB and IPB. During this step, the staff identifies specified, implied, and essential task(s) laid out in the higher headquarters' order. End state analysis is also conducted during this step. 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.

5-37. During end state 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.

5-38. Therefore, it is critical that the brigade planners provide as much information, as soon as possible, to subordinate units on what courses of action the brigade is considering. This information should come in the form of verbal and written WARNOs. At this stage of the HBCT staff's MDMP, it is also critical that logistics planners complete an updated logistics estimate that is a product from the LPB. This will result in an accurate appraisal of their sustainment capabilities, detailed requirements (how much of what class of supply, by specific type, where and when) and if there are shortfalls in capabilities (e.g. maintenance, transportation and medical). Proposed solutions should then begin to be developed. Solutions

beyond the support battalion's capabilities require coordination with the UEx's sustainment brigade.

5-39. 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 expression of the HBCT commander's intent, desired end state, and an approved restated mission.

5-40. 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 and the desired end state. It is the most important and the most enduring element of the planning process. The logistician's input during mission analysis primarily comes from the logistics estimate.

LOGISTICS ESTIMATE

5-41. A logistics estimate is an analysis of logistics factors affecting mission accomplishment. The key concerns of logistics planners are the status of supply Classes III, IV, and V and the operational status of critical generators of combat power (e.g. infantry Soldiers, tanks, Bradley Fighting Vehicles (BFVs), Stryker and other units that provide combat power). Logistics estimates at the combat battalion level are often not written, though at the BSB and the HBCT you will find written products such as combat power charts or the periodic updated briefings or commander's updates. They are frequently formulated in terms that answer the following questions:

- What is the current and projected status of maintenance, supply, and transportation?
- How much of what is needed to support the operation?
- How will it get to where it is needed?
- What external EAB support is needed?
- Can the requirements be met using host nation or throughput from EAB or are other techniques such as aerial resupply necessary?
- What are the shortfalls and negative impacts?
- What courses of action can be supported?

5-42. The logistics estimate is a continuous process that begins during mission analysis and is continually refined and updated through mission completion. The logistics estimate does not have a doctrinal format at the brigade level. The logistics staff estimate must address the following areas, at a minimum.

REQUIREMENTS

5-43. The first step in the logistics estimate process is to determine the logistical requirements for the mission. To determine the requirements, you may use a combination of methods. Automated systems such as the operations logistics planner (OPLOG PLANNER) are good tools to use to estimate requirements and the most current automation logistics planning tool, BCS3 should always be considered. Historical data from previous missions should also be used to determine or refine your requirements estimate. Be sure to include all customers when you determine the requirements: organic, attached, and any operational control (OPCON) units that are designated to provide logistical support. No matter which method or methods are used, the results are only estimates and will have to be refined later based on the actual tactical plan. After receipt of the OPORD from higher headquarters, consider all specified and implied tasks which have logistical considerations. Also determine

what movement and handling requirements there will be for all supplies, equipment, and personnel. Consider the terrain available to support from, as well as the terrain and distance to support over. Finally, determine what critical resupply must be accomplished to ensure mission success.

CAPABILITIES

5-44. To correctly determine the logistics capability of the supporting unit, consider the capabilities of all the available logistics assets. This includes all available logistics units assigned, attached, or OPCON, and the sustainment capability organic to the maneuver units themselves. When determining the unit's sustainment capability, be sure to consider the unit's current status of personnel availability and equipment operational readiness, as well as the projected status of each unit at mission execution. Analyze supply capabilities for storage, distribution, and transportation capacities.

SHORTFALL COMPARISON

5-45. After determining the estimated requirements and the unit's logistics capability, such as operational readiness and available personnel, compare them to determine any logistical shortfalls. If there are no shortfalls, go to the analysis step of this methodology. Shortfalls may occur in terms of storage, distribution, and transportation capability or may be caused by personnel or equipment shortfalls based on current on hand shortages or maintenance status. Shortfalls for all phases in the operation should be taken into consideration during the planning process. A shortfall may also occur if required facilities or terrain are not available or the plan does not provide enough time to prepare. If there is a shortfall, determine what the shortfall is in terms of pallets, vehicles, MRE cases, short tons of ammunition, gallons, m or other units of measurement and when or where during the operation the shortfall occurs.

ANALYSIS

5-46. Whether or not there is a shortfall, the analysis process must occur for all support operations. The logistics planner must determine when the support operation must begin, how much time there is to prepare for the mission, the purpose of the support mission, the duration of the mission, and whether the mission can be supported from a fixed location or whether to echelon support in some way. If there is a shortfall identified in the comparison of requirements and capabilities, the battlestaff must also determine its cause, its significance and its potential impact on the tactical operation.

SOLUTIONS

5-47. Determine the most workable solutions based on the analysis. Do not assume away a shortfall by assuming that a higher headquarters will provide additional capability. Make every effort to find solutions based on internal assets first before requesting additional assets from higher headquarters. Ensure that all solutions are integrated into the MDMP to enhance continuity between the tactical decision making and logistical planning.

Step 3: COA Development

5-48. Logistics planners use logistics estimates to recommend courses of action and to develop plans to support selected concepts of operation.

5-49. Logistics planners must anticipate and understand the support requirements of a tactical plan or COA. The Brigade S1, S4, brigade surgeon and BSB SPO analyze all COAs and modifications to current plans. They each assess their portion that supports sustainment feasibility, identifies support requirements, and determines requirements for

synchronization. They, like the commander, must visualize how the battle will unfold in order to determine critical requirements for each sustainment function. They logically considers the requirements for each logistics function during the operational phases of before (prior to commitment), during (commitment to battle), and after (reconstitution and future missions). Logistics planners analyze each COA or plan and consider:

- Type and duration of the operation.
- Task organization, tasks, and logistics requirements of subordinate forces.
- Ramifications of tactical operations such as river crossings, tactical pauses, long movements, preparatory fires or defenses.
- Need for special equipment, supplies, or services.
- Requirements to separate, disassemble, reconfigure, uncrate, or transload supplies above normal requirements.
- Requirements for reconstitution.
- Required varieties and quantities of all classes of supplies, especially water, III, V, and IX.
- Requirements for support of reconnaissance forces, security operations, or deception efforts.
- Need for Class IV and V obstacle material.
- Prepositioned stockage requirements.
- Emergency resupply requirements.

5-50. The brigade S4 and BSB SPO analysis also includes estimated attrition based on likely outcomes of subordinate missions. Analysis of estimated attrition primarily focuses on critical systems such as tanks, BFVs, and engineer systems. The S1 assists by projecting potential personnel losses. To perform this analysis, the S1 and S4 use current unit personnel and equipment densities, standard planning factors, historical data, or any combination of these. This projection helps the commander understand the potential losses and associated risks of each COA. Based on where there are expected losses of men and equipment, or required resupply, the logistics/FHP planner can start identifying routes, locations, and link up points that are expected to be needed during the battle.

5-51. In order to understand the supported unit's capabilities and determine support requirements, logistics planners should apply a METT-TC analysis to the situation. See Table 5-1 for general logistics considerations.

Table 5-1, Logistics considerations for tactical operations

<p>MISSION</p> <p>HBCT mission and commander's intent.</p> <p>Concept of operations</p>
<p>Higher headquarters' mission and concept of operations.</p> <p>Higher headquarters' concept of support.</p> <p>Type and duration of operation.</p> <p>Required supply rate.</p> <p>Controlled supply rate.</p> <p>Commanders Tracked Items List (CTIL)</p>
<p>ENEMY</p> <p>Enemy capabilities and tactics that could threaten sustainment operations.</p>
<p>Enemy Avenues of Approach</p> <p>Enemy unconventional tactics that could threaten sustainment operations.</p> <p>Anticipated amount of EPWs.</p>

Table 5-1, Logistics considerations for tactical operations

<p>TROOPS</p> <p>HBCT's task organization to include supporting logistics units. Location and condition of all units, including logistics units. Current and projected status of personnel, equipment, and classes of supply. Availability and status of services. Unit-level logistics capabilities.</p>
Contractors accompanying the force.
Manpower needed to support reconfiguring loads.
<p>TERRAIN AND WEATHER</p> <p>Effects of weather and terrain on sustainment operations. Additional logistics requirements of the HBCT due to weather and terrain. Condition of infrastructure such as roads and bridges.</p> <p>TIME AVAILABLE</p> <p>Impact on the ability to build-up supplies and replenish units. Planning and preparation time for logistics units. Impacts of time on support requirements and distribution methods.</p> <p>CIVIL CONSIDERATIONS</p> <p>Host-nation support and contract services. Impact of civilians that remain on the battlefield</p>
Impact of civilian and refugee movements.
Potential for hostile reactions by civilians against sustainment operations.
Rules of Engagement (ROE)
US (civilian) contractors on the battlefield.
Non-Governmental Agencies NGOs

5-52. The S4 must balance support requirements with available logistics capabilities. He considers existing stockage, anticipated receipts, capacities, and capabilities. He must assess the status of all sustainment functions required to support the battalion and compare them to available capabilities. He identifies potential shortfalls and recommends actions to eliminate or reduce their effects on the operation.

5-53. When a logistics shortfall is identified, the logistics planning staff takes every action available to eliminate or reduce its effect. The staff must understand its potential impact on the force, the risk it presents to mission accomplishment, its duration, and what requirements exceed the unit's capabilities. It analyzes the shortfall to determine its cause (for example, battle losses, supply availability, resource availability, equipment, time, people, or distribution shortfall). The staff considers the following actions to resolve a shortfall:

- Shift supplies or assets by phase of the operation e.g. cross-leveling.
- Request support or an additional assets from higher headquarters e.g., BSB to sustainment brigade or FSC to the BSB.
- Use alternate distribution methods.
- Consider pre-positioning supplies or attaching additional logistics capabilities to subordinate forces.
- Modify the COA or plan to include making recommendations to change the maneuver plan if the shortfalls are significant enough and cannot be overcome via any of the previously discussed methods.

5-54. As the MDMP progresses it is important that information continues to flow up and down among the logistics planners in the brigade. Logistics estimates must be continually updated. The COA must be developed and analyzed by the logistics planners to support the various COAs that are developed for the concept of the operation by the brigade and battalion planners. Throughout this process the support battalion's support operations office needs to coordinate with the UEx sustainment brigade to determine their convoy times of arrival and loads plus the requesting of augmentation to support COAs that are beyond the support battalion's capabilities.

5-55. Plans development is executed by the HBCT staff based on 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 COAs that incorporate desired effects as a major consideration in determining the HBCT's tactical objectives. 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.

5-56. During COA development, the logistics planners must refine the logistics estimate they developed during mission analysis. Facts and assumptions developed during mission analysis must be verified and updated logistics planners must identify any significant sustainment considerations and requirements that have a major impact on mission accomplishment. Additionally, the logistics planner must develop a draft concept of support during this phase of the MDMP.

5-57. During course of action development, the logistics planners within the brigade must begin to draft possible ways to provide sustainment for the brigade's concept of the operation. This is challenging because, at this stage of planning, the brigade probably has not selected a specific COA for the upcoming operation. However, logistics planners should have the restated mission, commander's guidance and intent, and continuously updated staff estimates. This input should come from both the brigade and battalion levels. With this information, the logistics planners at various echelons (i.e. brigade S1/S4, support battalion and battalion S1/S4) can begin to develop several options to support the brigade and battalion, respectively.

5-58. Throughout this stage, all the logistics planners must communicate and the brigade and battalion S1s/S4s must be integrated into this process. Concept of support options for the support battalion include but are not totally inclusive: distribution based support using the logistics release point to resupply the HBCT's battalions outside of the BSA (12-15 kilometers) or using a forward logistics element (FLE) during fast paced offensive operations or supply point for those units within the BSA. Solutions for sustainment challenges could be the use of caches, prioritization of sustainment support, request of additional assets from the UEx sustainment brigade, imposing supply constraints like controlled supply rates (CSR) or ordering reallocation of organic sustainment assets.

5-59. Based on the brigade's restated mission, the support battalion can begin to plan how they will provide sustainment for the brigade, determine if, when, and how the BSA will move, and what the best method may be to defend the BSA. The support battalion must keep the brigade S1/S4 informed in order to prevent two different logistics plans from being developed i.e. one by the HBCT staff and another different one by the BSB SPO's staff. Use of logistics planners at the HBCT CP by the BSB SPO is very effective with ensuring good situational understanding during the MDMP. The maneuver units S1s/S4s must also begin to develop several options that could be used to support their battalion/squadron and ensure these are integrated into the brigade and support battalion planning. At the end of this phase, each echelon of logistics planners in the brigade should have developed course of

action statements and sketches for each option that will be analyzed during the next stage of the MDMP.

Step 4: COA Analysis (War Game)

5-60. The sustainment planners 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 effectors coordinator (ECOORD) is responsible for ensuring that all effects, lethal and nonlethal are fully applied and analyzed during the wargame. The HBCT S2's team and the IOCOORD's team examine in detail the goals, motivations, actions, and potential impacts the various actors in the HBCT's AO will have on planned operations. Each staff section will participate to bring their specific items to the analysis.

Sustainment COA Feasibility

5-61. For each COA, the logistics planner must assess its sustainment feasibility. The sustainment feasibility is determined by whether or not the unit possesses the required resources to sustain the unit throughout the tactical operation. Tailoring your logistics estimate for each COA can help make this determination. If requirements do not exceed capabilities, the sustainment of the COA will generally be feasible. If any requirements do exceed capabilities you must again determine its significance and potential impact upon the mission. If the shortfall is a WAR-STOPPER i.e. the risk of mission failure is greater than the commander will accept, and there are no workable solutions to the problem, then sustainment of the COA is not feasible. The logistics planner must have exhausted all possible means to solve the problem, to include support from higher headquarters, before he deems the COA not feasible.

Sustainment Synchronization Requirements

5-62. The synchronization of logistics during COA analysis is critical to ensure continuous support during the operation. During the war game, the logistical planner will determine, based on the scheme of maneuver, what supplies and services must be where at a given time. This will generate critical sustainment actions that must be accomplished to sustain the mission. He must consider time distance factors and determine which support activity will be available to provide the required support. This is where the logistical planner begins to directly link the actions of battalion logistics assets with the support battalion sustainment activities and UEx or UEy resupply activities. He must ensure that all critical sustainment activities are included in the synchronization matrix to successfully synchronize all levels of support.

Critical Logistics Requirements

5-63. The logistical planner must determine the critical requirements for each logistics function. Critical sustainment requirements normally include high volume, high usage supplies. Class III, IV (barrier materiel), and V tend to be critical during almost any tactical operation. Medical Evacuation (MEDEVAC) is always critical, especially due to the limited availability of medical evacuation assets. Hence, casualty evacuation (CASEVAC) through the use of non-standard medical evacuation assets i.e. unit's own vehicles, should be part of the planning process. Any essential major muscle movements required by logistics units, such as movement of sustainment assets forward, pre-positioning of ammunition or fuel, setting up and executing a refuel on the move (ROM), or reorganization of the unit must be identified.

Step 5: COA Comparison

5-64. In order to compare COAs and determine which more supportable, logistical planners must calculate estimated attrition rates, project battle losses for critical weapons systems, and project personnel battle losses. The required supply rate (RSR) for each COA must be refined and compared to any controlled supply rate (CSR) that may be in effect. Quantities of supplies required, demands on transportation assets, and reconstitution requirements must be compared to determine which COA stresses the units' logistical system the most. An analysis of the risks to logistics assets and replenishment operations must be compared and considered.

5-65. During this phase of MDMP, the courses of action are compared using the synchronization matrices and notes taken for each evaluation criteria used. A decision matrix with the evaluation criteria and some type of weighting factor (e.g., numbers, +/-, etc.) should be used to record the results of the COA comparison. A decision matrix can be used as an aid to obtain a decision from the commander as to what course of action will be selected. 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

5-66. 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, rehearsals, and priorities for CS and sustainment. Once the COA is approved, the staff synchronizes the plan using the following guidelines:

- Synchronize planned actions and associated resources in time and space (synchronize lethal and nonlethal effects).
- Validate the synchronized effects during rehearsals.
- Ensure the OPORD/FRAGO describes the required operations and initiates execution.

5-67. The synchronization process sequences effects with associated tasks or actions in relation to time and space. This allows the identification and subsequent resolution of resource allocation issues. This in turn leads to a fully integrated HBCT operations plan, expressed as a synchronized plan with effects linked to actions and tasks to subordinate units. The outcome of this process, is depicted in the synchronization matrix, is approved by the HBCT commander, and may be included as a product in the OPORD/FRAGO.

Step 7: Orders Production

5-68. 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 effects. 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 cover weeks or months for execution.

5-69. The current operations section is responsible for ensuring subordinate units are executing their assigned actions or tasks. During the daily battle update briefings (BUBs), current operations personnel report to the commander the status of ongoing operations.

5-70. After the HBCT commander has made his decision, a WARNO to subordinate units must be issued. In this step staffs at each echelon produce a complete operations order. For brigade level logistics planners, this includes paragraph four (concept of support), a logistics annex/overlay and possibly a logistics synchronization matrix. For battalion level logistics planners, this includes paragraph 4 (concept of support) and possibly a logistics annex/matrix with additional information on support arrangements. The support battalion also produces a full five-paragraph field order for its own internal requirements and the external support mission.

5-71. Paragraph four for the support battalion should discuss the concept of internal sustainment support. Additionally, this paragraph should be expanded upon in a logistics annex and possibly a logistics matrix. External sustainment operations in support of the brigade should be discussed in paragraph three of the support battalion base order, in an external logistics support annex, and possibly a logistics synchronization matrix. The support battalion order must also contain appropriate annexes on how the BSA and logistics assets will be supported by fire support, intelligence (to include a reconnaissance and surveillance plan) and mobility/survivability (to include chemical, biological, radiological, and nuclear (CBRN)).

5-72. All the orders produced by the brigade must explain to the commanders how they will be supported throughout the operation which should include any constraints that will be imposed. They must also provide enough detail so that the individuals charged with executing the sustainment portions of the orders (i.e. brigade support battalion company commanders and forward support company platoon leaders) can successfully carry out their duties.

Logistics Considerations in Orders Production

5-73. The brigade logistic planners are responsible for paragraph 4 of the OPORD as well as the logistics annex. These products must be complete, concise and synchronize all levels of logistics support from top to bottom with the tactical plan.

5-74. The BSB staff finalizes the tactical and logistical plan based on the battalion commander's approval guidance, the HBCT's concept of support and then 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 as appropriate. WARNOs have been issued at the end of steps 1, 2, and 6 and as necessary throughout MDMP.

5-75. In a time-constrained environment, time is important and a verbal FRAGO may be issued first versus a written order. However, the staff must capture all the information in any verbal orders and warning orders and deliver a written order to follow up on any previously issued orders. Once the decision is made that a verbal order is not issued, the staff immediately sends out a WARNO.

Final Concept of Support

5-76. The paragraph four plus the logistics synchronization annex consists of the final approved concept of support. This paragraph is written primarily to inform the commanders how they will be supported throughout the tactical operation. Specific details will be included in the logistics annex. The concept of support should include a brief synopsis of the support command mission, support area locations to include the locations of the next higher logistics bases, the next higher levels' support priorities, the commander's priority of support, significant or critical sustainment activities, any significant risks, and the major support requirements in each tactical logistics function. If the tactical concept of operation is phased, the concept of support should also be phased to facilitate changes of priorities and logistics focus during each phase.

Complete/Concise

5-77. It is essential that the OPORD be complete, concise, and includes all critical tasks that must be accomplished to support the tactical mission. Ensure you consider the command and support relationships of all units within your area of operation and ensure all elements receive support. The logistics planner must address all of the tactical logistics functions and properly phase the support concept if the tactical concept of operation is phased.

Synchronized Top to Bottom

5-78. To ensure proper synchronization, include all critical tasks and coordination requirements that were developed during the war gaming phase. Consider developing logistics synchronization matrix, if possible. Ensure that all priorities of support are in agreement with the scheme of maneuver and weight the main effort. Coordinate with the other battlefield operating systems to ensure that there are no inconsistencies in logistics information within the maneuver, reconnaissance, fires, and logistics annexes. As subordinate OPORDs are developed, you must ensure that their support plans are consistent and executable within your support framework. Synchronization of resupply operations from the UEx to the support battalion, to the maneuver, fires or reconnaissance battalion/squadron level is critical. Additional measures to ensure understanding and synchronization include confirmation back briefs, rehearsals, use of troop leading procedures (TLP) and standardization of unit processes can be used to turn the plan into reality. Remembering throughout the process that no plan survives contact is a constant reality. The ability to execute well thought out and fully understood branches and sequels of the plan, when the original plan has changed, are crucial. Table 5-2 further outlines and defines the steps, inputs, actions and outputs required by the sustainment operations planning staff elements during the MDMP process.

Table 5-2, Sustainment Aspect of MDMP: Inputs, Actions and Outputs

MDMP STEP	INPUTS	ACTIONS	OUTPUTS
Receipt of Mission and Mission Analysis	Higher HQ WARNO or OPORD. Facts from higher, lower, and adjacent logistics planners. Higher HQ LPB and staff LPB products. Enemy COA from S2. High value targets. (HVTs) by phase or critical event. Facts from logistics assets. CDR's initial logistics guidance Staff estimates for logistics. Constraints and ROE	Understand higher maneuver Plan. Conduct logistics staff estimate - organize and analyze facts. Identify specified/implicit tasks Determine and portray friendly and threat INFOSYS capabilities and vulnerabilities. Translate status of logistics assets into capabilities/limitations. Analyze effects of LPB on sustainment operations Develop draft desired sustainment effects Identify logistics related CCIR and EEFI. Identify logistics constraints/restrictions. Obtain Cdr's initial logistics priorities.	Initial WARNO upon mission receipt. Logistics portion of mission analysis brief. (End State Analysis, Logistics Effects Development) Draft logistics RFIs Recommend logistics tasks ROE guidance. Logistics CCIR/EEFI inputs. Initial logistics/FHP rehearsal guidance. CDR: approves initial logistics or modifies. CDR gives other logistics guidance. WARNO after mission analysis brief.
COA Development	See outputs from previous step.	Determine logistics tasks for each COA Allocate logistics assets to sustain.	For each COA developed: Concept of Support -ISR Plan

Table 5-2, Sustainment Aspect of MDMP: Inputs, Actions and Outputs

MDMP STEP	INPUTS	ACTIONS	OUTPUTS
		Allocate logistics assets forces to each IO task Identify requirements for additional resources Integrate sustainment triggers with maneuver COA. Analyze relative logistics combat power. Use battle calculus. Assist S2 in ISR plan development to support sustainment operations. Prepare sustainment portion of COA/ sketch.	Logistics Effects IO execution timelines as they pertain to logistics. Input to force protection plan Refined logistics tasks.
COA Analysis and COA Comparison	See outputs from previous step.	Wargame the brigade COA & integrated sustainment plans vs. enemy COAs. ID coordination requirements to produce logistics synchronization matrix. Synchronize logistics effects Finalize logistics tasks. Modify/refine inputs as required. Refine and test sustainment plans.	Final Drafts: Paragraph 4 and logistics annex
COA Approval and Orders Production Staff Supervision	See outputs from previous step.	Approval briefing. Sustainment plan briefed as part of each COA. Bde S4 or BSB SPO presents sustainment analysis.	Commander: Selects, modifies or approves COA. Bde S3: Issue WARNO as required. Finalize logistics products. Issue logistics plan and annexes with OPORD. Logistics planners back brief. Manage refinement. Rehearsals.

5-79. The BSB commander, supported by his SPO and in conjunction with the HBCT S1/4 and surgeon, closely monitors the implementation of the logistics concept of support as outlined in the HBCT OPORD's logistics annex. The BSB commander adjusts logistics operations or shifts resources within his unit to account for a change in METT-TC factors or to replace lost logistics capabilities. Recommendations to surge logistics assets from units within the HBCT but not subordinate to the BSB or request UEx support are made to the HBCT commander by the BSB commander and the HBCT logistics staff.

Training for the MDMP

5-80. Before a unit can conduct decision-making in a time constrained environment, it must master all of the steps in the MDMP. A unit can only shorten the MDMP if it fully understands the role of each and every step of the process and the requirements to produce the necessary products. Training on these steps must be thorough and result in a series of

staff battle drills that can be tailored to the time available. Training on the MDMP must be stressful and replicate realistic conditions and timelines. Although the task is difficult, all staffs must be able to produce a simple, flexible, tactically sound plan in a time-constrained environment. Any METT-TC factor, but especially limited time, may make it difficult to follow the entire MDMP. An inflexible process used in all situations will not work. The MDMP is a sound and proven process that can be modified with slightly different techniques to be effective when time is limited. There is still only one process, however, and omitting steps of the MDMP is not the solution. Anticipation, organization, and prior preparation are the keys to success in a time-constrained environment.

SECTION IV – ABBREVIATED MDMP

5-81. The MDMP is abbreviated when there is too little time for a thorough and comprehensive application of the process. The most significant factor to consider is time available. It is the only nonrenewable--and often the most critical resource. See Figure 5-2 for an example of an abbreviated MDMP.

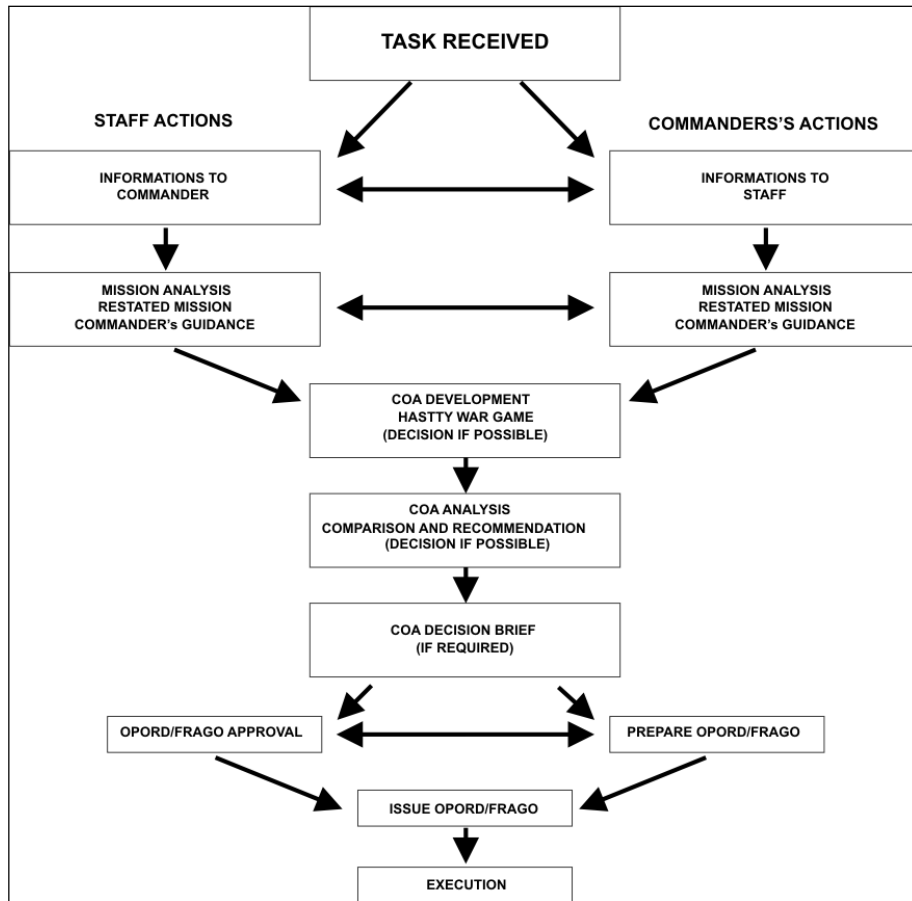


Figure 5-2, Example of an abbreviated MDMP

5-82. There are four primary techniques to save time:

- The first is to increase the BSB’s commander’s involvement, allowing him to make decisions during the process without waiting for detailed briefings after each step.

- The second technique is for the commander to become more prescriptive in his guidance by limiting options. This saves the staff time by focusing members on those things the battalion commander feels are most important.
- The third technique, and the one that saves the most time, is for the commander to limit the number of courses of action developed and war-gamed. The battalion commander can also direct only one course of action for the staff to refine if he has personally and mentally conducted the MDMP to come up with his acceptable course of action.
- The fourth technique is maximizing parallel planning with the brigade. Although parallel planning is the norm during the MDMP, maximizing its use in a time-constrained environment is critical.

5-83. In a time-constrained environment, the importance of warning orders increases as available time decreases. A verbal warning order now, followed by a written order later or posted to a database with confirmation of receipt, is worth more than a written order one hour from now. The same warning orders used in the MDMP should be issued when abbreviating the process. In addition to warning orders, units must share all available information with subordinates, especially IPB products, as early as possible. The digital INFOSYS greatly increase this sharing of information and the commander's visualization through collaboration with his subordinates.

5-84. While the steps used in a time-constrained environment are the same, many of them may be done mentally by the maneuver battalion commander or with less staff involvement than during the MDMP. The products developed when the process is abbreviated may be the same as those developed for the MDMP; however, they may be much less detailed and some may be omitted altogether. Unit SOPs tailor this process to the battalion commander's preference for orders in this environment.

5-85. When developing the plan, the staff may initially use the MDMP and develop branches and sequels. During execution, they may abbreviate the process. A unit may use the complete process to develop the plan while a subordinate headquarters abbreviates the process.

Advantages of Abbreviating the MDMP

5-86. The advantages of using the abbreviated MDMP include the following:

- It maximizes the use of available time.
- It allows subordinates more planning and preparation time.
- It focuses staff efforts on the commander's specific and directive guidance.
- It facilitates adaptation to a rapidly changing situation.
- It compensates for an inexperienced staff.

Disadvantages of Abbreviating the MDMP

5-87. The disadvantages of using the abbreviated MDMP include the following:

- It is much more directive and limits staff flexibility and initiative.
- It does not explore all available options when developing friendly courses of action.
- It may result in only an oral OPORD or FRAGO.
- It increases the risk of overlooking a key factor or failing to uncover a significantly better option.
- It may decrease the coordination and synchronization of the plan.

Benefits of Saving Time on MDMP Steps

5-88. The benefits of saving time on the MDMP steps include the following:

- It refines more thoroughly the commander's plan.
- It conducts a more deliberate and detailed war gaming session.
- It considers in detail potential branches and sequels.
- It focuses more on actually rehearsing and preparing the plan.

SECTION V – COMMANDER'S CRITICAL INFORMATION REQUIREMENTS (CCIR)

COMMANDER'S CRITICAL INFORMATION REQUIREMENTS (CCIR)

5-89. **Commander's Critical Information Requirements.** Elements of information required by commanders that directly affect decision making and dictate the successful execution of military operations (FM 3-0). CCIR result from the analysis of information requirements (IR) in the context of the mission and commander's intent. Commanders limit CCIR to a useable number (usually ten or less) for comprehension. Commanders designate them to let their staffs and subordinates know what information they deem necessary for decision making. Some CCIR may support one or more decision points. In all cases, the fewer the CCIR, the better the staff can focus its efforts and allocate scarce resources.

5-90. CCIR belong to the commander alone. Commanders decide what IRs are critical, based on their individual cognitive abilities and commander's visualization. Staffs recommend CCIR based on mission analysis during planning and through assessment during preparation and execution of operations. They keep the number of recommended CCIR to a minimum.

5-91. CCIR are not static. Commanders add, delete, adjust, and update them throughout an operation based on the information they need for decision-making. CCIR are—

- Specified by the commander for each operation.
- Applicable only to the commander who specifies them.
- Situation-dependent—directly linked to current and future missions.
- Focused on predictable events or activities.
- Time-sensitive. Answers to CCIR must be immediately reported to the commander by any means available.
- Always established by an order or plan. During planning, CCIR are established by WARNO. During preparation and execution, changes to CCIR are disseminated by FRAGO.

5-92. CCIR are key elements of information commanders required to support decisions they anticipate. CCIR also help screen the type and amount of information reported directly to the commander. During planning, CCIR focus on information needed to determine which COA to choose. During preparation and execution, CCIR focus on information needed to validate the selected COA or determine when to initiate critical events, such as a branch or sequel. CCIR may include latest time information of value (LTIOV) to indicate time sensitivity.

5-93. Within a digital command post, information comes into the tactical operating center (TOC) in a torrent. Digital systems, such as ABCS, and other systems embedded within the companies send electronic messages similar to email throughout the TOCs continuously and automatically in some cases, for every situation from a situation, activity, location, uniform, time, and equipment (SALUTE) report to position locations to intelligence, orders and reports. As the information flows into the TOC, Soldiers must receive the information,

process it in the appropriate system, and ensure it reaches the right user. The major difference is that information receipt can be overwhelming. An effective information management process or system is crucial. FM 3.0 defines information management as “the provision of relevant information to the right person at the right time in a usable form to facilitate situational understanding (SU) and decision making”. The key to effective information management is answering the CCIR—the elements of information required by commanders that directly affect decision-making and dictate the successful execution of military operations. Digital battle staffs must learn (and train in) the art of filtering, managing, and presenting relevant and timely information to commanders. See Figure 5-3, Commander's Visualization to Unit Action.

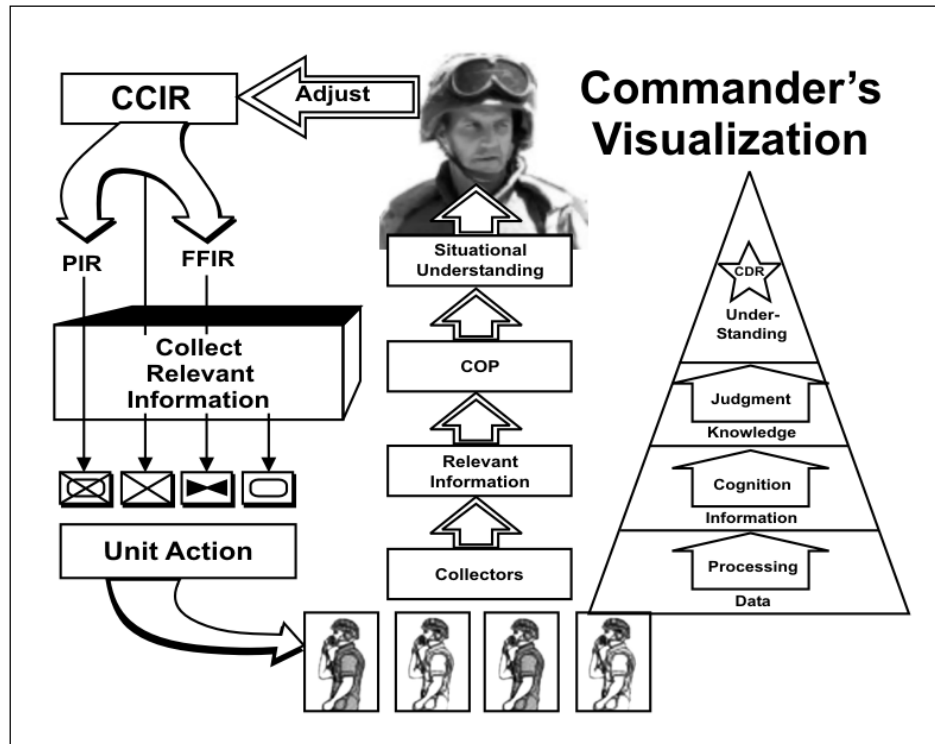


Figure 5-3, Commander's Visualization to Unit Action

5-94. The digital information system employed by the commander and battle staff is as sophisticated as the weapon systems they employ. The information available to the commander is only valuable if it can be focused to a manageable level. Information that the battle staff generates focuses on and is driven by the CCIR. The use of CCIR focuses the information gathering process for the battle staff. It is that information which the battle staff will notify the commander, regardless of his location or time. They vary with each phase of an operation and consist of only those critical information requirements that the commander must know to make a decision concerning logistical support of a particular phase of a battle. The battle staff must continuously recommend updates as needed to the CCIR so that they are current with the ongoing operation. The following sources normally feed the CCIR:

- **Priority intelligence requirements (PIRs).** What we want to know about the enemy and the environment that will cause the Commander to make a decision. Priority intelligence requirements are those intelligence requirements for which a commander has an anticipated and stated priority in his task of planning and decision making (JP 1-02). PIRs identify the information the commander considers

most important for decision-making. They concern both the enemy (including the time available to the enemy) and the environment (terrain, weather, and some civil considerations).

- **Friendly forces information requirement (FFIR).** Friendly forces information requirements are information the commander and staff need about the forces available for the operation (FM 6-0). FFIR consist of information on the mission, troops and support available, and time available for friendly forces. Information a commander needs on forces available for the operation such as personnel, maintenance, supply, ammunition, petroleum, oil, and lubricants (POL), experience and leadership capability. The BSB Commander may want to know when a given forward support company (FSC) delivers its carried load of resupply to a combat battalion so that he can make decisions on what to do next. It is not a CCIR if it does not drive a decision.
- **Essential elements of friendly information (EEFI).** Crucial information on enemy and environment needed by commander by a specific time. Essential elements of friendly information (EEFI) are critical aspects of a friendly operation that, if known by the enemy, would subsequently compromise, lead to failure, or limit success of the operation, and therefore must be protected from enemy detection (FM 3-13). Although EEFI are not part of CCIR, they become a commander's priorities when he states them. EEFI help commanders understand what enemy commanders want to know about friendly forces and why. They tell commanders what cannot be compromised. For example, a commander may determine if the enemy discovers the movement of the LOGPAC, the next phase of the operation is at risk. In this case, the location and movement of the LOGPAC becomes an EEFI.

5-95. EEFI provide a basis for indirectly assessing the quality of the enemy's situation understanding: if the enemy does not know an element of EEFI, it degrades his situational understanding. Just as CCIR are the basis for allocating collection assets to answer questions, EEFI are the basis for the command's operations security (OPSEC) plan. When limited assets are available for OPSEC, the first priority goes to protecting EEFI.

5-96. How can the BSB commander anticipates logistics requirements to best support the maneuver brigade's combat mission? The CCIR allows the commander to define his information needs and, in turn, focuses the battle staff (and subordinate commanders) on information acquisition, fusion, and analysis. The CCIR can be further described as being:

- Dependent upon the situation.
- Specified by the commander for each operation or phase.
- Generally time-sensitive in terms of the decision point on a decision support template or the event requirements of the synchronization matrix driving their collection.
- Applicable only to the commander, who specifies and publishes them; normally published in the applicable operations plan/order; and transmitted via specified means.
- A link between current, future, and sequel to the future operations.

SECTION VI – LOGISTICS PREPARATION OF THE BATTLEFIELD (LPB)

5-97. LPB is the process of gathering data against pertinent battlefield components, analyzing their impact on logistics, and integrating them into tactical planning so that support actions are synchronized with maneuver.

5-98. It is a conscious effort to identify and assess those factors, which facilitate, inhibit, or deny support to combat forces. Just as LBP is important to the conduct of actual combat

operations, LPB is equally important to sustaining the combat power of the force. Although it may be true that even the most optimal support plan may not win the battle, it is also true that poorly planned support can certainly lose it. Working together leaders must synchronize support actions with maneuver in a unified plan so that logistics is a factor in the success of a mission rather than a cause of failure. In addition to METT-TC, LPB focuses on determining the status and impact of the specific components that make up tactical logistics. It assesses how time and space requirements and restrictions of the battlefield affect support. This LPB shows how battlefield data, when systematically collected and processed, provide meaningful information for the development of effective logistics estimates.

5-99. The process requires tacticians to understand the data needed by logisticians to plan and provide timely, effective support. It requires logisticians to understand the mission, the tactical plan, and the battlefield's time and space implications for support.

5-100. It is a coordinated effort to prepare the battlefield logistically. The basic steps in systematizing the process are:

- Determine battlefield data pertinent to support actions.
- Determine sources from which raw data can be derived.
- Gather pertinent data.
- Analyze collected data elements and translate them into decision information by assessing their impact on the mission and the competing courses of action.
- Integrate decision information into tactical planning by incorporating it in logistics estimates and brigade or battalion (as appropriate) plans and orders.

5-101. When determining what battlefield data are relevant to sustainment, it's helpful to break down sustainment operations into certain key elements against which data can be collected for study and analysis. The following descriptions of the components of tactical logistics are not intended to be all-inclusive:

- Logistics capabilities include Soldier and leader skills and the personnel staffing which, collectively, activate logistics resources and bring to life the required support.
- Logistics capacities include reception and clearance capacities, carrying capacities of transportation assets, volumes of storage facilities, maintenance production output rates, and supply route characteristics such as surface composition, tunnels, overhead obstructions, bridge weight limits and traffic circulation rates.
- Materiel stocks include the quantity and status of weapon systems, ancillary equipment, ammunition, repair parts and consumable supplies required or available to sustain or reconstitute combat power of deployed units. Also included are logistics status reports and known or projected shortfalls.
- Consumption and attrition rates include experienced or expected usages of consumable supplies and weapon systems that must be considered to anticipate support requirements.
- Time and space factors are those requirements and restrictions of the battlefield that influence whether logistic support is provided to deployed forces at the right place and time.

5-102. Sources from which relevant battlefield data are derived include:

- **Higher headquarters briefs, plans and orders.**
- **The commander's planning guidance.** This is made up of the restated mission, initial concept of the operation, scheme of maneuver, deception objective, rear operations priorities, time plan, type of order to be issued, and type of rehearsal (backbrief, reduced force, full force). It may indicate what support tasks are required before, during, and after the mission.

- **The commander's intent (or concept).** The intent may indicate when and where support actions are to be synchronized with maneuver, thereby suggesting logistics triggering mechanisms.
- **Operations and intelligence briefings and overlays.** These provide locations of friendly and enemy forces, weather, terrain, likely logistics release points, resupply routes and distances.
- **Modified table of equipment (MTOE) of the HBCT's units.** These provide data on logistics resources, capabilities and capacities. Logistics status reports. These reports from BCS3 and FBCB2 provide data on the readiness of primary weapon systems and materiel stocks.
- **Reconnaissance Squadron.** They are especially helpful if the need to gather data against the components of tactical logistics is included in their collection requirements (such as airlift resupply landing zones).
- **Engineer route reconnaissance overlays.**
- **Traffic circulation and highway regulating plans.**
- **Personal reconnaissance.** Logistics battlestaff members may be required to collect data on likely resupply routes, obstructions, bridge weight limits or the composition of streambeds.
- **Civil affairs teams.**

5-103. The commander and staff conduct LPB. Successful LPB contributes immeasurably to the favorable outcome of battle. Logistics preparation of the battlefield is an on-going process by which logisticians analyze:

- Tactical commander's plan/concept of operation.
- Commander's or commanders' intents. A commander has one intent, although it may get modified over time plus you should know at the commander's intent at least one level above your immediate commander.
- Supported force sustainment requirements.
- Available logistics resources.
- Logistics shortfalls.
- The enemy (intentions, capabilities, weaknesses, doctrine).
- Terrain and weather.
- LPB products.
- Transportation infrastructure.
- Host nation support available.
- Time/distance factors.

5-104. The following are LPB products:

- A logistics estimate.
- A visualization of the pending battle and logistics activity required by phase of operation.
- Anticipated logistics challenges and shortfalls.
- Solutions to logistics challenges and shortfalls such as external support requirements.
- How, when, and where to position logistics units to best support the tactical commander's plan.
- A synchronized tactical and logistical effort.

SECTION VII – COMBAT SERVICE SUPPORT (CSS) FUNCTIONS DEFINED

5-105. All key logistics or CSS functions are accomplished in the HBCT, though not all are organic to the HBCT. The BSB limitations were described in Chapter 3: *Logistics Units Roles and Capabilities*. Unit commanders must carefully plan, manage, and synchronize these functions to accomplish responsive and efficient delivery of sustainment operations.

5-106. CSS as defined in FM 4-0 consists of 11 interrelated functions. Supply and field services general planning information is discussed in Section IV. Operational guidance for the conduct of the logistics/FHP mission within the HBCT is discussed in Chapter 6: *Sustainment Operations*. All the CSS functions are described below (FM 4-0).

- Supply and field services.
- Transportation support.
- Ordnance support.
- Health service support (Force health protection (FHP) at the HBCT level).
- Human resource support.
- Financial management operations.
- Legal support to operations.
- Religious support.
- Band support.

SUPPLY AND FIELD SERVICES

5-107. Supply is the acquiring, managing, receiving, storing, and issuing all classes of supply, except Class VIII, required to equip and sustain Army forces. This wide-ranging function extends from determining requirements at the national level to issuing items to the user in theater.

5-108. Field services are essential services to enhance a Soldier's quality of life during operations. They consist of clothing exchange, laundry and shower support, textile repair, mortuary affairs, preparation for aerial delivery, food services, billeting, and sanitation.

TRANSPORTATION

5-109. Transportation is moving and transferring units, personnel, equipment, and supplies to support the concept of operations. Transportation incorporates military, commercial, and multinational capabilities. Transportation assets include motor, rail, air and water modes and units; terminal units, activities, and infrastructure; and movement control units and activities.

MAINTENANCE

5-110. Maintenance entails actions taken to keep materiel in a serviceable, operational condition, returning it to service, and updating and upgrading its capability. It includes performing preventive maintenance checks and services; recovering and evacuating disabled equipment; diagnosing equipment faults; substituting parts, components, and assemblies; exchanging serviceable materiel for unserviceable materiel; and repairing equipment (FM 4-30.3). The ultimate key to effective maintenance is anticipating requirements.

EXPLOSIVE ORDNANCE DISPOSAL SUPPORT (EOD)

5-111. EOD is the detection, identification, onsite evaluation, rendering safe, recovery, and final disposal of unexploded explosive ordnance. It may also include explosive ordnance that has become hazardous by damage or deterioration (JP 1-02). EOD support neutralizes

domestic or foreign conventional, and most chemical, biological, radiological and nuclear and high explosive (CBRNE) munitions, and improvised devices that present a threat to military operations and to military and civilian facilities, materiel, and personnel.

FORCE HEALTH PROTECTION (FHP)

5-112. The Army's Health Service Support System (HSS) conducts FHP that conserves the force by preventing disease and non-battle injuries (DNBIs); clearing the battlefield of casualties; providing far-forward medical treatment and hospitalization; providing enroute care during medical evacuation; providing veterinary, dental, combat stress control, and laboratory services; and ensuring adequate Class VIII supplies, medical equipment, and blood are available.

HUMAN RESOURCE SUPPORT (HRS)

5-113. Human resource support (HRS) provides all activities and functions to sustain personnel manning of the force and personnel service support to service members, their families, Department of the Army civilians, and contractors. These activities include personnel accounting, casualty management, next-of-kin notification, essential personnel services, postal operations, and morale, welfare, and recreation. Joint doctrine refers to human resource support as personnel service support.

FINANCIAL MANAGEMENT OPERATIONS (FMO)

5-114. FMO encompasses the two core processes of resource management and finance operations (JP 1-02). FMO make resources available when and where they are needed, and assist the commander in maintaining fiscal responsibilities. FMO are necessary for contracting and providing real-time information, accounting, and finance related services. Resource management operations ensure that operational policies and procedures adhere to law and regulations, develop command resource requirements, and leverage appropriate fund sources to meet them.

LEGAL SUPPORT

5-115. Legal support is the provision of operational law support in all legal disciplines (including military justice, international law, administrative law, civil law, claims, and legal assistance) to support the command, control, and sustainment of operations.

RELIGIOUS SUPPORT

5-116. Religious support is the provision and performance of operations for the commander to protect the free exercise of religion for Soldiers, family members, and authorized civilians. It includes providing pastoral care, religious counseling, spiritual fitness training and assessment, and religious services of worship. It also includes advising the command on matters of religion, morals and ethics, and morale.

BAND SUPPORT

5-117. Army band support is the provision of music to instill in Soldiers the will to fight and win, foster the support of citizens, and promote National interests at home and abroad. Bands support information operations, provide music to the civilian community, promote patriotism and interest in the Army, and demonstrate the professionalism of Army forces.

ENGINEERING SUPPORT TO LOGISTICS OPERATIONS

5-118. Engineering support, though not a logistics function, plays a critical role in delivering sustainment by enhancing its capacities. Engineer units are normally in a direct support (DS) relationship to a logistics headquarters. The numbers and types of engineer units involved in such operations depend on METT-TC factors.

SECTION VIII – SUPPLY AND FIELD SERVICES DEFINED

5-119. Tactical-level supply focuses on readiness and supports the commander's ability to fight battles and engagements or achieve his stability or support mission. The Army's doctrine utilizes a distribution-based methodology where the tactical logistics unit delivers supplies to its supported unit; a change from the supply point distribution method where the supported unit traveled to the logistics unit for its supplies.

5-120. Logistics planners work with supporting commanders and materiel managers to ensure required supplies are available when and where the user needs them. Units carry a basic or combat load of supplies with them to support their operations until the system can resupply them. When time and mission constraints require, a push system provides supplies. Under this type of system, planners estimate the supply requirements and arrange to have supplies delivered to supported elements. Requests generated by supported elements are the basis of a "pull" system. FM 10-1 discusses planning considerations and request procedures.

5-121. Under a pull supply system, a using unit submits a request to its supporting DS supply element. If stocks are available, the direct support (DS) element fills the request and notifies the materiel manager, who initiates replenishment. If it cannot fill the request, the supply unit passes it to the materiel manager. In that case, the manager directs issue from general support (GS) stocks to the DS unit or passes the requisition to the appropriate materiel management center (MMC) or commodity center to meet the requirement.

5-122. Retrograde of materiel usually involves supplies and repairable equipment. Repairable items are generally in maintenance facilities and returned to supply channels when restored to serviceable condition. Salvage items are unserviceable and uneconomically repairable. They are evacuated through the supply system, destroyed, or demilitarized based on theater policy and commodity center instructions. FM 10-1 has more details.

CLASSES OF SUPPLY

5-123. In addition to the general considerations guiding all supply operations, there are specific considerations for each commodity. Chapter 6: *Sustainment Operations* addresses the considerations that apply to most classes of supply. Table 5-3 defines the ten classes of supply and the miscellaneous category.

Table 5-3, Classes of Supply

<i>Class Supplies</i>	
<i>I</i>	Subsistence, gratuitous health and comfort items.
<i>II</i>	Clothing, individual equipment, tentage, organizational tool sets and kits, hand tools, unclassified maps, administrative and housekeeping supplies and equipment.
<i>III</i>	Petroleum, fuels, lubricants, hydraulic and insulating oils, preservatives, liquids and gases, bulk chemical products, coolants, deicer and antifreeze compounds, components, and additives of petroleum and chemical products, and coal.
<i>IV</i>	Construction materials, including installed equipment, and all fortification and barrier materials.
<i>V</i>	Ammunition of all types, bombs, explosives, mines, fuzes, detonators, pyrotechnics,

Table 5-3, Classes of Supply

Class Supplies	
	missiles, rockets, propellants, and associated items
VI	Personal demand items (such as health and hygiene products, soaps and toothpaste, writing material, snack food, beverages, cigarettes, batteries, and cameras—nonmilitary sales items).
VII	Major end items such as launchers, tanks, mobile machine shops, and vehicles.
VIII	Medical materiel including repair parts peculiar to medical equipment.
IX	Repair parts and components to include kits, assemblies, and subassemblies (repairable or non-repairable) required for maintenance support of all equipment.
X	Material to support nonmilitary programs such as agriculture and economic development (not included in Classes I through IX).
Miscellaneous	Water, salvage, and captured material.

FIELD SERVICES

5-124. The commander decides which field services are most important for his unit. For example, laundry and shower units may be top priority in desert operations, while preparing loads for aerial delivery may be more important in mountain operations. During stability operations or support operations, the priority depends upon the support requirements.

Locations and Source

5-125. Quartermaster UEx personnel in a variety of units perform field service functions. During combat operations, military personnel provide most of the field service support in forward areas, with host nation support (HNS) and contractors providing a limited amount. Conversely, HNS and contractors provide much of the support in rear areas. During stability or support operations, field service support at all levels may come from a variety of sources.

FOOD PREPARATION

5-126. Food preparation is a basic unit function performed by unit food service personnel. It is one of the most important factors in Soldier health, morale, and welfare. Virtually every type of unit in the force structure has some organic food service personnel. These personnel support the unit food service program, as directed by the commander.

5-127. The field feeding system assumes UEy- and UEx-wide use of the MRE for the first several days following deployment. The theater then begins to transition to prepared group feeding rations. The theater initially transitions from the MREs to unitized ground rations (UGR). Then, as the operational situation permits, logisticians attempt to introduce the A-ration (fresh foods) into theater. This requires extensive logistics expansion, since it requires refrigerated storage and distribution equipment and a capability to make or acquire ice for unit storage. The feeding standard is to provide Soldiers at all echelons three quality meals per day. The meals fed depend on the prevailing conditions.

5-128. Disposing of garbage is important to avoid leaving signature trails and maintain field sanitation standards. See FM 10-1 for more details.

5-129. The bakery function, previously classified as a field service, is now an integral portion of field feeding. Bread is no longer produced in the AO, except in the field feeding system or through contractor support. Normal Class I supply channels handle pouched bread. The bakery function is no longer a stand-alone field service.

WATER PURIFICATION

5-130. Water is an essential commodity. It is necessary for sanitation, food preparation, construction, and decontamination. Water is critical to the individual Soldier. Classification of the water function is somewhat different from other commodities; it is both a field service and a supply function. Water purification is a field service. Quartermaster supply units normally perform purification in conjunction with storage and distribution of potable water—a supply function. GS and DS water units do not store or distribute non-potable water. Therefore, nonpotable water requirements (for example, water for construction, laundry, and showers) are the responsibility of the user.

5-131. Water supply units perform routine testing. However, monitoring water quality is primarily the responsibility of the preventive medicine personnel of the medical command or UEx. The command surgeon performs tests associated with water source approval, monitors potable water, and interprets the water testing results.

5-132. The quantity of water required depends on the regional climate and the type and scope of operations. Temperate, tropic, and arctic environments normally have enough fresh surface and subsurface water sources to meet raw water requirements for the force. In arid regions, providing water takes on significantly greater dimensions. Soldiers must drink more water. Water requirements are significantly greater in rear areas, where there is heavy demand for water for washing aircraft and vehicles, medical treatment, laundry and shower facilities, and construction projects. Planners may easily underestimate water requirements for enemy prisoners of war. They must consider the potential absence of water capability in enemy units and the requirement for on-site sanitation, shower, delousing, and medical support for in-coming prisoners. Since water is a critical commodity in arid regions, managers must strictly control its use. Commanders set up a priority and allocation system.

MORTUARY AFFAIRS (MA)

5-133. The Mortuary Affairs Program (MAP) is a broadly based military program to provide for the necessary care and disposition of deceased personnel. The program can have a direct and sudden impact on the morale of Soldiers and the American public.

5-134. All commanders are responsible for the search, recovery, tentative identification, care, and evacuation of remains to the nearest collection point or mortuary. The HBCT has a MA NCO. He trains HBCT personnel to perform initial search, recovery, identification, and evacuation of human remains and personal effects. A mortuary affairs unit assigned to the UEx support command supports on an area basis. This unit operates collection points throughout the UEx and brigade areas. These points receive remains from units, assist and conduct search and recovery operations, and arrange for the evacuation of remains to a mortuary or temporary burial site.

5-135. Mortuary affairs units operate theater collection points, evacuation points, and personal effects depots. Mortuary affairs personnel initially process remains in theater. Then, they arrange to evacuate remains and personal effects, usually by air, to a CONUS POD mortuary. CONUS POD mortuaries positively identify the remains and prepare them for release, in accordance with the desires of the next of kin. Recent wars and stability and support operations have shown this procedure is quite effective.

5-136. When directed by the combatant commander, mortuary affairs units establish cemeteries and provide for temporary interment of remains. Mortuary affairs units may also operate in-theater mortuaries, but they require personnel and equipment augmentation or host nation support for identifying remains and embalming.

AERIAL DELIVERY

5-137. Supporting aerial delivery equipment and systems includes parachute packing, air item maintenance, and rigging of supplies and equipment. This function supports both airborne insertions and airdrop/airland resupply.

5-138. Airborne insertions involve the delivery of an airborne fighting force and its supplies and equipment to an objective area, by parachute. FM 4-20.41 covers airborne insertions in detail. Airdrop resupply operations apply to all Army forces. The airdrop function supports the movement of personnel, equipment, and supplies. It is a vital link in the distribution system; it provides the capability of supplying the force even when landlines of communication (LOC) have been disrupted and adds flexibility to the distribution system.

5-139. Airdrop resupply support must be flexible. Certain contingencies may require airdrop resupply support from the beginning of hostilities. However, the requisite airdrop support structure is not likely to be in place due to deployment priorities. In such cases, the operational-level commander should consider having a portion of the supporting airdrop supply company deploy to the depot responsible for supply support to the contingency area. If forces require airdrop resupply before deploying the airdrop support units to the theater, the unit may rig supplies for airdrop at the depot. Forces then fly supplies directly to the airdrop location. This requires adaptation of the request procedures outlined in FM 4-20.41.

LAUNDRY, SHOWER, AND CLOTHING AND LIGHT TEXTILE REPAIR

5-140. Clean, serviceable clothing and showers are essential for hygiene and morale purposes. During peacetime, fixed facilities or field expedient methods normally provide shower, laundry, and clothing repair for short-duration exercises. During operations, they are provided as far forward as the brigade area. The goal is to provide Soldiers with one shower and up to 15 pounds of laundered clothing each week. Soldiers receive their own clothing from a tactical laundry within 24 hours.

5-141. A field service company provides direct support at the tactical level. The company has the modular capability of sending small teams as far forward as desired by the supported commander. The unit provides one shower for each Soldier each week. Other sources (such as field expediency methods, small-unit shower equipment, host nation support (HNS), or contract services) could be used to increase showers from one to two per Soldier per week.

5-142. The laundry and shower function does not include laundry decontamination support. Detailed troop decontamination of chemical and biological agents does not require showers. Radiation decontamination, however, may require showers. If Soldiers use chemical defense equipment against fallout, they do not need showers. If they do not use this equipment, contamination lodges in Soldiers' hair and on their skin; only showers can remove the contamination. Planners must ensure controlling the contaminated runoff from these showers. FM 3-11 has decontamination procedures. The new chemical protective clothing keeps its protective qualities after laundering. Once exposed to contamination, it must be disposed of under theater policies.

SECTION IX – SUPPORTING MILITARY OPERATIONS

5-143. To maintain tempo in the offense or endurance in the defense, commanders fit logistics into the battle rhythm of their operation as fully as possible and design their tactical plan to reflect the logistical constraints of the situation. The battalion or brigade S4 is the primary conduit for planning information with the FSC or the BSB. Instead of personally being present or the SPO attending, the BSB commander might maintain a liaison officer with the HBCT during the MDMP process. This is to help facilitate the flow of

information and a good understanding of the commander's intent and his guidance such as it impacts upon the BSB sustainment mission and force protection requirements.

5-144. The S4 maintains direct coordination with the logistics unit throughout all phases of the operation with their respective supporting logistics unit. If logistics planners identify constraints, the commander evaluates the risks and, if necessary, establishes new priorities or modifies his tactical plan to eliminate or reduce the risks. An advantage of having the offensive initiative is the ability to control the timing and tempo of operations. This makes it possible to sequence tactical combat operations and establish a predictable battle rhythm among combat elements. Having both the initiative and control of the rhythm and tempo of the advance, makes it easier to anticipate logistical requirements and organize the security and logistical operations to meet them.

5-145. In the defense, the HBCT will resupply its battalions either during the fight or by rotating companies into positions for basic sustainment or by relieving committed battalions with fresh forces in order to sustain them. To conduct sustainment operations securely during attacks, tactical commanders have three options:

- Halt the attack periodically to consolidate in secured positions, and secure the lines of communications and then move supplies and logistical units forward. To halt may cause the unit to lose the initiative and relieve the enemy of pressure. This approach should be avoided in most cases except when a tactical or operational pause is required and other forces are not available to engage the enemy.
- Field security forces large enough to secure logistical forces wherever they need to be on the battlefield, while combat units continue the attack at a pace that does not outrun or outdistance the logistics units. This is an uneconomical use of combat units and detracts from the offensive effort. This is an undesirable approach as well due to the large expenditure of combat power, but may have to be used given the METT-TC conditions of the operating environment.
- Most desired option is to establish a battle rhythm that supports an aggressive offensive or sustained defense, without becoming predictable to the enemy. This is done by rotating leading BCTs through logistical support one or two at a time while the force as a whole continues the operation. This maintains pressure on the enemy and ensures the initiative. The HBCT would halt in or move to anticipated positions with logistics units already close behind them. This approach could be used by the UEx for brief sustainment replenishment operations (SRO), or for periodic mission staging operations (MSO) of longer duration to reequip, resupply, plan, receive attachments or reinforcing support, and rest in preparation for continuing the mission. This method allows logistical units to focus upon specific units at a given time rather than continually supplying all of them and requires fewer security forces since only a portion of the battlespace routes are secured for the period of logistical activity. The UEx commander will open and close support routes and air corridors only as needed and secure the necessary space only for a relatively short period of time.

5-146. The BSB's distribution and field maintenance capabilities are designed to support mission staging operations (MSO). This is only in the context of a supporting role as the UEx/y sustainment brigade would have the larger mission of conducting the MSO. The BSB ensures unit readiness under HBCT guidance and by using sustainment replenishment operations (SRO) as pulsed or surge operations synchronized with maneuver operations primarily through distribution to the FSCs. The BSB combines a logistics common operating picture via digital enablers with its distribution capabilities to develop an efficient approach to sustainment and thereby forming a seamless distribution pipeline. This pipeline is designed to reduce stockpiles and substitute delivery speed for mass. Total asset visibility, to include transit visibility, along with advanced distribution management and decision support, will give the BSB personnel visibility over all assets and infrastructure capacity in

the AO. Direct throughput of supplies from UEx and the HBCT to the combat battalions is the rule rather than the exception with distribution-based logistics. The FSCs in the battalions are the cornerstone of the distribution-based logistics system. Essentially all logistical elements minus medical in the previous AOE battalion headquarters company are now organized as part of the FSC.

5-147. The personal involvement and on-the-scene appraisal of the situation by logistics staff members is as important to mission accomplishment, as is personal involvement by logistics leaders. Logistics planners must:

- Understand the commander's intent, priorities, and concept of operations.
- Monitor the battle.
- Anticipate future requirements and use initiative to meet them.
- Pre-position supplies and equipment.
- Push support forward.
- Seek windows of logistics opportunity.
- Use established procedures during lulls in battle to rearm, refuel, and repair.
- Detect then contain or destroy rear area threats within their capabilities.
- Allocate resources.

5-148. The majority of supplies are distributed to units using a logistics package (LOGPAC) system via combat logistics patrols in the COE. Based on supply requests generated by subordinate units and anticipated supply requirements, subordinate S4s coordinate the distribution of supplies. Battalion field trains made up from the FSC and unit supply sergeants serve as the link between the BSB, combat trains, and their supported companies. In conjunction with the BSB, the FSC distributes all classes of supplies and services to maintain unit combat loads and their combat effectiveness. Field trains support their companies and attached units by assembling preconfigured supply packages called logistic packages (LOGPACs). The transportation assets in the combat logistics patrols used to move LOGPAC supplies forward may also be used to transport replacements or return-to-duty Soldiers. The BSB distribution company pushes supplies forward to the FSC where they are received by the Class III (bulk), transportation, and general supply sections. Load handling system (LHS), palletized load system (PLS) and heavy expanded mobility tactical truck (HEMTT) fuel tankers transport supplies via combat logistics patrols from the combat battalion's support area i.e. the field train's location to a battalion logistics release point (LRP) under the control of the FSC distribution platoon leader.

5-149. Company/troop 1SGs pick-up their unit's LOGPAC, resupply their units, and return the LOGPAC vehicles back to the LRP. Combat logistics patrols are used as a routine method of resupply and occur as determined best by the battalion commander. Distribution of large quantities of some classes of supply such as artillery ammunition or Class IV barrier material may be delivered directly from UEx or UEy logistics units to the using unit by "throughput" distribution. However, the HBCT S4 in coordination with the BSB support operations officer must ensure resources are available from the supported battalions to download the resources. Also, delivery of critical supplies, such as repair parts, medical, or emergency resupply, may be conducted at any time using air or ground transportation assets to deliver the supplies. LOGPACs construction at the BSB level is the responsibility of the distribution company commander. He is responsible for putting them together. At the FSC level, the distribution platoon leader is responsible for putting the LOGPACs together in coordination with the unit supply sergeants.

MAIN SUPPLY ROUTES (MSR)

5-150. MSRs are routes designated within the HBCT's AO upon which the bulk of sustainment traffic flows in support of operations. An MSR is selected based on the terrain,

friendly disposition, enemy situation, and scheme of maneuver. Supply routes are selected by the HBCT S4 in coordination with the BSB support operations officer and HBCT S3. They also plan alternate supply routes for use if a MSR is interdicted by the enemy or becomes too congested. In the event of CBRN contamination, either the primary or alternate MSR may be designated as the dirty MSR to handle contaminated traffic. All alternate supply routes must meet the same criteria as the MSR. MPs assist with regulating traffic and engineer units, if available, maintain routes. Security of supply routes in a nonlinear environment may require the HBCT commander to commit non- logistics resources.

5-151. Some route considerations are:

- Location and planned scheme of maneuver for subordinate forces to include combined arms forces, artillery units, and other UEx forces moving through the HBCT's AO.
- Route characteristics such as route classification, width, obstructions, steep slopes, sharp curves, and type roadway surface.
- Two-way, all-weather trafficability.
- Weight classification of bridges and culverts.
- Requirements for traffic control such as at choke points, congested areas, confusing intersections, or along built-up areas.
- Number and locations of crossover routes from the MSR to alternate supply routes.
- Requirements for repair, upgrade, or maintenance of the route, fording sites, and bridges.
- Route vulnerabilities that must be protected. This may include bridges, fords, built-up areas, and choke points.
- Enemy threats such as air attack, conventional and unconventional tactics, mines, ambushes, and chemical strikes.
- Known or likely locations of enemy penetrations, attacks, chemical strikes, or obstacles.
- Known or potential civilian/refugee movements that must be controlled or monitored.

LOGISTICS RELEASE POINT (LRP) OPERATIONS

5-152. A LRP is the point along the supply route where the supported unit meets the supporting unit to transfer supplies. Likely functions performed at the LRP are:

- Battle rhythm synchronization.
- Load adjustment and cargo diversion.
- Transfer of responsibility.
- Updating battlefield intelligence.
- Driver briefing/vehicle maintenance.
- Decision making/C2 node.
- Link-up point for convoy guides.
- Empty flatrack backhaul.
- Human remains transfer.

5-153. Within a HBCT's battlespace, one LRP is normally established in the vicinity of the combat battalion's/squadron's support area (CABSA) for each FSC that is used to meet the BSB's combat logistics patrol. Additional LRPs may be established based on METT-TC. LRP's are also used by the FSC to meet the unit First Sergeants to link-up and move to the company for sustainment operations. Optimally, the LRP is located along a well-protected supply route. The exact location takes advantage of cover and concealment. The LRP is large enough to accommodate expected inbound and outbound convoys under all weather

conditions. At the LRP, dry cargo, liquid cargo, and flatrack transfer may occur. Trailer transfer may occur also most often between the BSB and the FSC. If practical, BSB combat logistics patrols may proceed past the FSC's support area LRP to the vicinity of the supported unit where supplies are then transloaded on to supported units' vehicles or downloaded on to the ground. When rotary wing aircraft are available for logistics resupply, the forward LZ may also be at or near the LRP.

5-154. Logistics release point security and C2 are critical. Routes into and out of each LRP must be secure. Security arrangements must be preplanned, synchronized, and executed. LOGPACs must include self-protection measures such as a combination of gun trucks, military police escort vehicles, armed helicopters, and combat vehicle escorts. Field artillery, engineer, and air defense unit support may also be required. This is why LOGPACs move in combat logistics patrols.

5-155. Logistics release point C2 considerations include:

- Which HQ is in charge?
- Assured, secure communications.
- Dissemination of LRP location to all logistics and supported units.
- Requirement for LNOs from supporting and supported units.
- Twenty-four hour operations.
- Situational awareness and situational understanding mechanism.
- Decision making authority or access to key decision makers.
- Need for linguists at LRPs.
- Location(s) of future LRPs.
- Frequency of LRP displacement.

FLATRACK COLLECTION POINT (FRCP) OPERATIONS

5-156. Flatrack collection points are predetermined points conveniently located to facilitate the harvesting and management of common user flatracks. Flatrack employment, management, and retrograde operations are the responsibility of distribution managers integrated at each echelon of support throughout the distribution pipeline. For detailed flatrack management operations and reporting procedures see the moving the force-transportation section in sustainment operations chapter 6 of this manual. The following items should be considered during flatrack operations:

5-157. Proposed FRCP locations are identified and reported to higher headquarters early in the planning process. Exact locations are reported immediately upon occupation. FRCP location considerations include:

- Collocation with existing logistical nodes (SSAs, ATP vicinity, other supply points and collections points) or consolidation with other FRCPs on an area basis
- Access to supply routes (MSRs/ASRs), feeder routes to supply routes, and traffic circulation
- Maximize force protection, cover and concealment, and other security resources

METHODS OF RESUPPLY

5-158. A company uses voice or digital means to request resupply and report status. The method used is determined after an analysis of the factors of METT-TC. However, current doctrine is distribution based i.e. transported to the unit by its supporting logistics unit. The two distribution methods of resupply are:

5-159. **Unit Distribution.** Unit distribution provides delivery of supplies directly to the unit. This is the concept used within the HBCT. A unit representative meets the resupply

package at the LRP and guides the package to the company's position during a FSC LOGPAC operation. The BSB LOGPAC operation can meet the FSC at a LRP and either continues forward to conduct sustainment operations or transload supplies with the FSC. Throughput to forward areas leverages configured loads, containerization, information, force structure design, technological enablers, and command and control relationships to deliver sustainment from the operational level directly to the customer or its supporting logistics unit. Throughput bypasses one or more echelons in the supply system to minimize handling and speed delivery forward. Direct throughput relies on unity of command and situational awareness.

5-160. **Supply point.** Supply point distribution requires unit representatives to move to a supply point to pick up their supplies. This is not the normal method of resupply in the HBCT, but can occur if the situation dictates or if the unit is a tenant of the BSA.

SECTION X – LOCATION OF HBCT'S LOGISTICS ASSETS

COMBAT BATTALION/SQUADRON SUPPORT AREA

5-161. The location of logistics assets assigned/attached to the combined arms and fires battalions and the reconnaissance squadron is a METT-TC situation. However, figure 5-4 is what you might generally find in support distances and locations of the combat battalion's FSC assets.

5-162. The BSA is generally 10 to 12 kilometers from a combined arms battalion support area (CABSA) at the most in either a defensive or offensive posture. Though the distances can be increased with the use of a forward logistics element (FLE) composed of critical sustainment assets that can extend the distances between the BSA and the CABSA. The Fires Battalion Support Area (FBSA) and the Reconnaissance Squadron Support Area (RSSA) are similar in structure. This however is not the only way to array forces on the battlefield as can be seen with figure 5-5 regarding a layout of the BSA. The commander makes the final decision for the allocation of his forces on the battlefield based upon METT-TC.

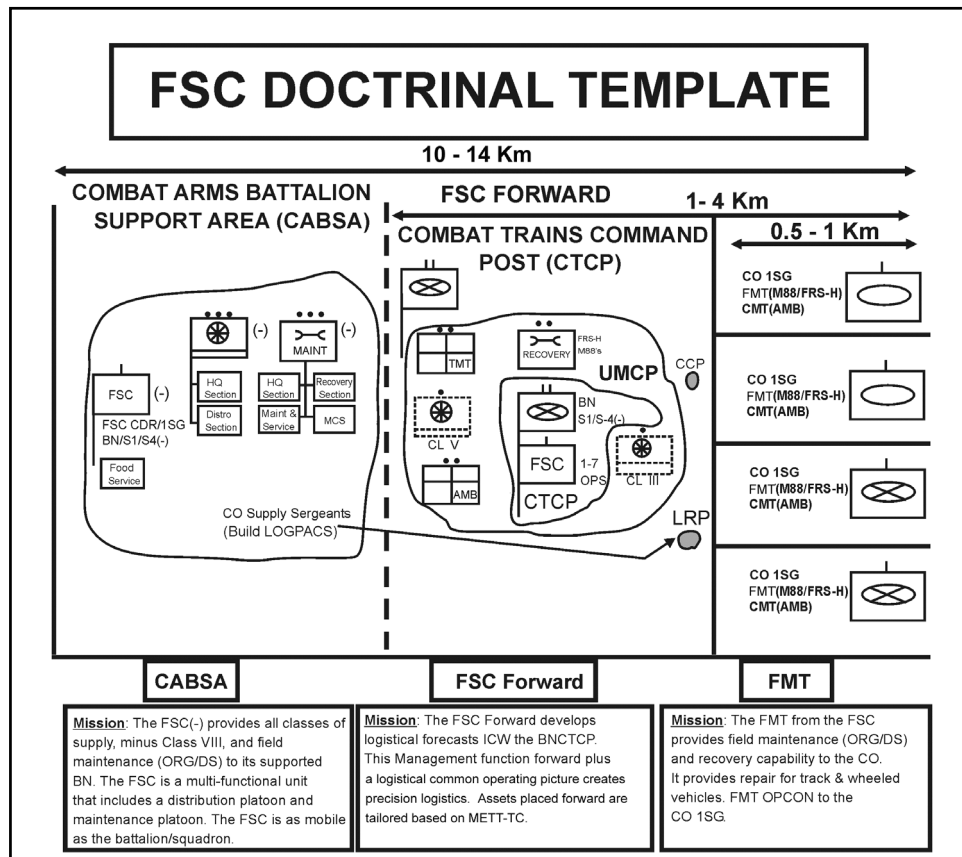


Figure 5-4, Forward Support Company Doctrinal Template

5-163. The combat battalion S3 in coordination with the combat battalion S4 and FSC commander determine the location of the FSC. The FSC should be located so as not to interfere with the tactical movement of the combat units, or units that must pass through the battalion area, while still maintaining responsive support to the combat battalion. Positioning of critical assets and use of earth mounds or man-made constructions to shield assets is important. Also segregating Class III (B), from work and sleep areas is important due to its ability to flow out of its area in a flaming river of fire if hit by enemy fire (most important when operating in a fixed site where room is limited). General considerations for the combat battalion's support area location include:

- Defensibility.
- Availability of roads capable of handling heavy traffic and large vehicles in all weather.
- Cover and concealment.
- Site drainage.
- Communication profiles.
- Accessibility to air assets.
- Adequate space for dispersion of assets and units.

5-164. Security and defense of the support area is the responsibility of the FSC commander. He develops and implements security measures. The sections in the FSC also prepare fighting positions, fortifications, and obstacles to enhance their survivability. Time and resources spent conducting force protection decreases time and resources expended on

logistics activities. The combat battalion commander should designate combat units to provide rear area security or security for the unassigned areas in non-contiguous operations or to be prepared to react to rear area threats. Security of logistics assets in a nonlinear environment is particularly challenging. See Chapter 8 for BSA security operations.

BRIGADE SUPPORT AREA (BSA)

5-165. The BSA is the logistics hub of the HBCT. It can consist of the BSB TOC, battalion field trains (METT-TC dependent) and other logistics units from the UEx and higher echelons (see Figure 5-5). The BSB normally positions all elements within the BSA in accordance with the HBCT's tactical plan, excluding those pushed out to support the HBCT in accordance with the concept of support published in the HBCT OPOD.

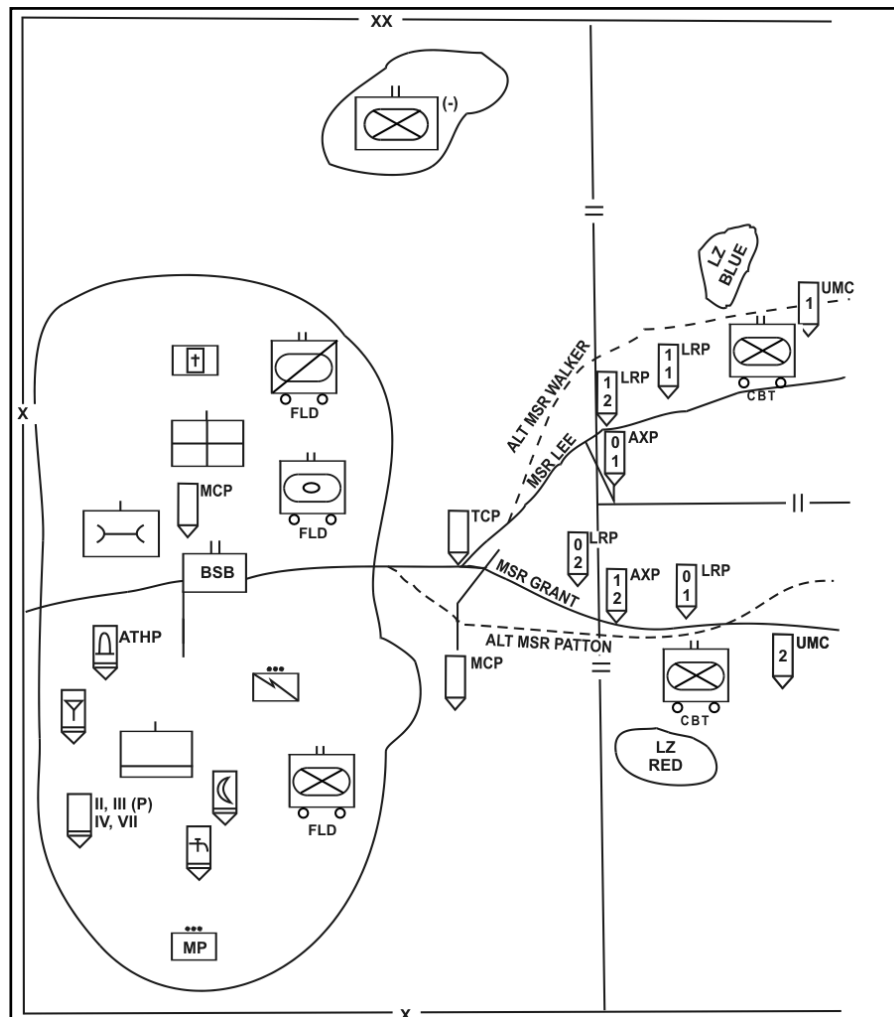


Figure 5-5, Example Layout of the Brigade Support Area

5-166. The unit field trains may or may not reside in the BSA. As indicated in figure 5-4, the CABSA could reside outside the BSA 10-14 kilometers or even more when using a FLE. This is a METT-TC decision by the owning unit commander coordinated with the BSB commander. Decisions to put assets in the BSA for example might be if the ration cycle is all MREs then the field feeding section would be better placed in the BSA to allow better flexibility and increased agility for the maneuver unit. Several other examples could be if

restricted distances make it most practical to have the trains in the BSA or at times force protection considerations make placement in the BSA appropriate. Once they are a tenant of the BSA, the field/combat trains leaders have responsibilities to the BSB commander such as force protection and policies applicable to operations in the BSA. Attendance at the Tenant's meeting hosted by the BSB is expected.

5-167. The HBCT S3 in coordination with the HBCT S4 and the BSB S3 and support operations officer determine the location of the BSA. The BSA should be located so as not to interfere with the tactical movement of HBCT units, or units that must pass through the HBCT area, while still maintaining responsive support to the HBCT. Its size will vary with METT-TC. The BSA is normally located on a UEx MSR in the rear or sustainment area and ideally out of the range of the enemy's medium artillery. The BSA should be positioned away from the enemy's likely avenues of approach and entry points into the HBCT's rear area (contiguous) or unassigned areas (noncontiguous). The BSA may also be located in a well-vegetated area or in an urban area. In an urban environment, indirect fire is problematic in trying to use distance as a force protection method. Positioning of critical assets and use of earth mounds or man-made constructions to shield assets is important. Also segregating Class III (B), from work and sleep areas is important due to its ability to flow out of its area in a flaming river of fire if hit by enemy weapon fires (most important when operating in a fixed site with limited room). General considerations for the BSA location include:

- Defensibility.
- Availability of roads capable of handling heavy traffic and large vehicles in all weather.
- Cover and concealment.
- Site drainage.
- Communication profiles.
- Accessibility to air assets.
- Adequate space for dispersion of assets and units.
- Availability of a water source.

5-168. Security and defense of the BSA is the responsibility of the BSB commander. He and his staff develop and implement security measures that include perimeter security, maintaining a force assigned a quick reaction mission and local patrolling. Units in the BSA also prepare fighting positions, fortifications, and obstacles to enhance their survivability. Time and resources spent conducting force protection decreases time and resources expended on logistics activities. The HBCT commander should designate combat units to provide rear area security/noncontiguous battlespace security or to be prepared to react to rear area/noncontiguous area threats under the C2 of the BTB commander. The brigade troops battalion commander is responsible for rear area security or the unassigned areas in noncontiguous operations. Security of logistics assets in a nonlinear environment is particularly challenging. See Chapter 8 for BSA Security Operations.

SECTION XI – MISSION STAGING OPERATIONS (MSO)

5-169. In order to maintain continuous pressure on enemy forces, the UEx is designed to allow operations for cycling of the maneuver brigade combat teams to temporary bases where the brigade rests, refits, and receives large quantities of supplies. This is a sustaining operation designated by the HBCT or UEx commander as a MSO. MSO is most often a HBCT level mission to plan, coordinate and execute. Responsibility for the mission resides primarily with the HBCT to control and set priorities for sustainment operations. Only the HBCT has the command, control and knowledge of future operations to develop plans and priorities for the scope of requirements necessary to conduct mission staging operations.

5-170. The maneuver brigade combat team moves to the area established by the sustainment brigade for mission staging. While in mission staging, the brigade is not available for other tactical tasks other than local security missions. Normally mission staging involves the sustainment brigade, maneuver enhancement brigade, and the maneuver brigade combat team. In offensive operations, one brigade may replace another brigade in the attack, typically when one brigade has a follow and assume mission. The UEx commander then orders a mission staging operation for the maneuver brigade combat team that is out of the fight. After mission staging, that brigade may assume the attack while the second brigade refits, continuing a tactical cycle of mission staging without relinquishing the initiative. In offensive operations against a tough opponent, the UEx may employ three brigades in rotation. Figure 5-6 illustrates. The following types of MSOs that are possible under the need to reconstitute forces, reorganization and regeneration, are what could occur during the MSO and why the MSO is occurring.

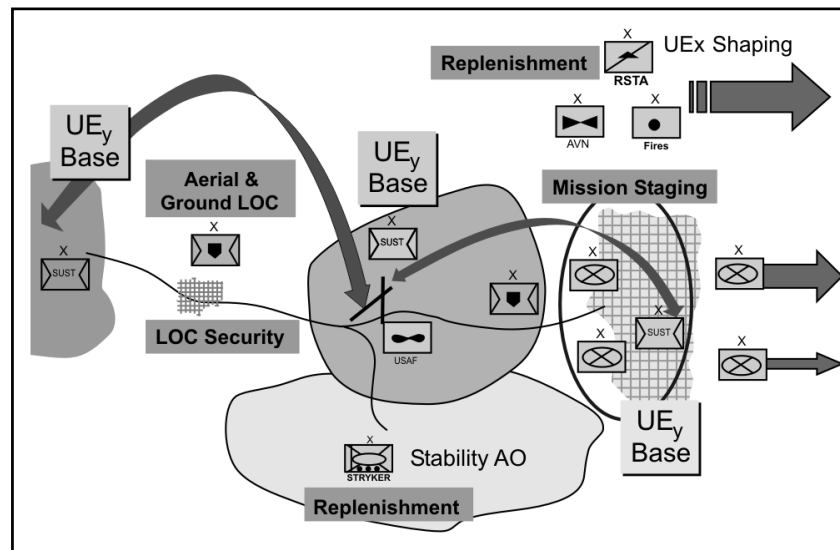


Figure 5-6, Example of a UEx Cycling Maneuver Brigades

RECONSTITUTION

5-171. Reconstitution is a set of actions that a commander plans and implements to restore his unit to a desired level of combat readiness. Although not a logistics (CSS) function, reconstitution is often logistics intensive, especially regeneration. Reconstitution is a total process. Its major elements are assessment, reorganization and regeneration. Reconstitution decisions belong to the commander. The commander, with his staff's support, assesses unit effectiveness (see FM 100.9). He does not base his reconstitution decisions solely on facts, figures, and status reports from subordinate units. His assessment relies also, and probably more importantly, on other factors. These include:

- Knowledge of his Soldiers
- Condition and effectiveness of subordinate commanders and leaders
- Previous, current, and anticipated situations and missions.

5-172. Planners must be prepared for mass casualties, mass destruction of equipment, and the destruction or loss of effectiveness of entire units. The heavy BCT combined arms battalion or company teams that have been catastrophically depleted or rendered ineffective are returned to combat effectiveness through this MSO. Reconstitution consists of the

actions to restore companies to a desired level of combat effectiveness commensurate with mission requirements and availability of resources. Reconstitution differs from sustaining operations, replenishment sustainment operations (RSO) in that it is undertaken only when a unit is at an unacceptable level of combat readiness. RSO's are routine actions to maintain combat readiness. Weapon system replacement operations can be part of RSO's. Commanders reconstitute by either reorganization or regeneration.

ASSESSMENT

5-173. Assessment measures the unit's capability to perform a mission. Subordinate unit commanders assess of their units before, during, and after operations. If a commander determines his unit is no longer mission capable even after reorganization, he notifies the HBCT commander. The HBCT commander either changes the mission of the unit to match its degraded capability or removes it from combat. Commanders can reconstitute their units by reorganization or regeneration to bring their units up to the necessary readiness level for the next mission.

REORGANIZATION

5-174. Reorganization is the action taken to shift resources within a degraded company to increase its combat power. Measures taken include cross-leveling equipment and personnel, matching operational weapons systems with crews, or forming composite companies. It can be conducted down to and including company level. Depending upon the type of reorganization, the unit's own assets may be used or higher echelon resources might be used.

5-175. Immediate battlefield reorganization is the quick and often temporary restoration of companies conducted during an operation; for example, reorganizing on the objective and implementing the established succession of command is a quick method that does not require a MSO to achieve the desired results.

5-176. Deliberate reorganization is a permanent restructuring of the unit. It is the type of reorganization considered during reconstitution planning. Deliberate reorganization is supported with higher echelon resources (such as maintenance and transportation), and additional replacements and other resources may be made available during a MSO. Deliberate reorganization must be approved by the parent-unit commander one echelon higher than that reorganized. For example, the heavy BCT combined arms battalion commander cannot approve the deliberate reorganization of an attached company, but the parent battalion commander or the brigade commander can approve it.

REGENERATION

5-177. Regeneration is incremental or whole-unit rebuilding through large-scale replacement of personnel, equipment, and supplies; reestablishing or replacing essential command, control, and communications; and conducting the necessary training for the rebuilt unit. It is used when the unit has become combat ineffective.

5-178. The unit must be removed from combat to be regenerated during a MSO. UEx is responsible for the regeneration of battalions. UEy is responsible for HBCT regeneration. To regenerate a unit, the UEx/y commander must balance priorities for supplies, equipment, or other logistics requirements to include medical, and he must task the support organizations to provide the needed support.

5-179. It is quite possible that HBCT regeneration could occur with redeployment back to its home station or an equally suitable environment. This requirement would place the HBCT in a location to effectively receive requisite resourcing (personnel and equipment) and a stable environment to retrain. A new HBCT would be deployed to assume its mission requirements in the AO.

SECTION XII – RELIGIOUS SUPPORT PLAN (RSP)

5-180. The commander is responsible for the execution of the Religious Support Plan (RSP). The chaplain, as the commander's special staff, is responsible to the commander to plan and implement the following:

- Developing the RSP.
- Executing the approved RSP.
- Use of available religious support resources.
- Allocation of assets.
- Location of unit ministry teams (UMTs).
- Coordination with indigenous religious leaders.
- Coordination with NGO/PVOs, with the assistance of civil affairs teams.
- Religious support for all authorized civilians in the AO.

KEY PLANNING CONSIDERATIONS:

Commander's Intent
 Concept of Operations
 Concept of Logistics
 Concept of Medical Support
 ROE
 METT-TC of the battlespace

5-181. The UMT participates in the collaborative planning process with the other staff sections in the MDMP. Religious support planning is continuous, detailed, and systematic. It examines all factors relating to the religious support of an operation. The planning process builds on the religious support section of the unit's tactical standard operating procedures (TSOP). It becomes specific to an operation through the preparation of a religious support estimate (RSE). The product of this planning process is a RSP. The RSP is included in the OPLAN/OPORD. Inclusion may be in the plan/order as an appendix, annex or tab. See FM 5-0 for the MDMP process that the religious support team uses to support the commander's MDMP.

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Chapter 6

Sustainment Operations

SECTION I – OVERVIEW OF SUSTAINMENT OPERATIONS AND FUNCTIONS

OVERVIEW OF SUSTAINMENT OPERATIONS

6-1. The HBCT receives sustainment from various elements depending on the logistics organizational structure at brigade and UEx level. The deputy brigade commander of the HBCT and the battalion/squadron XO is responsible to their respective commanders for overwatching sustainment operations and inserting themselves where appropriate to ensure successful sustainment operations for the HBCT. The HBCT/battalion/squadron S4 identifies the logistical requirements for the maneuver plan and provides the requirements to the FSC or BSB commander as appropriate for the level of command.

6-2. The FSC provides all logistics (less medical) to the HBCT combat battalion and is the senior logistician at the combat battalion level. The principal source of external support to the battalions in the HBCT is the brigade support battalion (BSB); it is organized with a headquarters and headquarters company, field maintenance company, distribution company, and a medical company to provide centralized direct logistics support to the BCT. Logistics augmentation required by the HBCT is requested from the BSB to the UEx's sustainment brigade.

HBCT LEVEL LOGISTICS UNIT

6-3. At the Heavy BCT level, the logistics assets are assigned to the brigade support battalion. Its limitations are described in Chapter 2. The BSB provides support that includes supply, transportation, maintenance and medical. The focal point for planning and supervising logistics is the BSB's command post. The BSB TOC's external support logistics functions are under the supervision of the support operations officer (SPO).

BATTALION/SQUADRON LEVEL LOGISTICS UNIT

6-4. In HBCT combined arms and fires battalions and its reconnaissance squadron, logistics assets are assigned to the forward support company (FSC), except for the medical platoon that is assigned to the headquarters company. The focal point for planning and supervising logistics is the battalion combat trains command post (CTCP). The CTCP in coordination with the main CP requests, coordinates, and supervises execution of sustainment operations either by the HHC (medical) or the FSC (supply and maintenance) assets.

LOGISTICS MODULARITY DESIGN IN THE HBCT

6-5. There are significant changes in the HBCT's concept of support. The concept of supply point versus distribution based logistics is now resolved for our Army. Previously the Army's concept for support provided by a forward support battalion was supply point operations. We have now moved the entire Army to distribution based logistics with pulsed operations as the basis for operational and tactical level support.

Pulse Operations

6-6. Pulse operations are preplanned pauses in battle rhythm that allow combat forces to replenish routinely. Pulse operations include movement from the decisive operations zone to mission staging operations and redeployment to the decisive operations zone.

6-7. In the area of command and control the following is now true for the HBCT:

- Use the HBCT TOC sustainment cell to monitor/control current operations within the HBCT main TOC (i.e. HBCT S1/4 are located with the brigade TOC).
- Plan, coordinate, synchronize, monitor, and control logistics/FHP within the HBCT AO.
- Provide and receive liaison officer (LNOs) is an implied task.
- Conduct joint/expeditionary sustainment operations.
- Coordinate/synchronize throughput to the combat units.
- Use Battle Command Sustainment Support System (BCS3) to paint the logistical picture for the common operating picture instead of CSSCS.

6-8. The ammunition capability at the ammunition transfer holding point (ATHP) now has a holding capability that allows ammunition to be stored. The ATHP has been resourced with the doctrinal capabilities (personnel and STAMIS) that permit holding ammunition for a period of time rather than just being a transfer point for ammunition.

6-9. The legal team is now configured as a brigade operations legal team or BOLT.

6-10. The BSB's maintenance capability is for the BSB's assigned companies and the BTB with limited back-up in low density maintenance skills for the FSCs.

6-11. The FSCs do not have a support operations section. Functions required of a support operations section are to be picked-up by the FSC commander and his executive officer or as determined by the FSC commander.

6-12. The brigade S4s are FA 90 officers instead of combat arms officers.

6-13. Using what we have learned from the Stryker brigade combat team (SBCT) and Force XXI digital experiences, the incorporation of new enabling technologies, and the acceptance of new logistics concepts has allowed the HBCT design to achieve a level of effectiveness not seen before in the logistician's battlespace. The following sections describe how these changes, and the use of the current doctrine, have been put into effect.

HBCT COMMAND RESPONSIBILITY

6-14. The HBCT commander ensures that sustainment is provided not only for his organic and attached elements but for any operational control (OPCON) or supporting units that are by doctrine still to receive support from their parent unit, but often do not receive parent unit support. The HBCT S4 coordinates logistics for the attachments and verifies who is to provide this sustainment and how support for attachments is to be requested. When a large unit attachment joins the heavy brigade combat team (HBCT), the attachment should bring an appropriate modular unit of logistics assets from its parent unit.

6-15. These assets are controlled by the unit they are to support. They can be attached to the BSB or the combat battalion's FSC in accordance with (IAW) the attachment instructions of the unit they support. The attached unit leader must coordinate with the heavy BCT unit's S1 and furnish him with a copy of his unit battle roster as well as provide the status of all key elements of equipment to the HBCT unit's S4. Thereafter, the attached unit submits reports and requests support according to the heavy BCT standard operating procedure (SOP). The following sections provide a discussion using the framework of the eleven logistics (CSS) functions described in Chapter 5 as to how support is provided.

SECTION II – SUPPLY AND FIELD SERVICES OPERATIONS

6-16. This section covers how the HBCT's BSB and the battalion/squadron's FSCs provide supply and field services or request support that are not available. It describes actions needed to obtain support and how that request flows up the chain and how the support flows back to the user.

CLASS I AND FIELD FEEDING OPERATIONAL GUIDANCE

6-17. Units deploy with three combat loads. Class I supplies (meals, ready-to-eat [MREs]) are configured into unit configured loads by the BSB based on personnel strength reports. These pallet-sized loads will be delivered via logistics package (LOGPACs) conducting combat logistics patrols by the BSB's transportation platoon to the FSCs. Operational rations (MREs) will be used until the HBCT commander or higher determines that they are no longer needed (i.e. commander determines A rations are appropriate) or operational tempo (OPTEMPO) permits a meal cycle. However, the feeding standard is three quality meals each day, with the capability to distribute, prepare, and serve at least one Unitized Group Ration-A (UGR-A) or UGR-Heat & Serve (UGR-H&S) meal per day that is METT-TC dependent. The family of operational rations used to support this standard consists of individual meals (Meal-Ready-to-Eat; Meal, Religious, Kosher/Halal; Meal, Cold Weather/Food packet, Long Range Patrol; along with the emerging First Strike Ration and Compressed Meal) and group meals (Unitized UGR-A and UGR-H&S, along with the emerging Unitized Group Ration-Express (UGR-E)), plus enhancements such as bread, cereal, fruit, and salad and the mandatory supplement of milk to ensure the nutritional adequacy of the group rations.

6-18. The inclusion of a hot cook-prepared meal in the standard of three quality meals per day is based on units having the required personnel and equipment necessary for implementation. During extended deployments of 90 days and beyond, the feeding standard is expanded to include the UGR-A Short order supplemental menus. This option provides for easy to prepare breakfast and lunch/dinner short order menus and affords choices in menu selection for the Soldier. The feeding standard applied when deployed beyond 180 days includes incorporation of the Department of the Army (DA) 21-Day contingency operations (CONOPS) menu and requires force provider type kitchen facilities or contractor logistics support only after 30 days. In addition, food service support will be required for attached units.

CLASS I AREA SUPPORT/UEX STOCKAGE/REPLENISHMENT OPERATIONS IN THE UEX

6-19. Bulk rations are received by the UEx subsistence platoon, which provides loads for each field feeding section that they support. Loads are configured within refrigerated containers and on containerized roll-in/roll-out platforms (CROPs) and distributed via heavy expanded mobility tactical trucks (HEMTT) load handling system (LHS) and pallet logistics system (PLS) trailer to the BSB in the HBCT. Class I supplies in loads configured for each primary field kitchen i.e. containerized kitchen(CK)/mobile kitchen trailer (MKT), are moved forward using HEMTT-LHS and PLS trailers carrying refrigerated containers and CROPs respectively. Should these enablers not be available, a ration break point (RBP) must be established within the BSB's distribution company (BSB DC). The RBP must be staffed by three Soldiers (MOS 92A) from within the BSB and augmented by two Soldiers (MOS 92A) from the UEx subsistence platoon.

CLASS I SRO OPERATIONS AT THE HBCT BSB

6-20. The distribution company of the BSB will deliver the configured loads to the individual field feeding sections. The field feeding sections of the FSC's/BSB will exchange their empty refrigerated containers, CROPs, and any retrograde items for configured loads of perishable and semi-perishable subsistence in refrigerated containers and on CROPs. If the field feeding sections are being supported by a RBP, cooks will come back to draw rations from the RBP. There are three Soldiers (MOS 92A) with forklifts that are assigned as ration handlers in the general supply section of the supply platoon in the distribution company of the BSB.

6-21. The distribution of rations arriving from the UEx subsistence platoon of the sustainment brigade is to be via configured loads built to support each primary field kitchen i.e. CK or MKT. If refrigeration is not available, rations will be delivered in bulk to a RBP operated by the three Soldiers (MOS 92A) in the BSB's distribution company and augmented by a team of two Soldiers (MOS 92A) from the UEx subsistence platoon. These Soldiers will break bulk rations for each primary field kitchen. When perishables are being consumed the RBP will issue to cooks coming from the kitchens. When no perishables are being issued, the Soldiers are employed either to ensure that the loads received are properly configured for the primary field kitchens or to build the loads themselves for distribution to each primary field kitchen. See Figure 6-1 for Class I distribution.

CLASS I FIELD FEEDING IN THE BSB

6-22. Field feeding is located in the headquarters company of the BSB is staffed and equipped to support the BSB itself and the brigade HQ. The BTB has its own field feeding section. The section has the capability to prepare, serve and distribute (via LOGPAC) the full range of operational rations METT-TC dependent. This section is equipped with the MKT) or CK, as the primary field kitchen, with one food sanitation center per primary field kitchen. For remote feeding the units currently have the kitchen combat level field feeding (KCLFF).

CLASS I CRO OPERATIONS AT UNIT LEVEL

6-23. The field feeding sections reside in the HQ platoon of the FSC. The section has the capability to prepare, serve and distribute (via LOGPAC) the full range of operational rations METT-TC dependent. They are currently equipped in the same manner as the field feeding section of the BSB, with the MKT or CK as the primary field kitchen and one food sanitation center per primary field kitchen. For remote feeding the units currently have the KCLFF.

6-24. The company level kitchens (KCLFF or CK) for the maneuver companies can either be located with the FSC or co-located forward within the maneuver company they are supporting. If the company level kitchens (KCLFF or CK) are located forward, the FSC battalion level field feeding sections will provide rations via LOGPACs to those KCLFFs or CKs co-located within the maneuver unit. If the company level kitchens are co-located with the battalion level field kitchens where they are normally located in a combat battalion's support area, they can either go forward with the LOGPACs on combat logistics patrols or hot meals can be prepared in the FSC field feeding section and merited forward in a LOGPAC (METT-TC dependent).

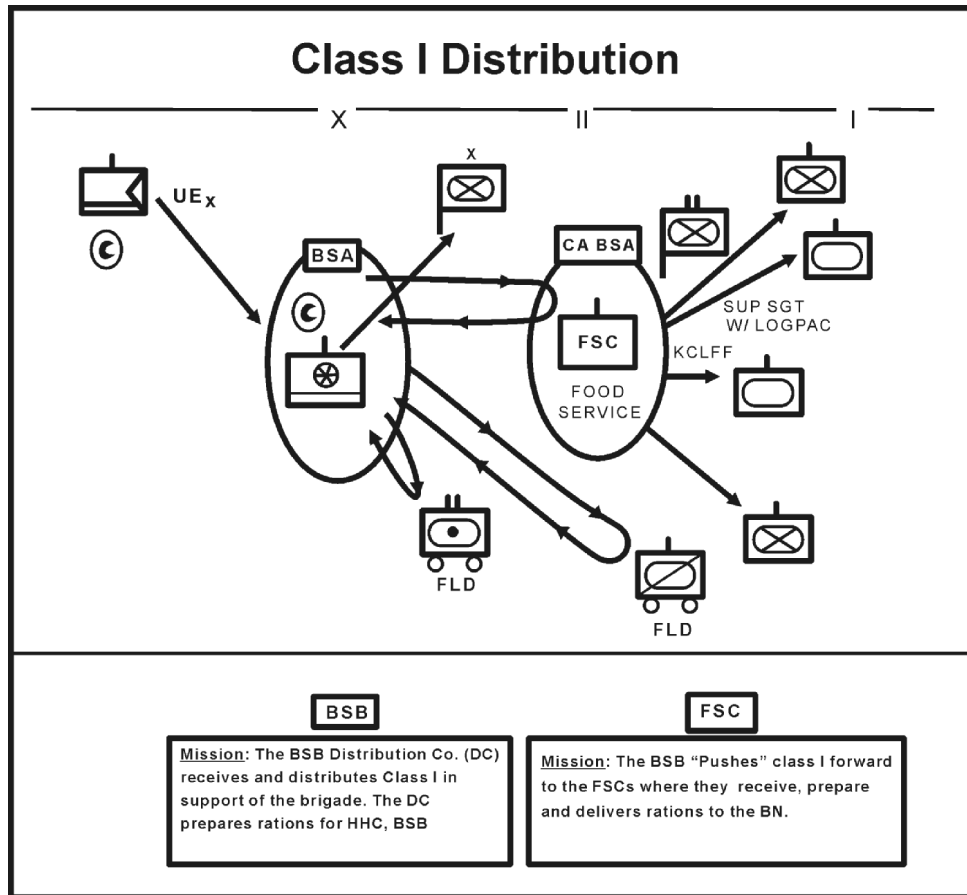


Figure 6-1, Class I Distribution

GENERAL SUPPLIES (CLASSES II, III (P), IV) OPERATIONS

CLASS II AND III (P)

6-25. Limited stocks of Class II and III (P) items—preventive medicine, motor oil, field hygiene, weapons cleaning, and special tools—will be available at the BSB. Class II chemical, biological, radiological, and nuclear (CBRN) will be configured by echelons above brigade (EAB) and called forward as needed. Class II administrative supplies will not be stocked at the BSB but may be requested as the theater matures.

6-26. The limited stockage of Class II items may include mission-oriented protective posture (MOPP) gear or environmental protection items (boots, overshoes, parkas, and helmets). Distribution plans for protective clothing and equipment must consider the threat and the service life of protective overgarments and filters. Unit priorities for issue must be established by the HBCT Commander or higher level authority.

CLASS IV

6-27. The HBCT will produce a local SOP to define combat loads for Class IV. Other Class IV must be configured by echelons above brigade by the UEx or UEy sustainment brigade or if conditions dictate at an intermediate staging base (ISB) and called forward as needed.

6-28. Modular supply distribution for general classes of supply is characterized by throughput of configured loads as far forward as the BSB, and further by exception. Supply distribution is conducted by the quartermaster support companies (QSC), assigned to the sustainment brigades in both the UEy and UEx. The QSC is modular and tailorable to provide support from smaller scale contingencies (SSC) or early entry operations to a fully developed theater of operations. See Figure 6-2 for general supplies operations.

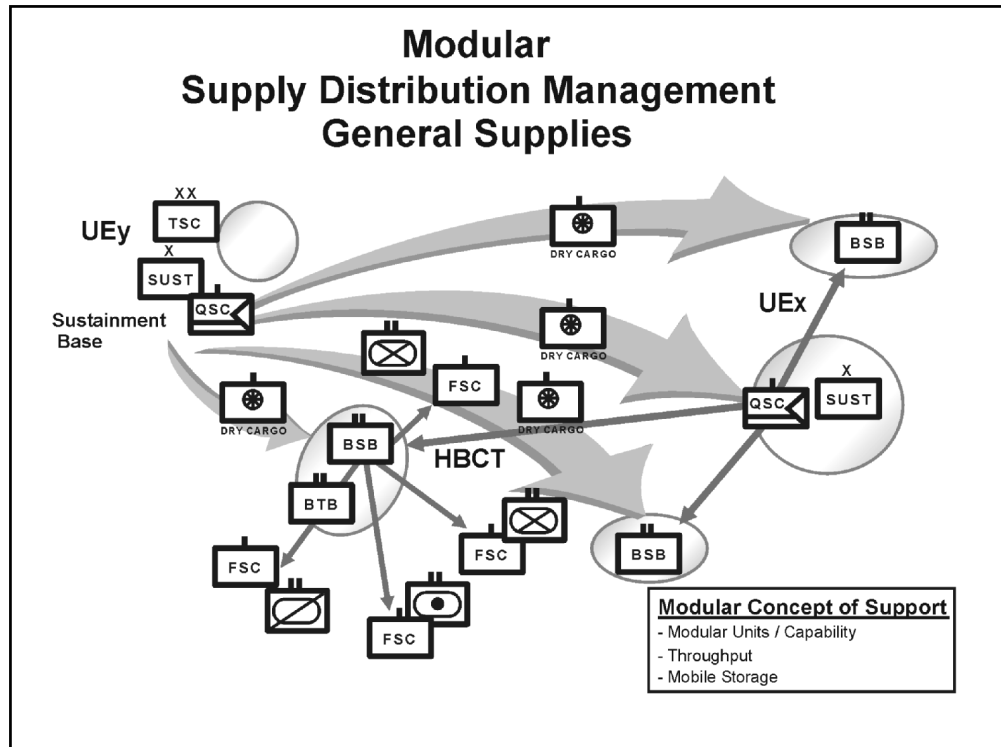


Figure 6-2, General Supplies Operations

6-29. The QSC's at both the UEy and UEx levels, performing a DS mission, provide area support to the units attached to and passing through the area of operations.

6-30. The QSC area support platoons will build configured loads from modules and bulk supplies, and will re-configure combined loads received from the strategic level for issue and forward movement to satisfy unit requests. These loads will be either throughput to the unit, pulsed to the BSB, or delivered to the MSO site established by the UEx sustainment brigade for distribution during MSO operations.

6-31. The QSC in the UEx sustainment brigade performs minor re-configuration and maintains minimal stockage, supporting the receipt, storage, issue and retrograde of general supplies during MSO operations.

6-32. Retrograde of returned supplies is also handled by the QSC. Retrograde is distributed rearwards to the QSCs at both the UEx and UEy in order to re-enter those items into the supply system; re-distribute to other units or FDP's; or configure items for evacuation from theater.

6-33. Re-supply for general supplies within the BCT is a combination of CRO, SRO, and MSO operations which is METT-TC dependent. The HBCT carries three combat loads of supplies using organic assets one at unit level, one at the FSC's, and one at the BSB. Units receive

needed supplies from their supporting FSC during CRO operations; the FSC's are replenished by the supporting BSB's during SRO operations; and the BSB's are re-supplied by the sustainment brigade when the HBCT commander informs the sustainment brigade that he is ready for MSO operations to be conducted. During MSO, the QSC in the UEx sustainment brigade issues supplies as configured loads to restore the unit's three combat loads. The QSC also receives turn-in of excess supplies/retrograde items at the MSO site.

6-34. To the extent possible, throughput is conducted from the UEy to the BSB and aerial delivery is a routine method of distribution. Requirements are generated from the units and are passed to the BSB for processing using Standard Army Retail Supply System (SARSS), which will transition into GCSS-Army under the future logistics enterprise system.

HBCT LEVEL GENERAL SUPPLY OPERATIONS: (CLASS II, III (P) AND IV)

6-35. The BSB distribution company's supply platoon receives, stores, issues, and transloads approximately 29 ST of Classes I, II, III (P), IV (barrier material only) and Cl VII supplies daily. It stores the third combat load for supported units and provides these supplies to the forward supported FSC's during SRO operations. The supply platoon also carries the 2d and 3rd combat loads for the brigade troops battalion (BTB) and the BSB. The BSB is 100% mobile to keep pace with the companies it supports; therefore the supply platoon maintains a mobile storage capability. See figure 6.2 for general supplies distribution.

6-36. The BSB is the first point of entry for SARSS transactions within the brigade. The FSC does not have a SARSS capability.

6-37. The FSC provides combat replenishment to supported units. Since general classes of supply used for combat replenishment operations (CRO) remain uploaded on the vehicles that are used to distribute them, there is no requirement for the receipt, store, and issue of Classes II, III(P), and IV and there are no embedded quartermaster assets (i.e. 92A's and SARSS boxes) to perform this mission. Each Company headquarters, however, has a 92Y Unit Supply Sergeant with an ULLS-S4 box or property book unit supply enhancement (PBUSE) program, who provides internal supplies such as chemical gear, basic load, ammo, and combat rations. These internal supplies will be delivered either through pulsed SRO or during MSO operations LOGPACs via combat logistics patrols.

CLASS III (BULK) FUEL OPERATIONS

6-38. Fuel is a critical demand commodity when supporting HBCTs that are 100% mobile, are self-sustaining over increasingly extended periods, and are often required to provide their own security for force protection or integrate maneuver assets in an extended, noncontiguous battlespace. Bulk petroleum will be distributed to both the UEy and the UEx for forward distribution to the HBCT. The HBCT retains its mobility by storing their three replenishment loads of fuel in internal mobile fuel platforms (one combat load each at the using unit, the FSC and the BSB), eliminating the need for on-ground storage. Resupply from the UEx to the HBCT will be conducted during MSO operations and between MSO cycles, as required, to maintain combat readiness. See Figure 6-3 for Fuel Operations.

6-39. The UEx pushes fuel to the BSB during MSO and replenishment operations, based on forecasts from the supported units. Battle Command Sustainment Support System (BCS3) software provides Class III status displays for the UEx and lists the quantity and days of supply available in Class III supply points. Class III inventory data feeds the BCS3 from the SARSS-1 interface. Utilizing fuel consumption factors of the operations logistics planner and SB 710-2, UEx/UEy planners forecast fuel requirements for the HBCT. Forecasts for fuel usage are received by the UEx support operations center from the BSB support operations center. The HBCT S4 and BSB SPO will use the aforementioned tools plus analyze current consumption to predict future needs based upon the amount of time that combat systems

and support vehicles expect to be operational to achieve better accuracy in their forecast. The intent is to predict what is actually needed and not have excess fuel requirements put at risk to the enemy unnecessarily.

6-40. UEx fuel operations consist of SRO and mission staging operations (MSO), using ground truck assets coming out of the sustainment brigade (petroleum support company), and POL transportation battalions. In SRO, elements from the BSB move to top-off units within the FSC. Both of these actions are conducted within the HBCT battle space by organic HBCT assets.

6-41. Fuel status is initiated at the platoon or company level, and reported daily to the 1SG using the logistics situation report (LOGSITREP) report in FBCB2. Information copies will be furnished to commanders at each echelon. The 1SG consolidates on hand quantities and submits the fuel status report via FBCB2 to the BN S4, with information copy to the FSC CP. The BN S4 consolidates the fuel status report for the BN and submits by company rollup on hand quantities via FBCB2 to the brigade S4, with information copy to the FSC CP. The brigade S4 consolidates the battalions/squadron submits the report to the BSB support operations via FBCB2. The FSC and BSB DC using FBCB2, submits their bulk fuel status report to the BSB support operations section. The BSB support operations section consolidates the bulk fuel status reports for the brigade and slices elements, and submits it to the UEx sustainment brigade.

6-42. The UEx resupplies the HBCT with bulk fuel based on METT-TC. A transportation medium truck company usually makes deliveries directly to the HBCT. The BSB support operations, with guidance from the HBCT S4, will coordinate the bulk fuel distribution into the brigade. Throughput will be maximized down to the BSA, and down to lower levels on a case-by-case, exception, or mission dependent basis. Due to EAB time/distance factors, OPTEMPO, and the challenges in synchronizing deliveries forward, this throughput to the lowest level will be coordinated through support operations channels. If direct re-supply from EAB assets to FSC is required, the BSB support operations needs to have the FSC conduct a reverse LRP operation in concert with the already coordinated delivery time and location. The preferred method of distribution is via LRP operations as coordinated with the BSB support operations.

6-43. Bulk fuel will be issued based on priorities established by the HBCT S4 with guidance from the HBCT commander. The BSB DC provides unit distribution to the FSCs, as determined by fuel consumption/distances/METT-TC. The BSB support operations are responsible for coordinating the resupply of bulk fuel to the FSCs and the BSB DC. The location of the bulk refueling site and the quantity of issue is transmitted using FBCB2 to the receiving unit and the supply and transportation platoon. The BSB DC provides DS support to the BTB and backup/reinforcing support to the FSCs. The FSC CP and the BN S4 will coordinate the refueling site and quantity of issue for the maneuver companies using FBCB2. Fuel HEMTT tankers located in FSC accomplishes the tactical refueling operations for the maneuver companies. To optimize bulk fuel storage capacity forward and ensure HEMTT tankers have smaller turns to refuel, the BSB commander has the flexibility to position BSB DC HEMMT fuelers in the FSC's field trains location. If the BSB commander needs additional fuel assets they can request for UEx fuel tankers forward in the BSA. Tasking authority to position the UEx fuel tankers in the forward areas normally resides with the UEx sustainment brigade. HBCT operations consist of CR and SR operations. In CRO, the FSC moves to a designated site, and fuels the combat platforms within the HBCT. See section on *Techniques of LOGPAC Operations* on ways to conduct these operations.

6-44. While consumption rates are predictable, consumption requirements are significant and require almost constant contact with the supported units. What makes the fuel function unique is the product and the assets required to move, store and distribute. POL tankers are

transportation assets that have only one function, to move fuel. Figure 6-3 depicts Class III (B) operations.

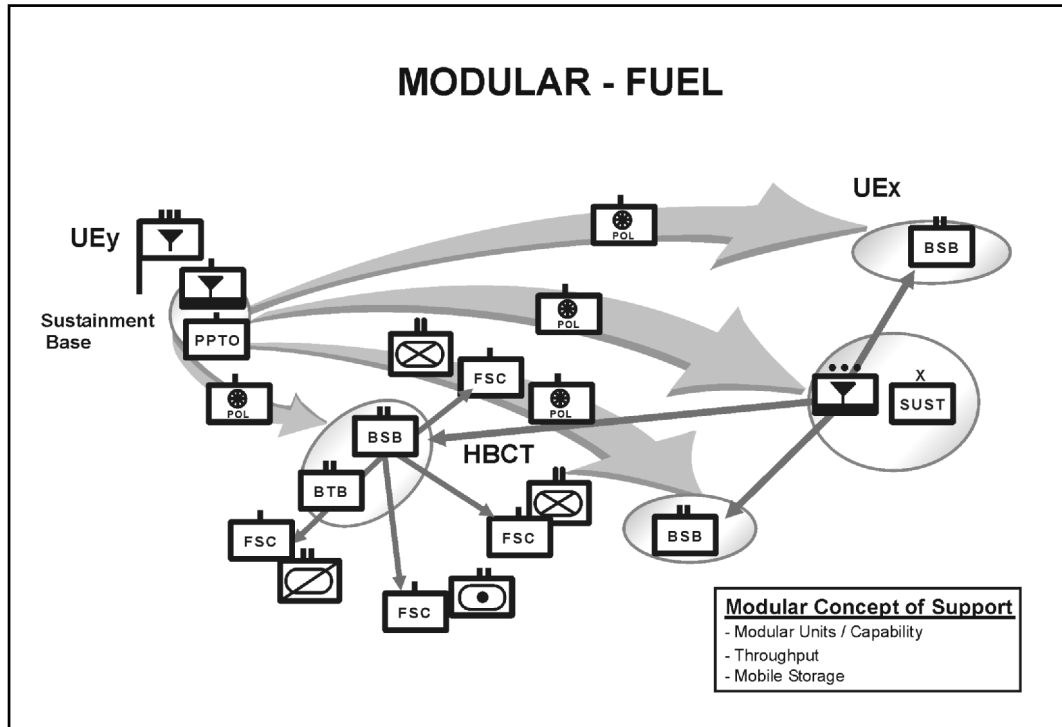


Figure 6-3, Fuel Operations

CLASS VI SUPPLY OPERATIONS

6-45. The BSB does not stock Class VI supplies. After 30 days in theater, the ration supplement health and comfort pack (HCP) is usually issued with Class I rations.

6-46. Class VI supplies are those items used for personal hygiene, comfort, and welfare. They include such things as candy, gum, dental care products, soap, and stationery. Initially the Soldier carries these personal items with him. As the supply system adjusts to demand, resupply is by HCP where personal demand items are issued gratuitously. When the situation permits, tactical field exchanges provide services to specified units and troop concentrations.

MAJOR END ITEMS (CLASS VII) OPERATIONS

6-47. Class VII items are intensively managed and are normally command controlled. When a loss is identified on the unit's battle losses report, the responsible property book team drops this item off of the unit's property book records, and at the same time, submits a request for its replacement to the supporting supply support activity. Class VII replacement is based on combat losses reported through command channels to the UEx G3 and G4 via MCS. This permits the commander to remain apprised of the operational status of subordinate commands and to direct the distribution of items to those units having the most critical need. Weapon systems such as tanks are intensively managed by weapon system replacement operations (WSRO). If the item is a WSRO weapon system, the primary linkup points of the item with its crew may occur in the BSA or in designated assembly areas.

6-48. Class VII requests will be accomplished by using the FBCB2 to submit combat loss reports from company level to the BN S4. The CO roll-ups will be consolidated by the BN S4 and submitted to the brigade S4, with an information copy provided to the FSC CP. The brigade S4 will consolidate and submit battalion combat loss reports to the Sustainment Brigade with information copies provided to the UEx G4 and BSB support operations. The Class VII/PBO representative from the brigade S4 office will enter the requests into the appropriate STAMIS (ULLS-S4 or PBUSE to SARSS-1). The HBCT S4 will consolidate and submit HBCT troops battle loss reports for Class VII to the UEx sustainment brigade, with a copy provided to the UEx G4.

6-49. Class VII items are distributed to the BSB distribution company, from the QSC or QM heavy materiel supply company in the UEy sustainment brigade, from an ISB or FOB, or from the strategic level. Upon UEx approval of the HBCT S4 Class VII requisitions, UEx units transport Class VII equipment to the supporting SSA in the BSB DC or directly to the requesting unit when possible. Since major end items are generally large and expensive, they are not stocked unless a critical need is established.

6-50. Demand for some Class VII may be forecasted and sent forward through the distribution pipeline prior to a request. Critical Class VII items are stocked at the UEy in limited quantities as determined by the regional combatant commander (RCC). See Figure 6-4 for Class VII Operations.

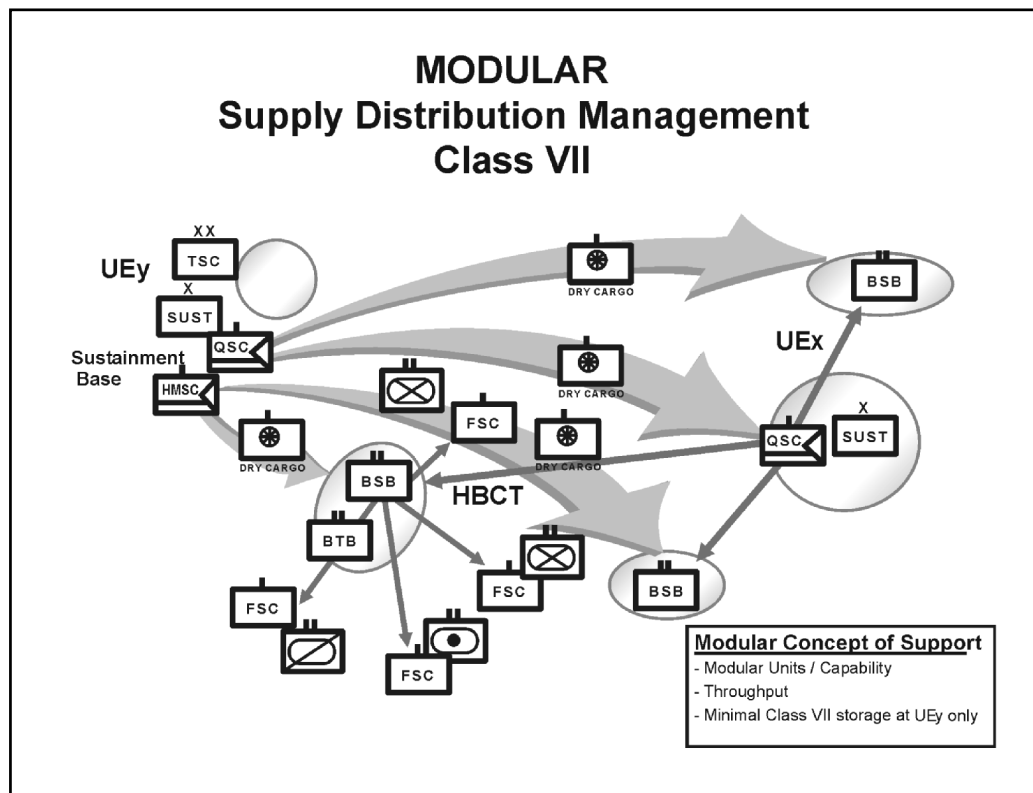


Figure 6-4, Modular Class VII Operations

REPAIR PARTS (CLASS IX) OPERATIONS

6-51. Repair parts support begins with a Class IX requirement from the supported FSC field maintenance team (FMT) that provide field maintenance support to maneuver units. The concept of self-sufficiency within the brigade marks a departure from the Force XXI design, as some Class IX items (combat spares) will be contained within the brigade's three combat loads. See Figure 6-5 for Class IX Operations.

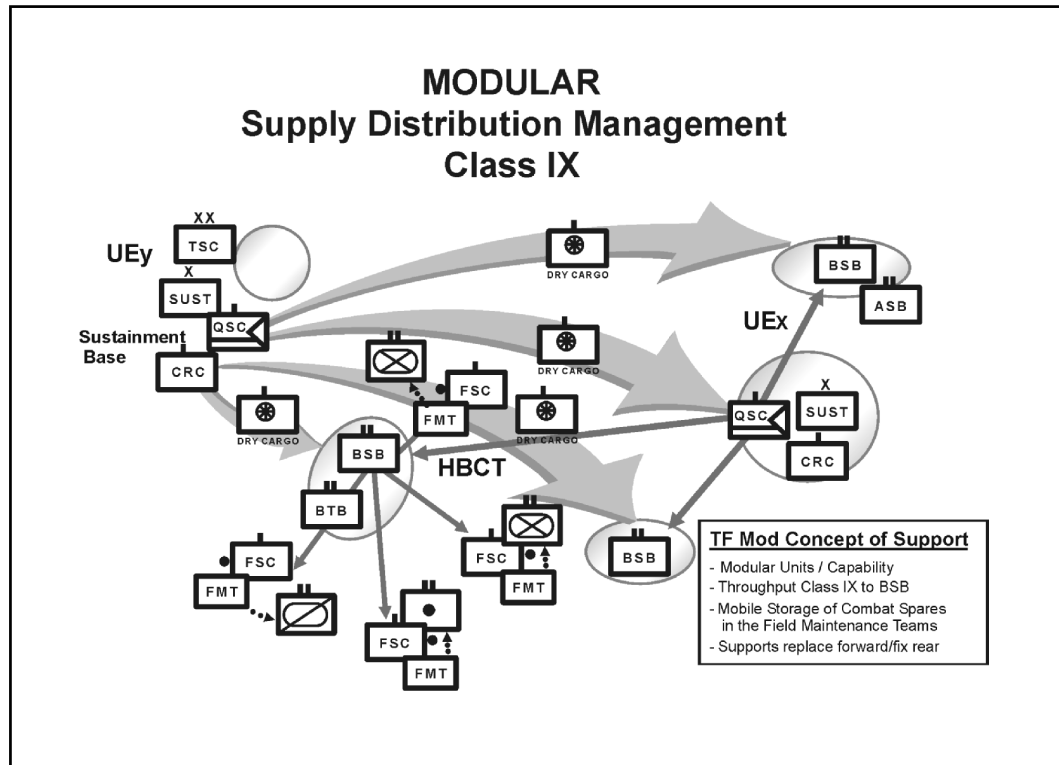


Figure 6-5, Class IX Operations

6-52. If the requested Class IX item (located in the combat spares) is contained in the unit's combat load, it is provided from the FSC maintenance platoon to the FMTs during CRO operations. The FSC is then replenished from the BSB distribution company with this item during SRO operations. If the item is not available in the unit's combat loads, requests are submitted so that the nearest supporting SSA that has the repair part can issue the part to fill the requisition. It could be the BSB's distribution company's ASL or the quartermaster support company in the UEx sustainment brigade. If the QSC in the UEx has the item, it is released and provided to the BSB during replenishment operations; otherwise, the request is forwarded to the QSC, UEy sustainment brigade for fill at the operational level. If the item is not available at the UEx, UEy, forward operating base (FOB), or intermediate staging base (ISB), the request is sent out of theater.

CLASS IX MANAGEMENT PROCESS

6-53. As a result of the implementation of field maintenance (previously known as organizational and DS level maintenance) in FXXI, the maintenance control sections (MCS) is now responsible for maintaining what we know as prescribed load lists (PLL) and shop supply items. For this reason we have designated the new term for these consolidated

inventories as combat spares. Both of these inventories have very different requirements for adding and maintaining parts on inventory. The MCS will manage the PLL using the ULLS-G and the shop stock using the SAMS-1. With the fielding of GCSS-Army, the maintenance module's consolidated ULLS-G and SAMS-1 functionality will have the ability to manage the combat spares. During the interim ULLS-Enhanced will merge the management functions of ULLS-G and SAMS-1.

6-54. Combat spares are not meant to bring back the iron mountains. Combat spares consist of a broad but shallow inventory of high use, combat essential parts that support a replace forward maintenance philosophy. Combat spares provide a buffer for the lead-time it takes the distribution system to deliver a required part and also acts as insurance against interruptions in the distribution pipeline. Parts can be stocked in several different ways. If there is a high use, combat essential part the support units believe needs to be stocked to support combat operations they can do it several different ways. If the part does not meet the stockage criteria for PLL it may be able to be carried on the shop stock. If an essential item fails to meet the criteria for both it may still be stocked at the MCS but will be centrally managed as ASL in the BSB DC. The SARSS1 box has the ability to just change the location of where the part is physically stored.

6-55. Combat spares for the CO are received, stored, and issued by the maintenance control section of the FSC. An operator identifies a fault and requests assistance from the FMT via FBCB2 (free text) or FM radio. The FMT will diagnose the fault and identify the required Class IX supplies. The ASL for the brigade is maintained by the Class IX section in the BSB distribution company.

CLASS IX RESUPPLY

6-56. Upon receipt of a requisition, the UEx SARSS-2A will conduct a subordinate search of all SSAs to locate the requested repair part. Once SARSS-2A identifies the location of the repair part, a MRO is processed to the lowest level SSA. The UEx's units will throughput Class IX supplies to the supply platoon of the BSB DC, and when possible the general supply section of the FSC.

CLASS IX REQUEST

6-57. An operator identifies a fault, annotates the fault and notifies the FMT. The FMT will diagnose the fault, identify the repair part required, and forward the request to the maintenance control section (MCS) of the FSC. The MCS will either issue the part if it is on hand or it will pass the requisition on to the Class IX section supply platoon of the BSB DC via ULLS-G or SAMS, and if the part is on hand in the Class IX section of the BSB DC it is released. If the requested repair part is not on hand, the Class IX section will process the requests via SARSS-1 to have the supply system search for the repair part in the nearest supporting SSA. The BSB's DC maintains the brigade's ASL. The MCSes in the BSB's FMC and the combat battalion's FSCs maintain the brigade's combat spares. The supply platoon, BSB DC will process the ULLS-G and SAMS class IX requisitions via SARSS-1.

CLASS X OPERATIONS

6-58. The HBCT is not intended to conduct civil assistance operations and thus the BSB is not intended to provide material to support civil operations. That does not mean a civil assistance operation would not be assigned to the HBCT, but only that the force structure was not developed for this type of mission.

CONFIGURED LOADS

6-59. Configured loads (CL) are tailored to the operation and are METT-TC dependent. As the Army transitions into the modular design of the UEy, UEx and HBCT, the distribution-based logistics system will become more dynamic, and the integration of CL into the distribution process will become more defined.

CONFIGURED LOADS DISTRIBUTION

6-60. Configured loads (CL) will be built at the strategic level and throughput as far forward as the BSB. In order to optimize strategic lift assets, CL modules may be shipped to the theater and configured into loads at the UEy for forward distribution. CL may be built in the sustainment brigade of the UEx, closer to the unit's location, to respond to rapid changes in OPTEMPO, satisfy critical, high priority requests, and ensure time definite delivery (TDD). Quartermaster (QM) support company's area support platoons in the UEy and UEx will provide configuration/re-configuration for general classes of supply, given the availability of load configuration equipment, training, commodity/capability modules, and other CL contents in theater.

6-61. Using the Configured Load Building Tool (CLBT) software, QM Soldiers can configure and load commodity and capability modules onto the appropriate conveyances and send these CL forward through the distribution pipeline, as required, meeting critical customer requirements. Also, in response to a fluid and dynamic battle space, the QM area support platoons may perform last minute re-configurations of CL before they are sent forward to eliminate significant excess due to changes in posture or mission requirements. The ability to configure CL in theater will rely heavily on a dynamic and responsive Distribution-Based Logistics System (DBLS) and will require both on-hand inventory and inventory in motion to support the requirement for rapid response time. Empty CROPs, containers, and other conveyances will be used to retrograde excess supplies and reparable back through the distribution pipeline and will themselves be retrograded for future re-use. Criteria for the source of the CL origination will be determined by the logistical support and operational planners and administered through the Distribution Management Centers. See Table 6-1. Method/Frequency of Distribution/Employment.

Table 6-1, Method/Frequency of Distribution/Employment

<i>Class of Supply</i>	<i>Method of Determination</i>	<i>Method of Distribution/Employment</i>	<i>Frequency of Distribution/Employment</i>
Class I: Subsistence (Including Bottled Water)	Partially Predictive/On Demand	Pulsed/Sustainment Packages to CRO/SRO/MSO	Routine Determined by Combatants Battle Rhythm
Class II: Clothing, Individual Equipment, Tools, and Administrative Supplies	On Demand	Pulsed/Sustainment Packages to CRO/SRO/MSO	As Required
Class III: Bulk Petroleum	Predictive	Pulsed/Bulk Tank Rack to CRO/ SRO/MSO	Routine Determined by Combatants Battle Rhythm
Class III (P): Packaged Oils and Lubricants	On Demand	Pulsed/Sustainment Packages to CRO/SRO/MSO	As Required
Class IV: Barrier and Construction Material	On Demand	Pulsed/Sustainment Packages to CRO/ SRO/ MSO	As Required
Class V: Ammunition	Predictive	Pulsed/ Sustainment Packages to CRO/SRO/MSO	Routine Determined by Combatants Battle Rhythm
Class VI: Personal	On Demand	Pulsed/Sustainment	As Required

Table 6-1, Method/Frequency of Distribution/Employment

<i>Class of Supply</i>	<i>Method of Determination</i>	<i>Method of Distribution/Employment</i>	<i>Frequency of Distribution/Employment</i>
Demand Items		Packages to CRO/SRO/MSO	
Class VII: Major End Items	On Demand	MSO	As Required
Class VIII: Medical Material and Repair Parts Discussed in Force Health Protection section	Partially Predictive/On Demand	Sustainment Packages to CRO/SRO/MSO Emergency Resupply via evacuation assets	Routine Determined by Combatants Battle Rhythm
Class IX: Repair Parts	Predictive	Pulsed/ Sustainment Packages to CRO/SRO/MSO	Routine Determined by Combatants Battle Rhythm
Class X: Supplies for Civilian Use	On Demand	MSO	As Required
Water: Bulk Production/Storage	Predictive	Pulsed/Bulk Rack to CRO/SRO/MSO	Routine Determined by Combatants Battle Rhythm

6-62. As depicted in Table 6-1, the method of distribution/employment and frequency of distribution/employment is class of supply dependent and contingent upon whether a requirement is predictive or satisfied on demand. For predictive requirements, CL and modules can be entered into the distribution pipeline on a schedule that will support the established distribution metrics of customer wait time (CWT) and time definite delivery (TDD). For demand items, particularly critical demand items, adequate stockage at appropriate supply nodes must be maintained to support CWT and TDD in order to support the combatant commander and to maintain combat power.

RETROGRADE

6-63. Retrograde is the timely return of serviceable and unserviceable assets back into the distribution system. Excess supplies may be redistributed forwards, backwards, or laterally to other units to satisfy user requirements. The intent is to ensure the return of reparable items for maintenance and reintroduction into the supply base; and the proper disposal of unserviceable items. Unserviceable items will be exchanged forward and pushed backwards to the UEy for proper disposition. Redistribution is part of the theater distribution process that is enabled by in transit visibility/total asset visibility (ITV/TAV). Control and visibility of supplies and distribution assets in the distribution network must begin at the source of supply and continue until the supplies are used or returned to the supply system. Managers at all levels will have visibility of supply and repair parts assets in order to affect maintenance and/or disposal planning and redistribution of serviceable items.

RETROGRADE/REDISTRIBUTION FLOW

6-64. In the HBCT, the BSB provides distribution of supplies to the FSC's during SRO operations. Sustainment replenishment sites (SRS) are established by the BSB or designated UEx elements and serve several different units and functions. One of these functions will include the retrograde of expended or unused supplies, CL modules, or empty CROPs/containers; and repairable parts. Evacuation will take place during SRO and MSO to the SSA in the UEx sustainment brigade, then rearward to the UEy supply source/repair facility. Unserviceable repair parts/components will be replaced and evacuated rearwards to the UEy supply source or facility such as an intermediate staging base (ISB), forward operating base (FOB) or other pre-designated element at echelons for repair, disposition, re-

routing, or further evacuation. Using the CLBT, the ISB or FOB may re-configure these loads, as required, for forward, backwards, or lateral re-distribution.

Inventory Return and Tracking

6-65. Materiel no longer required will be turned in using the standard procedures contained in AR 710-2, *Inventory Management Supply Policy Below the Wholesale Level* and associated pamphlets. The procedures currently used by Army forces for turn-in using MILSTRIP transactions will be used until revised by the emerging Single Army Logistics Enterprise (SALE) System.

6-66. If an entire CL is considered excess upon arrival and requires return processing, the using unit will be provided a turn-in credit based upon the credit values established for the entire load. If a portion of the CL is deemed excess and the return of individual components is necessary, credit is then based upon the credit values of the separate entities, NOT the entire CL. The turn-in process as it pertains to the return of excess material does not change.

6-67. In-transit visibility (ITV) is the leveraging of advanced automation, information, and communications capabilities to track cargo en route from the point of origin to destination and return. It is the most essential component of distribution management. The most common and, error free, way to capture the data to provide for both ITV and total asset visibility (TAV) is through the use of Radio Frequency, Automatic Identification Technology (RF/AIT). This capability resides at the first Supply Support Activity (SSA) level of support. This is the point at which the data is captured and fed into the Standard Army Management Information Systems (STAMIS). This information is further populated to all echelons above their level that require ITV/TAV data.

6-68. RF/AIT technology will also be used to provide visibility of the distribution conveyances as they move within theater as well as when they depart the theater area as part of the retrograde process. Empty CROPs, containers, and other conveyances will be used to retrograde excess supplies and reparables back through the distribution pipeline and will themselves be retrograded for future re-use.

RETROGRADE PACKAGING REQUIREMENTS

6-69. Depot level reparables (DLR), serviceable and unserviceable, whose packaging prescription dictates the use of reusable containers, shall be afforded that protection throughout their life cycle. Not all retrograde materiel requires special packaging. However, retrograde items, such as repair parts, require enough packing protection to keep them from being damaged during shipment, handling and storage.

FIELD SERVICES OPERATIONS

MORTUARY AFFAIRS OPERATIONS

6-70. Recovery operations are conducted to search for, recover, and evacuate human remains for proper disposition. Prior to augmentation from a higher headquarters, the HBCT must plan for and conduct recovery operations. The HBCT has one NCO in the BSB to assist in planning for mortuary affairs (MA). The following guidance should be used for MA operations:

- Upon approval of the commander, the remains may be removed from the site. Ensure that all identification media is safeguarded. Leave all clothing and personal effects with the remains. The remains should be shrouded from view or placed in remains pouches before transport.
- Treat ALL remains with dignity and respect.
- Do not use Class I vehicles for the movement of remains.

- The site must be safe for recovery personnel. It is likely that the site will have hazardous conditions if remains are to be recovered.
- There should be restricted access to the site. Media should not be allowed on the site.
- The location of all remains should be documented prior to removing remains from the site.
- It may be necessary to use host nation labor to assist in the recovery. They should be briefed on search techniques, what they are looking for, and what to do when they find remains, personal effects, or ordnance. Close supervision is the key.
- Procedures must be established for handling deceased local nationals and enemy Soldiers.

6-71. A mortuary affairs (MA) company will be dedicated to each UE to provide for limited search and recovery, identification, disposition, and respectful handling of human remains. The MA team provided to the HBCT will establish a collection point in the vicinity of the BSB and will be capable of processing 20 remains per day. This team will also train HBCT personnel on the proper handling and evacuation of remains. Evacuation of remains from forward areas to the collection point will remain a unit responsibility. Evacuation of remains from the HBCT to UE facilities will occur during MSO operations (METT-TC dependent). See Figure 6-6 for mortuary affairs operations.

MA OPERATIONS IN THE HBCT

6-72. At unit level, remains are tentatively identified and evacuated to the battalion aid station for medical verification. Remains are transferred to the support platoon (forward MA collection point (MACP)) during CRO operations.

6-73. The support battalion collects remains and personal effects and holds remains for evacuation to HBCT MACP during SRO. Augmentation – UE MA collection team (s) establish a HBCT MACP vicinity of the BSB. This team will be in habitual support to the HBCT and be responsible to train HBCT personnel and prepare remains for evacuation to the UE. The following are actions taken by the MACP ICW the HBCT:

- When feasible (METT-TC), the FSC distribution platoon evacuates remains to BSB MACP.
- At the HBCT theater mortuary evacuation point (TMEP), effects and remains are secured and held for evacuation to UE MACP during MSO operations.
- Prompt and effective recovery of all remains from the HBCT area of responsibility.
- Prompt tentative identification of the remains.
- Prompt recovery, inventory, and security of personal effects found on remains.
- Evacuation of remains, with their personal effects secured to them out of the HBCT area to the UEx mortuary affairs collection point (MACP).
- Prompt, accurate, and complete administrative recording and reporting.
- Prompt and adequate care for deceased allied and threat personnel IAW current united nation (UN) agreements.
- Reverent handling of remains and adequate ceremonies and services for deceased.
- Temporary interment of remains (when required and authorized).

6-74. The MACP may not always be available for operational missions. Therefore a technique to ensure that the HBCT can respectfully conduct MA duties is to attach the BSB SPO's mortuary affairs NCO with trained augmentees from the BSB or other units in the HBCT to the distribution company. They conduct MA duties as needed under the C2 of the distribution company commander.

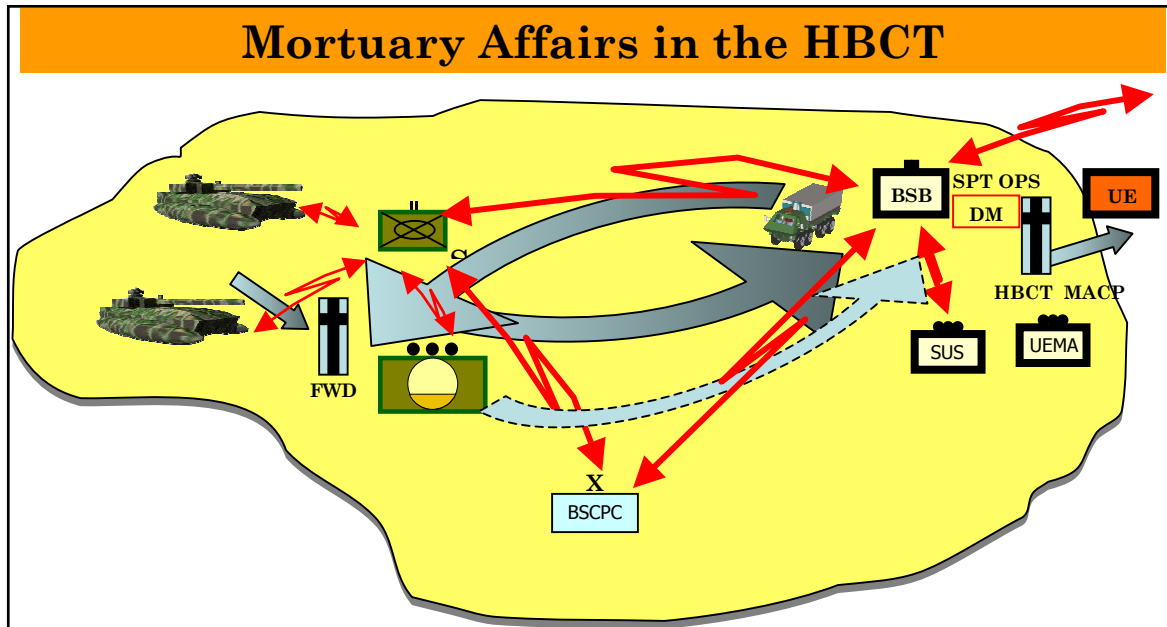


Figure 6-6, Mortuary Affairs Operations

MORTUARY AFFAIRS LEADER AND STAFF RESPONSIBILITIES

6-75. The MA team leader works with the BSB support operations or HBCT S4 as a liaison and technical representative. Forward collection teams establish MACPs at key locations within the UEx's HBCTs (e.g. ATHP or along medical evacuation routes or MSRs). Each forward collection section has seven personnel and can receive, process, and coordinate evacuation of about 20 remains and associated personal effects per day.

6-76. The forward collection point NCOIC in the BSA reports to the BSB commander for command and control. The collection point receives staff supervision from the BSB's MA staff NCO assigned to support operations. The BSB's MA staff NCO is the commander's advisor for all MA issues. The BSB MA staff NCO's responsibilities include:

- Advising the BSB commander on MA issues.
- Training the brigade and BSB units and personnel on performing search and recovery, tentative identification, and evacuation of remains to the mortuary affairs collection point (MACP).
- Establishing the MACP within the BSA.
- Advising on temporary interment policy and the security and disposition of remains and personal effects.
- Planning and coordinating escort of remains.
- Maintaining files, reports, and a situation map on MA support activities.

6-77. The BSB's support operations coordinate the transportation of remains within the BSA. All personal effects found on the remains will accompany the deceased when evacuated to the UEx collection point. Vehicles bringing supplies (except Class I) to the BSA evacuate remains to the BSA collection point as a backhaul mission or by throughput to the UEx collection company or theater mortuary evacuation point (TMEP). For morale purposes and respect for the deceased, remains should always be covered and screened from sight during transportation.

6-78. Temporary interment of remains OCONUS is permitted as a last resort. Every effort should be made to return remains to CONUS as soon as possible. The geographic combatant commander may authorize temporary interments only when operational constraints prevent the evacuation of remains out of the AOR. The expedient and respectful evacuation of deceased personnel is a top priority. However, during extreme situations when the tactical and logistical situations leave no alternatives, a program of temporary interment may be implemented. Temporary interments are a last resort used for health, safety, sanitation, and morale reasons at unit levels and are conducted IAW Joint Pub 4-06 and FM 10-64. These burials are fully documented and promptly reported through MA channels.

SHOWER, LAUNDRY, AND CLOTHING REPAIR (SLCR)

6-79. Hygiene capabilities resident within the QM Field Services Company are provided from the UEy /UEx Sustainment Brigades with projection as far forward as the MSO sites. The goal is to provide Soldiers with a weekly shower and up to 15 pounds of laundered clothing each week (comprising two BDU sets, undergarments, socks, and two towels). The primary responsibility for Soldier hygiene support to the HBCT is provided by the UEx level. There are no hygiene support assets at the HBCT level. See Figure 6-7 for Hygiene and Field Services.

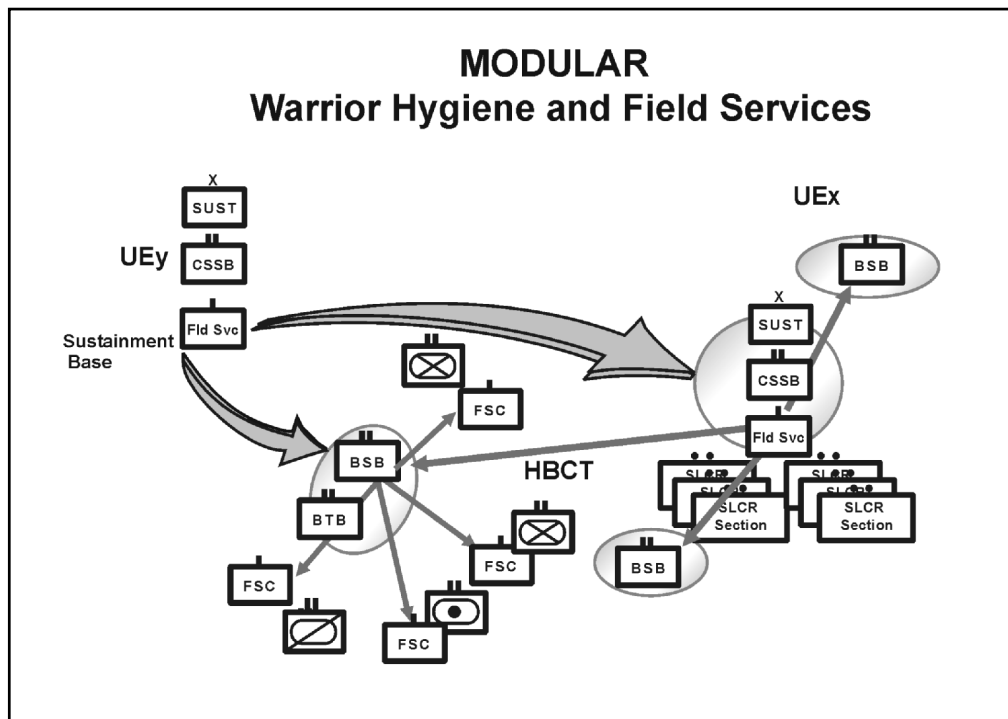


Figure 6-7, Hygiene and Field Services

WATER SUPPORT OPERATIONS

6-80. Modular water sustainment operations can be characterized by a greater degree of self-reliance by maneuver units due to forward mobile storage capability, an improved distribution system characterized by forward distribution within the brigade; organic water purification in the brigade; and more modular and capable sustainment organizations. This added water generation capability, along with the reduction in echelons and mobility

improvements, will eliminate the traditional supply point operations and replace it with distribution based supply operations which will enhance the integration of sustainment into the operational battle rhythm. Modular quartermaster water purification and distribution companies provide tailored water production capabilities, storage, and area distribution in the UEy and UEx as part of the sustainment brigade. Arrival of water units in theater is synchronized in such a way that the water distribution system will expand as the theater matures. See Figure 6-8 for water operations.

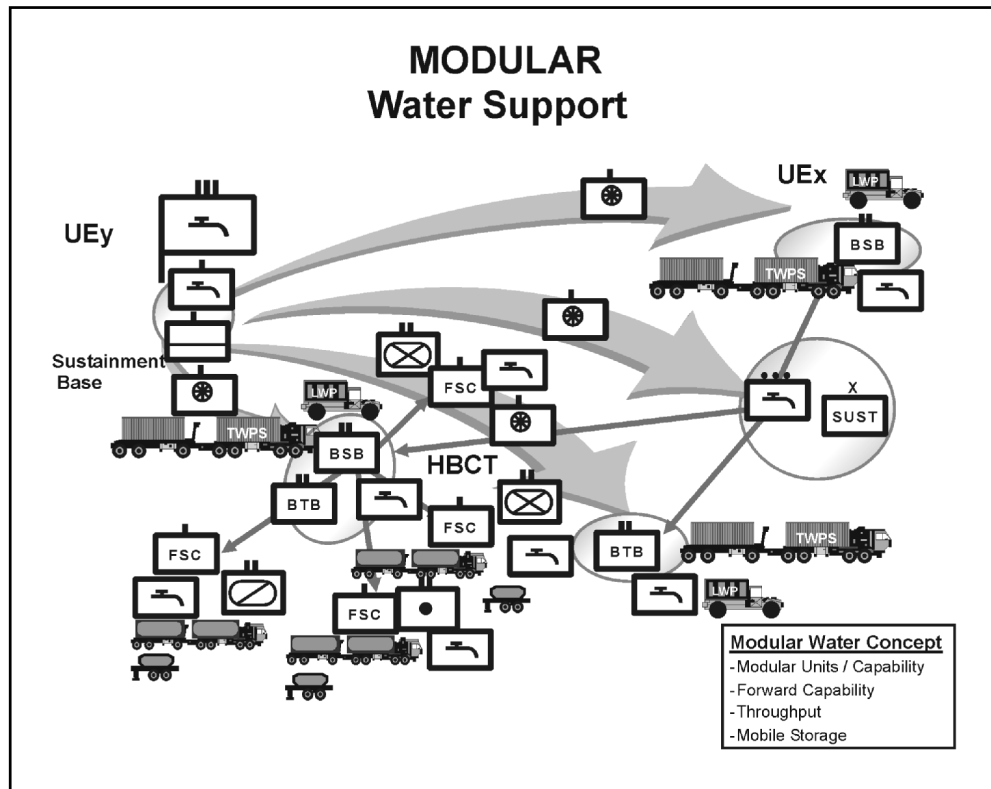


Figure 6-8, Water Operations

WATER PURIFICATION

6-81. In temperate climates, water purification activities are conducted at the port, UEy AO, UEx AO, and within the HBCT, when feasible and as METT-TC allows. Water will then be stored and/or distributed, as required. Within the HBCT, water purification, storage, and distribution will take place in the BSB's distribution company. The BSB has the distribution assets to deliver bulk water forward to the FSC's during SRO operations. The FSC's will in turn distribute water to the units they support as part of the CRO operations. Bulk water purification will not be conducted forward of the BSB; however, vehicle water-generation and individual Soldier filtration devices are being considered for the future force.

6-82. In an arid environment, water sources are limited and widely dispersed. Operations in an arid environment place greater demand on storage and distribution capabilities than in other climatic conditions; therefore, operations in arid environments will require a greater commitment of water assets in the UEy as bulk water will need to be produced at the port, distributed forward and stored at the UEy, UEx, and HBCT's BSB. Water units required in the UEy in an arid environment include Water supply battalions, modular QM Water

purification and distribution companies with arid augmentation, and additional truck units to support line haul distribution of bulk water forward.

WATER PURIFICATION EQUIPMENT

6-83. Water purification, storage, and delivery equipment continues to be the key to establishing an acceptable distribution velocity for water supply. The Lightweight Water Purifier (LWP), a means for providing safe drinking water for early entry operations, has been realized with the modular approach to providing water support. The LWP can support the daily water consumption requirements for 70-225 personnel. There is one TWPS and two LWPs in the heavy brigade BSB to handle the brigade's water requirement. The UEy/UEx sustainment brigade water support units have the 1,500 Tactical Water Purification System (TWPS).

WATER DISTRIBUTION/STORAGE OPERATIONS

6-84. Units will deploy with three combat loads. Water will be resupplied via LOGPACs. The HBCT can be expected to obtain bulk water or commercial bottled water in the theater of operations. The HBCT TOC sustainment cell must ensure that the BSB is provided an adequate water source. Location of that water source is critical to sustainment of the HBCT. Water purification and distribution personnel and equipment are embedded in the BSB's distribution company to support the HBCT. The BSB distribution company will provide one combat load in 2000 gal capacity HIPPOs mounted on HEMMT-LHS pulling PLS trailers during SRO operations. The fuel and water platoon's water section is responsible for the purification, storage, and distribution of bulk water for the brigade.

- The fuel and water platoon in the BSB's distribution company operates one water point and provides storage and distribution up to 30K GPD. The water purification section is capable of purifying up to 1,750 gallons of water per hour.
- An additional combat load in the FSCs distribution platoon Class III Section will be available as mobile storage in HIPPOs mounted on HEMMT-LHS pulling PLS trailers for CRO operations. There is no water purification capability at the FSC and bulk water is received from the BSB during SRO operations.
- The remaining combat load for the HBCT will be at the organizational level, stored in CAMELs and moved with the unit.
- The BSB's Supply platoon is capable of handling packaged water for receipt, storage, and issue operations, but requires additional transportation assets for onward movement (water would be treated the same as dry cargo).

AERIAL RESUPPLY OPERATIONS

6-85. Aerial delivery capability is not resident in the HBCT. Air Force airlift and Army aviation assets may supplement the HBCT's transportation capability. When supply routes become severely disrupted, the use of aerial delivery may be necessary. Units must be prepared to receive both air-dropped and sling-loaded supplies.

ENEMY RISK ASSESSMENT FOR GROUND OPERATIONS

6-86. The receiving commander must consider the enemy's ability to locate his unit by observing the aircraft. Unless conducting the resupply in an area under friendly control and away from direct enemy observation (reverse slope of a defensive position with recon well forward), locate the drop zone (DZ) and landing zone (LZ) away from the main unit in an area that can be defended for a short time. The delivered supplies are immediately transported away from the DZ/LZ. Each unit must know how to select DZs and LZs and receive aerial resupply.

FOUR METHODOLOGIES FOR AERIAL DELIVERY FOR RESUPPLY

6-87. The following discussion on aerial delivery for resupply operations discusses four methodologies to affect these operations: aerial delivery, precision aerial delivery slingload delivery or airdrop delivery.

AERIAL DELIVERY/RESUPPLY OPERATIONS

6-88. Aerial delivery/resupply includes airdrop, airland, and sling Load operations. Due to extended lines of Communication (LOCs), aerial resupply will be critical to the sustainment of the modular and future forces. Use of airdrop, airland, and sling-load operations conducted by HBCT and UEy/UEx elements will be based on the operational distances of the HBCT, and will support both routine and emergency supply actions. See appendix C for aerial sustainment operations by the HBCT and the aviation brigade. See Figure 6-9 for the overall modular aerial delivery/resupply concept.

6-89. **Precision Aerial Delivery** is a combat multiplier, eliminating the need to secure vast sections of the ground LOC (GLOC) against improvised explosive device (IED) and insurgent activity. Aerial delivery offers a sound and safe distribution method that bypasses the traditional distribution system and facilitates delivery to the point of consumption (eliminating multi-handling of cargo). Coupled with the harmonization of the overall distribution system, precision aerial delivery improves distribution, especially to dispersed and remote units. Precision aerial delivery helps to ensure continuous lethality by delivering supplies to combat units in stride. Safe delivery of supplies directly to units (whether they are sustainment units or combat arms units) can be executed from stand-off distances, bypassing the traditional ground-based distribution system, and ultimately enhancing unit effectiveness and protection.

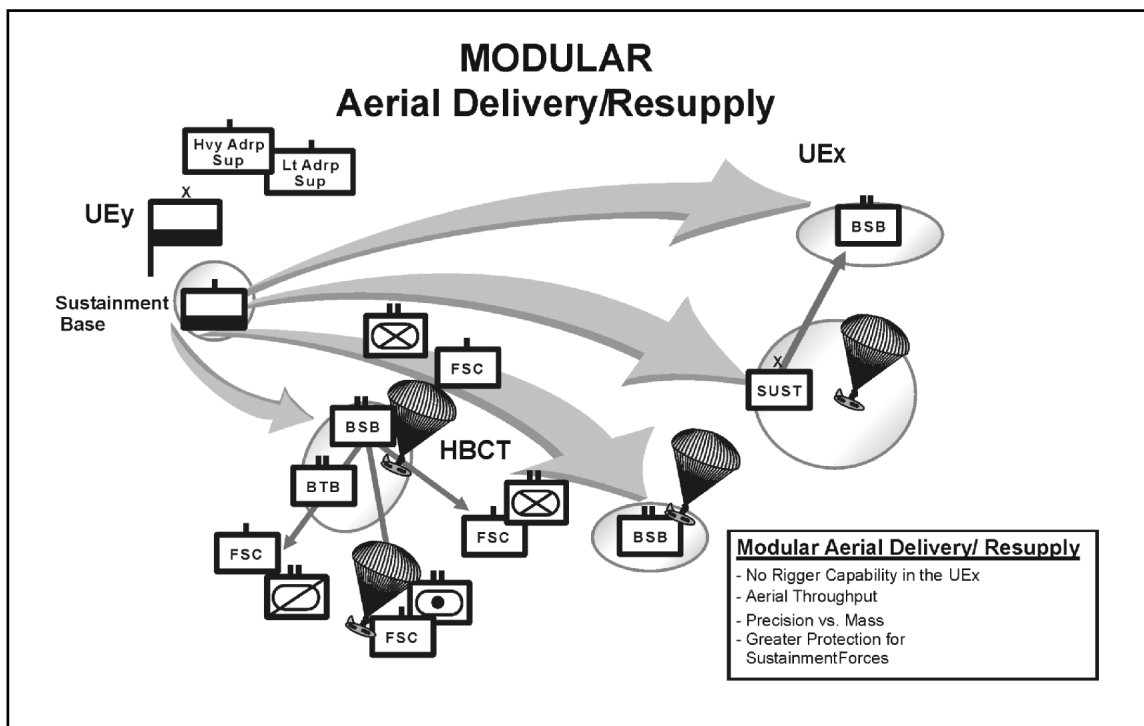


Figure 6-9, Modular Aerial Delivery/Resupply

6-90. Precision delivery eliminates the need to establish and secure large drop zones to execute mass aerial delivery. Supplies are delivered to the designated rigger unit in the UEy (either the heavy drop company or in some cases the Light AD Company (for small bundle loads)). Loads can be delivered to sustainment units and then transloaded to the end user or go directly to the supported company position.

6-91. **Sling Load Resupply.** If sling load is selected as the method of delivery, an Army Aviation unit will be tasked. This unit will be responsible for providing the helicopter at the appropriate place and time, and for flying the mission. They will also advise the supported unit on PZ location selection and the receiving unit on LZ location selection. Sling loading provides for rapid movement of heavy, outsized cargo directly to the user, bypassing surface obstacles; allows the use of multiple flight routes and landing sites, which enhance survivability of the aircraft and the flexibility afforded to the ground commander; and reduces planning cycle time, thus providing a far more flexible and responsive asset. In order to conduct this operation, sling load trained personnel are required in the distribution company of the BSB and the Distribution platoon of the FSC. Sling load trained staff officers are required in the SPO section for planning purposes.

6-92. **Airdrop Resupply.** Airdrop permits throughput of supplies from as far rearward as the national level, directly to the using unit and reduces the need for forward airfields, LZs, and materiel handling equipment, effectively reducing the forward battlefield footprint, as well as, mitigating the enemy threat to traditional surface methods of distribution (i.e. convoy ground attacks). Recovery of airdrop/sling equipment should be conducted by the unit being supported and backhauled to owning unit.

SECTION IV – TRANSPORTATION OPERATIONS

TRANSPORTATION SUPPORT

6-93. Tactical vehicles are the backbone of the support structure. They are mobile, flexible, and reliable. The transportation platoon of the BSB's distribution company and the transportation sections in the maneuver units' FSCs and the equipment mix for an operation depend on METT-TC. Planning factors include the planned flow of personnel and materiel and the availability and quality of the road networks. The right tactical trucks, in the right place, at the right time are essential to the success of any military operation.

6-94. Each echelon centrally controls common-user transport assets to respond to their unit commander's priorities and weight the logistics effort. At HBCT level, the BSB provides transport support under control of the BSB support operations. The HBCT's transportation units can expect to move frequently in response to changes in requirements. FM 4-01.30 has detailed information on transport units and operations.

6-95. The following section describes responsibilities of those involved with transportation management and the automation tools for movement used in the HBCT. It is then followed by a section on transportation in the HBCT.

TRANSPORTATION COORDINATORS' AUTOMATED INFORMATION FOR MOVEMENT SYSTEM II (TC-AIMS II)

HBCT MOBILITY OFFICER IN THE S4 SECTION AND UNIT MOVEMENT OFFICER

6-96. The unit move module of TC-AIMS II has four basic functional areas:

- It stores unit personnel and equipment information.
- It maintains deployment information, and plans and schedules deployments.

- It manipulates/updates information for convoys, rail, and air load planning, and personnel manifesting. Other transportation systems share unit movement information.
- It allows units to update their operational equipment list (OEL) and unit deployment list (UDL) and electronically send the updates through the chain of command to the installation transportation office (ITO).

BSB SPO AND BATTALION/SQUADRON S3/S4

6-97. TC-AIMS II supports unit deployments/movements to exercise sites, and the functions of convoy planning and transportation requirements estimating. The battalion/squadron operations, plans and training staff (S3), the HBCT logistics staff (S4) and the BSB SPO movements NCO prepare a deployment schedule of events/flow table to use as a management tool.

MOTOR TRANSPORT OPERATOR: ALL VEHICLE OPERATORS IN TRANSPORTATION PLATOONS/SECTIONS

6-98. The system supports day-to-day fleet management missions. Integrated with the MTS and AIT equipment, TC-AIMS II effectively manages the tactical-wheeled fleet.

MOVEMENT TRACKING SYSTEM

6-99. The movement tracking system (MTS) provides the capability to identify position, track progress, and communicate with the operators of tactical wheeled vehicles. With positioning and communication satellites, transportation movement control and mode operators can locate and communicate with tactical wheeled vehicle (TWV) anywhere.

6-100. MTS is a satellite-based tracking/communication system consisting of a mobile unit mounted in the vehicle and a base unit controlled/monitored by movement elements control and mode operators. The MTS includes—

- Global positioning system capability.
- Capability to send messages between base and mobile units.
- Capability to locate/track a vehicle position on a map background using personal computer-based software.

6-101. These capabilities provide the communications and tracking necessary for tactical wheeled vehicles to complete and survive distribution missions on the digitized battlefield. As all tactical wheeled vehicles do not have MTS installed, it is important to place vehicles with MTS in the front, rear and center of a convoy, as a minimum for most optimal C2 capabilities with the system. In addition, MTS provides real-time, in-transit visibility of vehicles and cargo within a theater. It also redirects cargo and units based on changes to battlefield requirements and tactical unit relocations. It provides an embedded movement control capability that improves trafficability on main supply routes (MSRs) and reduces the potential for fratricide. As a key logistics enabler, MTS is essential to providing in-transit visibility for distribution and velocity management at the BSB SPO and the FSC command post.

RADIO FREQUENCY IDENTIFICATION

6-102. Radio frequency identification (RFID) uses radio wave transmission and reception to identify, locate, and track objects. Information is stored on a radio frequency (RF) tag with media storage capability similar to a computer floppy disk. Interrogators read and pass information contained on the RF tag attached to vehicles, containers, or pallets. This information passes to a central database. Units attach a RF tag to all major shipments in

theater. RF interrogators are located at key transportation nodes to provide visibility of the shipments en route to final destination. MTS integrates RFID technology to provide total visibility of in-transit cargo.

HBCT TRANSPORTATION OPERATIONS: MOVING THE FORCE

6-103. In order to maximize the HBCT's transportation capability, planners and operators must employ the items discussed below as the principles for all transportation operations in the UEx and, therefore, the HBCT.

UNITY OF COMMAND, CENTRALIZED DISTRIBUTION MANAGEMENT

6-104. Synchronizing movement and materiel management, and maintaining integrated end-to-end visibility of transportation assets, is key to the successful operation of an efficient, fully integrated transportation system at the HBCT level. The movement control NCO in the BSB support operations section performs this function for the HBCT. The intent is to allow throughput to the customer unit whenever possible. This reduces the amount of time spent off-loading and then reloading materiel between vehicles (i.e. echelons are bypassed thereby decreasing delivery time).

INCREASED VELOCITY, THROUGHPUT TO FORWARD AREAS

6-105. Throughput operations bypass one or more echelons in the distribution network or system to minimize handling of cargo and improve velocity on the battlefield. Direct throughput relies on unity of command and situational understanding to effectively implement the use of transportation assets and to divert, re-route, and ensure continuous movement of supplies into, through, and out of the HBCT area. The BSB support operations maintain constant in-transit visibility (ITV) of UEx sustainment resupply convoys entering the HBCT boundary through MTS and other ATCCS. The movement control NCO in the BSB support operations maintains constant ITV of all UEx sustainment resupply convoys in/out of the BSA through movement tracking system (MTS). The BSB movement control NCO also synchronizes delivery schedules via Force XXI battle command brigade and below (FBCB2) with customer units to complete throughput to forward areas. BCS3 allows units down to battalion level to see where their supplies are in the pipeline (i.e. unit gains a logistical common operating picture).

INCREASED VELOCITY, MINIMIZE LOAD HANDLING

6-106. Minimizing load handling of cargo and reducing materiel handling equipment requirements are essential to successful throughput to forward areas. Transportation materiel enabling technologies such as the PLS, HEMTT-LHS, and CROP significantly reduce handling requirements over break-bulk methods. These systems extend distribution throughput capability and enhance velocity through flatrack exchange at the brigade and combat battalion support areas. Transportation managers will coordinate efficient flatrack exchange and maximize flatrack load capacity and retrograde operations.

6-107. The aforementioned items are the basis for movement within the HBCT. Applying them in a combined affects creates a synergy that allows for efficient, effective and distribution management of sustainment within the HBCT. Movement of the HBCT is discussed using these principles.

LOGISTICS MOVEMENT OPERATIONS WITHIN THE HBCT

6-108. The movement of the brigade is coordinated and synchronized with the HBCT S3 and S4. Unless the movements are planned concurrently with the tactical plan, the best plans can be thwarted by road congestion. The brigade S3 manages and approves all tactical

movements in the brigade's battlespace. The brigade S3 must also monitor that all logistics movements are synchronized with the scheme of maneuver. The brigade S4 plans, manages, and monitors all logistics movements with the BSB support operations. The BSB support operations office (SPO) manages and executes the movements and maintains visibility through MTS. See chapter 7 for a more detailed discussion on movement operations by logistics units.

6-109. The BSB support operations office assumes the distribution management center's role in providing continuous and responsive sustainment to the brigade through a variety of STAMIS and the BCS3 managed by the section. The BSB's limited distribution capability relies heavily on support from the UEx for sustainment throughput. The BSB's distribution manager synchronizes the delivery schedule with customer units and transfers information between the brigade S4 and the battalionS4/FSC (via MTS) to schedule and synchronize transportation requirements within or in direct support of brigade or battalion operations. For supplemental transportation support and coordination on inbound and outbound shipments the BSB movement control NCO coordinates with the UEx through MTS.

6-110. The FSC CP assumes the movement and materiel management and maintenance (evacuation) functions as the lowest echelon of transportation support to a BN/SQDN. The FSC CP coordinates with the BN S4 and synchronizes the delivery of all classes of supply with customer units and transfers requirements and capabilities to the BSB support operations (info copy to FSC commander). The FSC CP schedules and synchronizes transportation support and coordinates inbound and outbound shipments with the BSB movement control NCO through MTS.

FIRST DESTINATION REPORT POINT

6-111. A first destination reporting point (FDRP) is normally established along a MSR at or near the HBCT boundary. The FDRP is a point manned by a movement regulating team, a movement control team, or military police that diverts a driver and cargo to an alternate consignee or destination. Basically, FDRPs are logistical information checkpoints. FDRPs support velocity management and situational understanding.

6-112. Even though the HBCT is digitized, a FDRP is routinely required since many echelons above brigade (EAB) supporting units, host nation support, and/or contractors will be non-digitized. The EAB unit or HBCT can operate the FDRP. Optimally, both the HBCT and supporting EAB headquarters have representatives located at the FDRP continuously. Security arrangements, command and control, and communications support must be addressed prior to FDRP establishment. Further amplification of FDRP operations can be included in unit SOPs. Some tasks performed at the FDRP are below:

- Track location of critical supplies.
- Perform movement control functions.
- Provide instructions to convoys.
- Provide and receive latest intelligence.
- Reroute convoys/vehicles.
- Provide information on routes and weather.
- Establish brigade "light line" for black-out driving.
- Linkup point for armed convoy escort vehicles.

FLATRACK MANAGEMENT OPERATIONS

6-113. Flatracks offer tactical efficiencies that serve an increased pace of logistical operations and significantly alter the speed at which sustainment operations are conducted for the warfighters. The key to sustaining these efficiencies and maintaining improved

throughput velocity is flatrack employment, management, and retrograde procedures at each echelon of support. An increased battlespace depth and a reduction of logistics force structure challenge flatrack management and ultimately sustainment of combat power within the HBCT area of operations. Flatrack management is a challenge that must be met in order to successfully sustain combat power on the HBCT battlefield.

6-114. Flatrack employment, management, and retrograde operations are the responsibility of distribution managers integrated at each echelon of support throughout the HBCT area. Flatracks will be dispersed throughout the distribution pipeline, particularly from the HBCT rear boundary to the combat trains command post of a combat battalion or dispersed throughout the area of operation for a noncontiguous battlespace. It is imperative that stringent flatrack management procedures be implemented at the tactical level on an area basis.

BATTALION/SQUADRON SUPPORT AREA FLATRACK MANAGEMENT OPERATIONS

6-115. The FSCs operating CABSA face increased flatrack management challenges because they are mobile units with limited transportation assets to move supplies and retrograde flatracks. (CABSA is the term used, but it references all battalion/squadron support areas for flatrack management) Flatrack management responsibilities within the CABSA rest with the FSC executive officer and the FSC distribution platoon leader. The FSC executive officer flatrack responsibilities include:

- Identifying a proposed flatrack collection point (FRCP) upon occupation of the CABSA in coordination with the FSC distribution platoon leader.
- Managing all common user flatracks on an area basis.
- Ensuring flatrack exchange (providing a back hauled flatrack for every received) procedures are adhered to as a matter of priority.
- Maximizing the use of FSC distribution LHS for retrograding flatracks from the FRCP back into the distribution pipeline.
- Reporting flatrack on-hand quantity by location, status, and condition to the BSB support operations office movement control (MC) NCO.
- Coordinating with the BSB support operations MC NCO for supplemental transportation support when retrograding flatracks from the CABSA FRCP.

6-116. The FSC distribution platoon leader flatrack responsibilities include:

- Identifying a proposed flatrack collection point (FRCP) upon occupation of the CABSA in coordination with the FSC support operations officer.
- Ensuring flatrack exchange procedures are adhered to as a matter of priority.
- Collecting and consolidating empty flatracks across the BN sector.
- Reporting flatrack on-hand quantity by location, status, and condition to the FSC support operations officer.
- Back hauling/cross leveling items on flatracks such as ammunition residue, trash, remains, unserviceable parts/assemblies, as directed by the FSC support operations officer.

6-117. Flatrack exchange is the preferred method for retrograding flatracks from the CABSA. The FRCPs are designated for flatrack consolidation purposes when required and this proposed location is reported to the BSB support operations officer. Logistics release points (LRPs), supply routes, feeder routes accessing supply routes, other collection points, and force protection measures are considered when selecting these locations. The FRCPs can also be collocated within the existing CABSA perimeter or consolidated with adjacent FSCs to maximize force protection resources.

BRIGADE SUPPORT AREA FLATRACK MANAGEMENT OPERATIONS

6-118. The BSB operating in the BSA has flatrack management responsibilities for all flatracks throughout to and retrograding from the brigade area. Flatrack management responsibilities within the BSA rest with the BSB support operations office, supply & services movement control (MC) NCO and the BSB DC transportation platoon leader.

6-119. The BSB support operations MC NCO flatrack responsibilities include:

- Identifying a proposed flatrack collection point (FRCP) upon occupation of the BSA in coordination with the BSB DC transportation platoon leader.
- Managing all common user flatracks on an area basis.
- Ensuring flatrack exchange procedures are optimized using UEx throughput assets as a matter of priority.
- Maximizing the use of BSB DC transportation LHS for retrograding/back hauling flatracks from the FRCP back into the distribution pipeline.
- Reporting flatrack on-hand quantity by location, status, and condition to the movement control office (MCO) at the HBCT and UEx.
- Monitoring the status and location of FSC FRCPs.
- Coordinating with the UEx MCO for supplemental transportation support when retrograding flatracks from BSA FRCP.

6-120. The BSB DC transportation platoon leader's flatrack responsibilities include:

- Identifying a proposed flatrack collection point (FRCP) upon occupation of the BSA in coordination with the BSB support operations office MC NCO.
- Ensuring flatrack exchange procedures are adhered to as a matter of priority.
- Collecting and consolidating empty flatracks/back haul items across the brigade rear area and at CABSA FRCPs.
- Reporting flatrack on-hand quantity by location, status, and condition to the BSB support operations MC NCO.
- Retrograding unserviceable assemblies/parts, supplies, trash, remains, or any back hauled/cross-leveling item on flatracks as directed by the BSB support operations office movement control MC NCO.

6-121. The preferred method for retrograding flatracks from the BSA is flatrack exchange with the FSCs and UEx sustainment replenishment convoys. The FRCPs are designated for flatrack consolidation purposes when required and this proposed location is reported to the BSB movements NCO. When selecting the LRP, supply routes, feeder routes, accessing supply routes, supply support activity, and other collection point locations, force protection measures must be considered. The FRCPs can also be collocated within existing logistical nodes to maximize force protection resources.

FLATRACK REPORTING PROCEDURES

6-122. Accurate daily reporting of flatracks in a unit's area of responsibility by location, status, and condition is critical to efficient management of this crucial asset within the distribution pipeline. A separate report is not required for reporting flatrack status. Flatrack managers roll flatrack status into existing reports. Requests for supplemental transportation to retrograde flatracks on the battlefield are submitted as routine transportation requests through support operations channels. Flatrack procedures outlined in this appendix will be incorporated into unit tactical standing operating procedures (TACSOPs).

SECTION V – ORDNANCE SUPPORT: MAINTENANCE OPERATIONS

6-123. The nature of the modern battlefield demands that the maintenance system repairs equipment quickly and at, or as near as possible to, the point of failure or damage. This requirement implies a forward thrust of maintenance into brigade areas. There the battle is more violent and the damage greater. Maintenance assets move as far forward as the tactical situation permits to repair inoperable and damaged equipment and to return it to the battle as quickly as possible.

6-124. The structure of maintenance units includes highly mobile field maintenance teams (FMTs). FMTs provide support forward on the battlefield as directed by the field maintenance company commander and maintenance control officer. They send people; parts; test, measurement, and diagnostic equipment (TMDE); and tools to forward areas, as required, and redistribute assets when no longer needed.

6-125. The following sections describe maintenance principles, maintenance support levels, specific equipment maintenance and a discussion on the multi-level responsibility for maintenance operations.

MAINTENANCE PRINCIPLES

6-126. Maintenance is central to any mission operational success. A viable maintenance system is agile and synchronized to the combat scheme of fire and maneuver. It anticipates force requirements. A commander who has 65 percent of his combat vehicles operational may wisely delay an attack if he can realistically expect the repair process to have 80 percent ready within 24 hours, if that is what the commander believes is necessary to successfully execute the mission. Alternatively, he can weight the battle by allocating replacement systems. The guiding maintenance principles are—

- **To replace forward and repair rear.** Maintenance activities, with a forward focus on system replacement, task and use the distribution and evacuation channels to push components and end items to the sustainment level for repair.
- **To anticipate maintenance requirements.** To maximize the number of combat systems available, maintenance leaders and managers anticipate the requirements for support by using on-board sensors integrated into equipment design and linked by a distributive communication system. The diagnostic data helps anticipate future reliability and provide maintenance managers the ability to preposition repair parts and maintenance personnel.

6-127. Maintenance is a combat multiplier. When opposing forces have relative parity in numbers and quality of equipment, the force that combines skillful use of equipment with an effective maintenance system has a decided advantage. That force has an initial advantage if it enters battle with equipment that is operational and likely to remain operational. It has a subsequent advantage if it can quickly return damaged and disabled equipment to the battle. Securing this advantage is the purpose of a maintenance system.

6-128. Elements at all levels work together to ensure attaining the strategic goals and objectives. They must have the proper personnel, equipment, tools, and replacement parts. Personnel must be well trained in maintenance theory and maintenance principles of all systems and capable of diagnosing and correcting faults. Additionally, they must have immediate access to high-usage repair parts.

MAINTENANCE SUPPORT LEVELS

6-129. There is only one type of maintenance conducted within the HBCT: field maintenance.

FIELD MAINTENANCE SUPPORT

6-130. Field maintenance support includes operator/unit, DS, and component repair capability designed to repair components and end items for customer units versus the supply system. The multi-capable maintainer will be the cornerstone of field maintenance support. This individual performs both unit and DS tasks to improve system readiness and reduce repair cycle time.

Preventive Maintenance Checks And Services

6-131. Preventive maintenance checks and services (PMCS) initiate most maintenance actions. PMCS is the care, servicing, inspection, detection, and correction of minor faults before these faults cause serious damage, failure, or injury. Command emphasis is vital to ensure an effective PMCS program.

6-132. PMCS programs require trained operator/crews and routine supervisory and implementing procedures. Ineffective command emphasis can lead to cursory PMCS programs that fail to correct deteriorating effects before they adversely affect readiness and combat capability, and unnecessarily burden technical maintenance systems.

6-133. Unit maintenance efforts concentrate on returning equipment to the user quickly enough to influence the outcome of a given task or mission. The operator or crew identifies malfunctions using on-board sensors and visual inspections. Personnel make quick repairs by using on-board spares and tools to perform on system maintenance.

SPECIFIC EQUIPMENT MAINTENANCE CONSIDERATIONS

6-134. Several types of equipment have special maintenance considerations associated with them. The following is a general, not specific discussion of maintenance of signal, and information systems. It also covers maintenance in a CBRN environment.

SIGNAL-PECULIAR EQUIPMENT MAINTENANCE

6-135. Maintenance for signal units has unique characteristics. Combat electronic warfare intelligence units have highly complex, low-density equipment. In such exceptional cases, these units rely on—

- An organic maintenance capability to perform diagnostics and minor repairs.
- On-board spares.
- Forward deployment of FMTs from the UEx, UEy or CONUS by surface or air transportation.

SUPPORT TO INFORMATION SYSTEMS: AUTOMATION CENTRIC

6-136. The Army is rapidly transforming into a highly lethal, technologically advanced fighting force through digitization of its information systems. This transformation to a digital, information-based Army requires a substantial investment in information systems. Thousands of computers are currently being developed, tested, and fielded to enable this transformation. These systems will link commanders and leaders at every level and provide a near real-time common operational picture (COP) of the battlefield. This COP permits commanders to make timely decisions based on accurate information to better control forces, synchronize battlefield operating systems, and achieve decisive victories with minimal casualties.

6-137. Information system support presents a unique challenge for the Army of the 21st century. The spiral development and streamlined acquisition of computer hardware and software have rapidly exceeded the Army's ability to logistically support these systems. The

increased involvement of contractor support on the battlefield further complicates this challenge. Unique, stovepipe systems support many information systems today, particularly command and control devices. These stovepipes often involve a mix of military, DA civilian, and contractor personnel for both maintenance and supply support. The BSB SPO and brigade S4 request maintenance assistance beyond the ability of the HBCT to maintain its equipment from the UEx sustainment brigade.

MAINTENANCE IN A CBRN ENVIRONMENT

6-138. Logisticians avoid operating in a chemically contaminated environment, when METT-TC permits. Reduction in manual dexterity and effects of petroleum product spills on protective over garments particularly degrades maintenance operations. Rather than conduct operations in a contaminated area, logistics units displace at the earliest opportunity, decontaminate their equipment, and resume support operations.

6-139. Avoiding contamination of equipment is easier than decontaminating it. Decontamination is time-consuming and may corrode and damage some types of equipment. When possible, maintenance activities should occupy protected areas like underground garages or concrete buildings to provide overhead cover from liquid chemical agents and shielding from radioactive contamination. Using units decontaminate their own equipment within their capabilities. Equipment turned over to maintenance personnel must be as free of contamination as the using unit can make it. Using units must establish standing operating procedures (SOPs) for recovery, handling, and decontamination of their own equipment.

6-140. When personnel of the using unit are not able to decontaminate equipment, they should mark the equipment with the type and the date/time of contamination. If feasible, they should identify the specific areas of equipment contamination to alert maintenance personnel of the danger. They should also segregate contaminated materiel. When using units cannot decontaminate damaged or inoperable equipment that is critical to the battle, materiel managers should consider equipment replacement.

LOGISTICS UNIT MAINTENANCE CAPABILITIES IN THE HBCT

6-141. The field maintenance company (FMC) of the BSB and field maintenance platoon (FMP) from the forward support company (FSC) supporting combat battalions, are the primary field maintenance providers in the tactical maneuver battle space. Units or elements of the UEx sustainment brigade's maintenance unit may be required to operate in the tactical battle space based on METT-TC.

6-142. The BSB's FMC supports itself and all BDE assigned assets smaller than battalion level that are not assigned/attached to a battalion such as the brigade troops battalion (BTB). In addition, the BSB FMC accomplishes the following:

- Provides back-up recovery, auto/armament, ground support and electronic maintenance and maintenance management to brigade base elements (BSB and the BTB).
- Provides maintenance advice and support to the brigade.
- Serves as the central entry and exit point to the BDE for low density equipment.
- The BSB's FMC is organized with a HQ/maintenance control section and two field maintenance platoons; base and area.
- The base field maintenance platoon (BFMP) provides specialized/ low density and limited back-up support for the BDE (primarily electronic/missile, ground support equipment, and armament).

- The area field maintenance platoon (AFMP) provides support to BDE assigned company level assets (BTB) (primarily automotive, recovery and maintenance teams)

6-143. The forward support company's field maintenance platoon (FMP) provides field level maintenance to a maneuver/combat battalion level organization. It is capable of providing recovery, auto/armament, ground support and electronic/MSL maintenance and maintenance management to the assigned combat battalion.

- The FSC's FMP is organized with a maintenance control section to provide maintenance management for the battalion. In addition it has a base section and FMT as required.
- The FSC's field maintenance platoon (FMP) Base section provides area support for the BN HQ and FSC, in addition to consolidating low density equipment repair (Generator, AC, CHEM QM, electronic/missile, CEWI) for the entire battalion, to include FMTs.
- FMTs are designated to company level, in maneuver and support battalions, for automotive/tracked vehicle maintenance support based on the organization's equipment density.

6-144. These field maintenance units are dependent on distribution delivery/asset visibility and connectivity. They maximize LRU replacement, combat spares (PLL, bench/shop stock) and BDAR. Low density communications equipment repairs are reliant on CL VII floats. Limited redundant or back-up capabilities necessitate reliance on sustainment brigade for this capability.

6-145. The BSB medical company performs medical maintenance.

MAINTENANCE REQUIREMENTS IN THE HBCT

6-146. The maintenance of weapons and equipment is continuous. Every Soldier must know how to maintain his weapon and equipment in accordance with the related technical manual. Leaders at each level must understand maintenance for every piece of equipment in their unit.

SOLDIER/MECHANIC FIELD EXPEDIENT REPAIR: BATTLE DAMAGE ASSESSMENT AND REPAIR

6-147. Battle damage assessment and repair (BDAR) is rapid damage assessment and repair. If required, HBCT or contractor personnel are authorized to bypass components to support a combat mission or enable self-recovery. The purpose of BDAR is to return disabled combat equipment as quickly as possible to the tactical commander. The CTCF implements the commander's guidance on whether or not to use BDAR in lieu of normal maintenance procedures. Such enabling repairs may be temporary or permanent, depending on the repair required. At the completion of immediate combat operations, mechanics will make repairs that will return the equipment to fully mission-capable status. Since it may not be possible to train BDAR techniques in peacetime using actual equipment, the best substitute is to train system-oriented crews and mechanics to understand the principles associated with weapon systems. BDAR actions include:

- Using shortcuts to install or remove parts.
- Modifying and installing components designed for other vehicles or equipment.
- Using parts serving a non-critical function on a like vehicle.
- Bypassing non-critical components.
- Using substitute fuels, fluids, or other POL.

SOLDIER RESPONSIBILITIES FOR MAINTENANCE

6-148. Proper maintenance is the key to keeping vehicles, equipment, and other materials in serviceable condition. It is a continuous process that starts with preventive measures taken by each vehicle crew and continues through repair and recovery efforts by maintenance personnel. It includes the functions of inspecting, testing, servicing, repairing, requisitioning, recovering, and evacuating equipment.

COMPANY ROLE IN MAINTENANCE OPERATIONS

6-149. The company is the echelon at which maintenance must occur. The maintenance crew performs a digital PMCS and passes the requirements electronically to the FMT via FBCB2. The FMT updates the readiness status, orders Class IX in GCCS-A and comes forward to make any repairs required.. In the absence of the digital capability provided by GCCS-A, the crew will conduct the PMCS and prepare the appropriate equipment inspection and maintenance forms (DA Form 2404, *Equipment Inspection and Maintenance Worksheet*, or 5988-E).

6-150. Companies collect the maintenance forms each day, validate them, and forward them via FBCB2 or hard copy to the CTCP and its supporting FMT. During the next LOGPAC operation, the completed hard copy forms are returned to the FMT to document acknowledgement of the maintenance or parts required. Repair parts that do not require FMT assistance are packaged in the BSA and delivered to the FSC which forwards them to the maneuver company during the next LOGPAC.

6-151. The individual Soldier or vehicle crew conducts initial maintenance, repair, and recovery actions on site. Once it is determined that the crew cannot repair or recover the vehicle or equipment, the crew initiates a maintenance CFS using FBCB2. The CFS is sent in accordance with unit SOP to the supporting FMT and CTCP. Once a CFS has been sent, the company can monitor its status through the logistics task management application of FBCB2 (Figure 6-10).

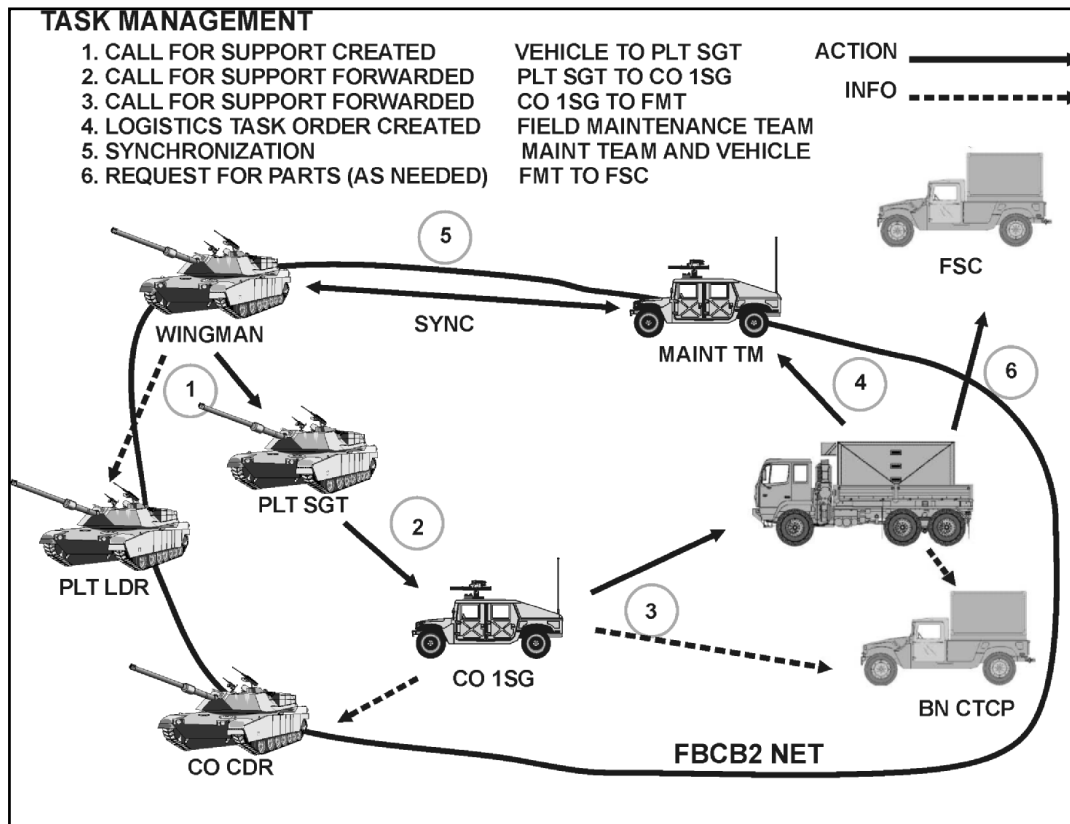


Figure 6-10, Call-for-Support Thread

BATTALION ROLE IN MAINTENANCE OPERATIONS

6-152. The battalion supervises the preventive maintenance work of companies, overwatches the repair work of the FMT, and coordinates officially for limited back-up support from the BSB if the FSC has not already done it unofficially. Technical guidance for the FMT comes from its parent forward support company.

6-153. Daily maintenance management begins with the arrival of the appropriate equipment inspection and maintenance forms to the FMT and MCO. FBCB2 is used to monitor operational status, maintenance requests in process, and repair parts flowing from the BSB.

6-154. The FMT reacts to calls for support for vehicle, B-22 that has been submitted to them by the PSG or 1SG IAW maintenance control office (MCO) priorities developed from the battalion commander's guidance and the company to which it is habitually associated. The FMT generates a logistics task order (LTO) to advise the support requester (and the MCO and the CTCP) of the status of his request. The FMT will assess the damaged or broken equipment and make necessary repairs or order the necessary repair parts. (See Figure 6-9 above.) The FMT requests back-up support or evacuates the vehicle to the CABSA, FBSA or RSSA. Self-and like-vehicle recovery are the primary methods of recovery from site of breakdown to a maintenance collection point (MCP). This process may require a fully mission-capable platform to evacuate an inoperative vehicle.

6-158. Cannibalization is the authorized removal of parts, components, or assemblies from materiel designated for disposal. It supplements and supports the supply system by providing assets not readily available through normal supply channels. During combat, commanders may authorize the cannibalization of disabled equipment only to facilitate repair of other equipment for return to combat. No parts will be cannibalized for stockage. Cannibalization is not authorized during peacetime without approval from the national inventory control point (NICP).

AUTOMATION SUSTAINMENT OPERATIONS: C2 SYSTEMS

6-159. The HBCT depends on a significant number of automated systems to accomplish its missions in both peacetime and wartime operations. Automation is a critical component of gaining information dominance, shaping the battlespace, conducting decisive combat, and protecting the force.

6-160. A major part of the success in leveraging all this automation involves the development of an integrated maintenance plan for keeping all the associated hardware and software operational and functioning. The maintenance plan must be integrated to maximize operator level, field maintenance capabilities within the HBCT and the reinforcing support from the UEX and contractor maintenance capabilities at echelons above brigade.

6-161. Development of a successful automation maintenance plan at the BSB level in support of the HBCT's battlespace involves the following considerations:

- A viable PMCS program for all automated systems that can be executed at operator level (this may entail the local development of automation PMCS kits that consist of compressed air, keyboard covers, lint sheets, and disk drive cleaners for CD ROM disks, magnetic optical disks, and floppy disks). This must be coupled with an established maintenance cycle for automation that focuses on periodic checks and services.
- Clearly defined levels of maintenance responsibility for Soldiers and contractor personnel that define who is authorized to perform certain maintenance related functions as well as identification of any warranty exceptions that may be required.
- Proper positioning on the battlefield of automation related "combat spares"/ASL (cables, T-connectors, keyboards, diskdrives, motherboards, UPS, etc...) that supports the replace forward/fix rear maintenance concept.
- Identification of applicable tool sets and kits needed to support automation maintenance and equipping maintainers at appropriate levels with the proper tools to perform their mission.
- A clearly defined HBCT automation evacuation and repair plan that contains procedures and SOPs for contacting "help desks", packaging and preparation of hardware for evacuation to higher echelons, and issuance of spare or "float" automation equipment. The focus of this plan must be on maximum reduction of repair cycle time.

6-162. Other considerations at HBCT level for automation maintenance include:

- A comprehensive training plan for exposing Soldiers to automation maintenance at the operator level is appropriate. This must parallel vehicle maintenance programs to the degree that maintenance of automation becomes a periodic, sustained process. Automation, like vehicles, must be viewed as combat systems and cared for accordingly.
- Increased operator confidence in troubleshooting and repairing automation systems. Reduce operator dependency on contractors and logistics assistance representative (LARs) from AMC electronic systems support center (ESSC) to solve operator and organizational problems. Free ESSC personnel to focus on isolation

and repair of maintenance faults that cannot be resolved by HBCT's organic maintenance assets.

- Proper positioning of contractor personnel and LARs from AMC ESSC in the brigade area.
- Consideration of the establishment of a "help desk" at brigade level.
- Identifying of duties and responsibilities of various personnel, units, and battle staff sections regarding automation maintenance. Clearly define what tasks and functions that the operators, the CSSAMO, the various S6 sections at different echelons, maintenance units, and contractors are responsible for. Rehearse evacuation and replacement procedures for combat critical automation systems such as FBCB2, BCS3, ABCS (MCS, AFATDS, ASAS, AMDWS), and selected GCSS-A systems.

ORDNANCE SUPPORT: EXPLOSIVE ORDNANCE DISPOSAL (EOD) OPERATIONS

OVERVIEW OF GENERAL OPERATIONS

6-163. The mission of EOD is to support U.S. security operations across full spectrum operations by reducing or eliminating the hazards of explosive ordnance that threaten personnel, operations, installations, or materiel. EOD elements participate in security and advisory assistance, antiterrorism, counterdrug operations, training, ordnance disposal, arms control, treaty verification, and support to domestic civil authorities, and other stability operations and support operations.

6-164. During war, preserving the commander's combat power becomes more challenging for EOD because of the increasingly complex and lethal battlefield. EOD integration into staff planning must be sufficiently explicit to provide for battle synchronization, yet flexible enough to respond to change or to capitalize on fleeting opportunities. EOD missions include—

- Detecting UXO hazards.
- Identifying unexploded U.S. and foreign ordnance.
- Rendering safe UXO.
- Recovering UXO for technical intelligence exploitation.
- Disposing of UXO.
- Advising commanders on UXO hazards and protective measures.

6-165. Explosive ordnance disposal capabilities are not organic to the HBCT. EOD augmentation will be required from ARFOR to support HBCT operations. Once UXO is located and reported, the chain of command to the UEx EOD cell determines what EOD assets may respond. EOD teams may be called forward from an ISB as required. The EOD asset of any service nearest to theater responds. Requests for EOD support flow through the BSB support operations section who then forwards the request to the UEx for support.

ORDNANCE SUPPORT: AMMUNITION SYSTEM

6-166. The ammunition logistics system provides to the force the right type and quantity of ammunition in any contingency. The challenge is to move required amounts of ammunition into a theater from the CONUS sustaining base and other prepositioned sources in a timely manner to support an operation. The system must be flexible enough to meet changing ammunition requirements in simultaneous operations around the world. The objective of the system is to provide configured Class V support forward to the force as economically and responsively as possible to minimize handling or reconfiguring; quickly adapt to changes in

potential threat; introduce new/improved weapons and ammunition; and be more responsive in getting the product to the forces. The unique characteristics of ammunition complicate the system. These factors include its size, weight, and hazardous nature. It requires special handling, storage, accountability, surveillance, and security.

6-167. Effective and efficient ammunition support requires integrated information and distribution management at all levels from the combat user to the CONUS sustainment base. Ammunition managers manage ammunition by MACOM determined stockage objectives. The amount of Class V a unit can carry into combat on its weapon systems is measured in terms of combat or turret loads, except for field artillery, where the unit of measure is the battalion load. That is the amount of Class V that an artillery battalion can move uploaded on its weapon systems as well as with all its organic supply vehicles. See Figure 6-12 for Modular Arm function.

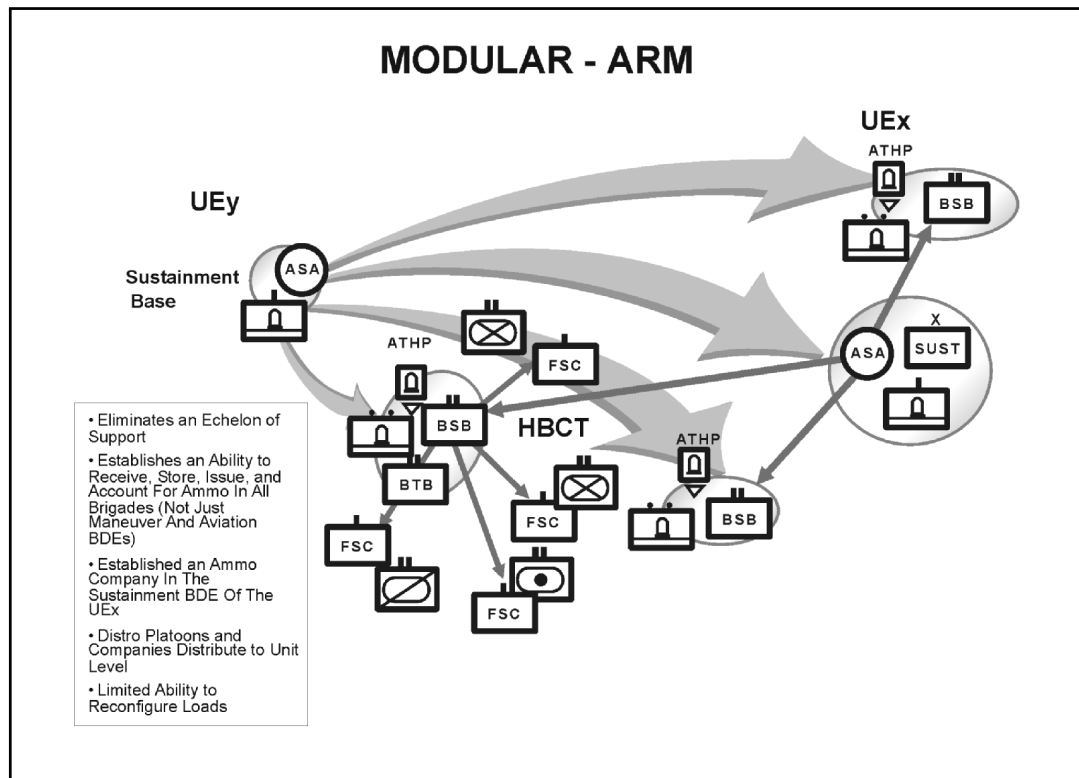


Figure 6-12, Modular Arm Function

AMMUNITION OPERATIONS

6-168. HBCT units deploy with a combat load of personal munitions and a turret load of vehicle munitions. The BSB's ammunition transfer/holding point (ATHP) section does not deploy with sustainment stocks. Munitions will be delivered to the BSA as strategic configured loads (SCLs) or operational configure loads (OCLs) from pre-positioned stocks or CONUS. These SCLs or OCLs will be delivered to unit LRPs on heavy expanded mobility tactical truck-load handling system (HEMTT-LHS) or Palletized Load Systems (PLS) flatracks without repackaging. The flatracks will be left for unit personnel to rearm their equipment. The BSB's HEMTT-LHS/PLS vehicles are the primary ammunition distribution vehicles within the HBCT. Use of required supply rates (RSRs) and controlled supply rates

(CSRs) are critical to munitions management. Ammunition sustainment will depend on the availability of airlift and weather. Oversight of munitions will be a critical function for the HBCT BSB TOC's SPO section and HBCT S4.

AMMUNITION TRANSFER HOLDING POINT (ATHP)

6-169. ATHPs are the most mobile and responsive of the munitions supply activities. The HBCT's BSB has the capability to conduct limited holding of ammunition. UEx storage areas and ASPs deliver ammunition to the BSB's ATHP using UEx transportation assets. This ammunition is kept loaded on semitrailers, containerized roll-on/off platforms (CROPs), or PLS flatracks until ATHP personnel transload it to the BSB DC's vehicles to be delivered forward. If the situation demands, personnel can transfer the ammunition immediately to using unit tactical vehicles.

6-170. The HBCT's Ammunition Transfer Holding Point (ATHP) is located in the brigade support area (BSA). . An ammunition warrant officer is located at each ATHP to control the issue of munitions. The expansion of the ATHP concept designed for the Stryker Brigades to the HBCT design provides an imbedded ammunition accountability and holding capability forward:

- Capability to receive, store, issue and account for Class V forward at the brigade.
- Reliance on the BSB DC transportation platoon and FSC's transportation section to distribute to battalion/company level.
- Limited ability to reconfigure loads.

6-171. The HBCTs now have the former embedded division ammunition office function. The HBCT has an embedded ammunition management function resident in the brigade support operations staff, in addition to an organic 12-Soldier ATHP design, which allows for munitions accountability and limited storage. This section is reliant upon the distribution company and distribution platoons in the forward support company to distribute ammunition to unit level. There is a very limited ability to reconfigure loads at the ATHP level, especially during high intensity operations. With the inclusion of the ATHP section within the HBCT, this provides a threshold doctrinal storage and accountability capability during stability operations and support operations, providing the brigade with the capability to support ongoing munitions needs.

UNIT LEVEL AMMUNITION STATUS REPORTING

6-172. Using the LOGSITREP via FBCB2, unit ammunition on-hand status is reported per unit SOP to the 1SG, with information copies going to the company commander. The 1SG consolidates the unit's on-hand quantities and forwards them using LOGSITREP via FBCB2 to the BN S4, with information copies to the battalion/squadron commander and S3. Company commanders will indicate in their LOGSITREP remarks about any critical ammunition shortages or forecasted changes in ammunition requirements. At the discretion of the company commander cross leveling on-hand ammunition within platoons or throughout the company is accomplished.

DETERMINING/REQUESTING BATTALION AMMUNITION REQUIREMENTS

6-173. The BN/SDRN S4 will determine ammunition resupply requirements based on information provided in the LOGSITREP and guidance received from the battalion commander and S3. The BN will consolidate the entire battalion ammunition requirement. He will then submit company roll-ups for ammunition resupply through the LOGSITREP via FBCB2 to the brigade S4. The brigade S4 will consolidate the ammunition request and pass that request to the support operations officer located in the BSB.

6-174. The support operations officer for the BSB will request the ammunition support from the UEx ammunition officer. The UEx ammunition officer will compare the request with the controlled supply rate (CSR). If the request is within the limits of the CSR, the UEx ammunition officer will order the ammunition from the UEx either to be issued directly to the FSC, or to replace stocks that will be issued from the ATHPs located in the BSA.

6-175. The ATHP, operated by the BSB DC, is responsible for supporting all units located in the brigade that are assigned, attached, have established a support relationship, or as directed by the HBCT commander. Attachment of additional combat forces to the HBCT will require augmentation of munitions handling assets to the ATHP. The BSB should request attachment of medium lift platoon rear ATP sections or RTLS sections based upon projected requirements.

6-176. The ATHP is designed to provide the required lift and transload capability associated with high-volume and high tonnage. The support operations officer of the BSB will coordinate directly with those non-organic units that will be supported by the ATHP. The support operations officer will consolidate their ammunition requirements, and the non-organic units request for resupply will be rolled-up with the brigade's request. Ammunition and explosives will be accounted for and provided proper physical security at all times.

6-177. Until ammunition policy catches up with the redesign of the HBCT, the following methodology for accountability is suggested. This is provided due to the distribution based doctrine that is now used. The BSB DC provides the vehicles and drivers to pick-up and deliver the ammunition forward to the FSCs. In order to maintain a record of who the ammunition was issued to, where it went and when, the use of a DA Form 581 (*Request for Issue and Turn-in of Ammunition*) or TCMD printed by the SASS-MOD can be used. The driver or leader of the LOGPAC can sign the documentation and then return it to the ATHP ammunition officer. If the documentation is lost, then the ATHP ammunition officer writes a memorandum for record as to the loss of the documentation.

AMMUNITION REQUEST VALIDATION

6-178. The UEx ammunition officer validates the brigade's ammunition requests by comparing the amount of ammunition requested against the controlled supply rate (CSR) and the on-hand stocks in the BSB's ATHP. The UEx ammunition officer will take into account the current mission posture, scheduled/future mission posture, and operational guidance. Once all of these factors have been considered, the UEx ammunition officer will either validate the request or adjust it to meet the situation in coordination with the brigade S4 and supported unit. The UEx ammunition officer will then determine based on METT-TC and transportation availability, whether the ammunition resupply will be throughput to the BSB's ATHP, combined arms battalion support area (CABSA) or the FSC forward. Ammunition can be throughput to a cache (a storage location where UEx transportation drops flatracks loaded with ammunition, the ammunition will be closer to the maneuver unit to reduce transit time) unless the tactical situation does not allow delivery that far forward. Prep-fire ammunition delivered as close to the batteries as possible prevents the situation where the artillery ammunition carriers have to up-load after the prep-fire. The ammunition resupply requests and transportation requests are then sent to the UEx materiel management center/UEx movement control center (MMC/MCC), with information copies to the ATHP ammunition officer and the brigade and battalion S4s.

AMMUNITION RESUPPLY

6-179. The UEx materiel management center (MMC), using SAAS-MOD and recommendations from the UEx ammunition officer, then determines whether the ammunition resupply will come from the ASP or the UEx storage area (UEx SA). If the ammunition is coming from the ASP, the UEx MMC cuts a materiel release order (MRO)

directing the ammunition shipment. If the ammunition needs to be brought forward from the UEy ASA, the UEx DMC will submit a request for ammunition resupply to the UEy DMC. Ammunition may arrive in-theater in strategic configured loads (SCLs). The supporting activity will reconfigure the SCLs into operational configured loads (OCLs) prior to transportation asset arrival. The MCC will schedule transportation IAW priorities. The ASP is then notified of where and when transportation will arrive by the MCC. After ammunition has been loaded, the RF tags will be verified along with the correct cargo and destination. All ammunition shipments will be tracked through the movement tracking system (MTS). Delivery coordinates and time will be sent by FBCB2 to the receiving unit/activity, with information copies furnished to the UEx ammunition officer, brigade S4, ATHP ammunition officer, and the BSB support operations section. In the event an ammunition shipment needs to be diverted within the brigade, the brigade commander or designated representative will retain the sole authority to do so. After granted the authority to divert the ammunition, it will be done through the BSB support operations officer using the BCS3, FBCB2, or MTS through free text. Ammunition shipments that need to be diverted within the HBCT will be directed by the BSB commander or designated representative.

SECTION VI –FORCE HEALTH PROTECTION OPERATIONS

GENERAL OVERVIEW

6-180. Force health protection to the future force will be built on three pillars: provide a healthy and fit force, casualty prevention, and casualty care and management to rapidly stabilize wounds/injuries and provide early casualty evacuation.

6-181. Tactical planning is proactive rather than reactive. The FHP mission must be thoroughly integrated with tactical plans and orders. Medical commanders, following the combat commander's guidance, reallocate medical resources as tactical situations change and tailor medical units to adapt to the flow of battle and to meet reinforcement or reconstitution requirements. Elements to reconstitute medical units normally come from the next higher level of HSS resources. Due to the massive destructive and disabling capabilities of modern conventional and CBRN weapons, medical units can anticipate large numbers of casualties in a shorter period. Medical units are flexible. They alter their normal scope of operations to provide the greatest good for the greatest number. However, these mass casualty situations usually exceed the capabilities of local medical units. Key factors for effective mass casualty management are—

- On-site triage.
- Emergency resuscitative care.
- Early surgical intervention.
- Reliable communications.
- Skillful evacuation by air and ground resources.

UNIT/PATIENT FORCE PROTECTION REQUIREMENTS

6-182. Medical personnel may also have to defend themselves and their patients within their limitations. Medical personnel are only authorized the use of small arms for the protection of themselves and the patients in their care. In certain situations, medical units in rear areas or non-contiguous areas must be able to defend against level I threats and to survive CBRN strikes while continuing to support the operation. Medical personnel are not required to perform perimeter defense duties for non-medical units. Due to the protections afforded medical personnel under the provisions of the Geneva Conventions, medical personnel must be exclusively engaged in their humanitarian duties and can, therefore, only defend medical unit areas.

6-183. In the following parts of this section the principles of Force Health Protection are listed and defined. In addition levels of patient care, Class VIII operations, blood management, medical equipment repair, medical treatment and actions taken once a soldier is wounded are discussed.

PRINCIPLES OF FORCE HEALTH PROTECTION

6-184. **Conformity.** Conformity with the tactical plan is the most fundamental element for effectively providing FHP. Only by participating in the development of the operation plan (OPLAN) can the medical planner ensure adequate support at the right time and the right place.

6-185. **Continuity.** Force health protection must be continuous since an interruption of treatment may cause an increase in morbidity and mortality. No patient is evacuated any farther to the rear than his physical condition or the military situation requires.

6-186. **Control.** Technical oversight and supervision of medical assets must remain with the appropriate force-level surgeon. Medical staff officers must be proactive and keep their commanders apprised of the impact of future operations on health service support (HSS) resources. The HSS system must be responsive to a rapidly changing battlefield and must support the tactical OPLAN in an effective manner. The medical commander must be able to tailor medical organizations and direct them to focal points of demand throughout his AO. Treatment performed at each level of care within the HSS system must be commensurate with available HSS resources. Since these resources are limited, it is essential that their control be retained at the highest medical C2 level consistent with the tactical situation.

6-187. **Proximity.** The location of medical assets providing FHP in support of combat operations is dictated by the tactical situation and METT-TC, time and distance factors, and availability of evacuation resources. The speed with which medical treatment is initiated is extremely important in reducing morbidity and mortality. The efficient allocation of HSS resources and the judicious location of medical treatment facilities (MTFs) will minimize medical evacuation time. The MTFs cannot be located so far forward that they interfere with the conduct of combat operations or are subjected to enemy interference. Conversely, they must not be located so far to the rear that medical treatment is delayed due to the lengthened evacuation time. Further, the level of conformance to the Geneva Convention protections may affect the location of the MTFs by the combatants.

6-188. **Flexibility.** Since a change in tactical plans or operations may require redistribution or relocation of medical resources to meet the changing requirements, more medical resources should not be committed nor MTFs established than are required to support expected patient densities. When the patient load exceeds the means available for treatment (mass casualty situation), it may be necessary to give priority to those patients who can be returned to duty the soonest, rather than those who are more seriously injured. This ensures manning of the tactical commander's weapons systems.

6-189. **Mobility.** Since contact with supported units must be maintained, medical elements must have mobility comparable to that of the units they support. Mobility is measured by the extent to which a unit can move its personnel and equipment with organic transportation. When totally committed to patient care, a medical unit can regain its mobility only by immediate patient evacuation.

LEVELS OF MEDICAL CARE

6-190. The medical treatment capabilities of the Army Medical Department are arranged in five levels of medical care. Each level has the same capabilities as the level before it, but adds a new treatment capability that distinguishes it from the previous. The levels of care

extend throughout the theater to the CONUS support-base. See FM 4-02 for a definitive description for the levels of care.

PREVENTIVE MEDICINE

6-191. In past conflicts, DNBI rendered more Soldiers combat ineffective than combat action. Commanders are responsible for protecting their Soldiers from DNBI, and must emphasize and enforce high standards of field sanitation and personal hygiene. Preventive medicine measures (PMM) to counter the medical threat and prevent DNBI are the most effective, least expensive means of providing commanders with the maximum number of healthy Soldiers. There are 5 levels of PVNTMED support which involve PMM:

- Level I PMM are what the Soldier, does to stay healthy and prevent disease (wash hands, eat/drink from only approved sources, maintain good personal hygiene (shower, shave, brush teeth), wear combat ear plugs, use DEET, sleep under bednets, put permethrin in the uniform, buddy system to prevent heat/cold injuries, etc.). In addition to the individual PMM responsibilities, each company-sized unit is required (AR 40-5) to have a Field Sanitation team. This team monitors the individual PMM of the unit and oversees the establishment of collective PMM such as hand wash stations, removal of wastes and garbage from the unit area, latrines, oversight of food service sanitation, etc.
- Level II PMM involves PVNTMED personnel located within the PVNTMED Section of the brigade support medical company (BSMC). These organic PVNTMED personnel monitor the use of PMM, provide training to FLDSAN Teams, conduct limited pest control activities, and recommend actions that would prevent or reduce DNBI within the unit.
- Level III PVNTMED support involves PVNTMED Detachments. These detachments provide area support and supplement organic PVNTMED activities. These units have the capability to conduct area wide pest control activities.
- Level IV PVNTMED support involves in theater laboratory support that analyzes samples taken by lower level PVNTMED assets.
- Level V PVNTMED support involves out of theater, usually CONUS, reach-back support for information, data analysis, additional sample analysis, and other specialized support. See FM 21-10 for FLDSAN/PMM and FM 4-02.17 for Preventive Medicine Services.

COMBAT OPERATIONAL STRESS CONTROL

6-192. Combat operational stress control (COSC) conserves the fighting strength by minimizing losses due to combat operational stress reactions (COSR), battle fatigue, and neuropsychiatric disorders. The focus of Army COSC is on—

- Promoting positive mission-oriented motivation.
- Preventing stress-related casualties.
- Treating and the early detection of Soldiers suffering from battle fatigue.
- Preventing harmful combat stress reactions, such as misconduct stress behaviors and post-traumatic stress disorders.

6-193. The brigade support battalion provides COSC support. It receives further support from CSC companies or detachments assigned to the UEx and EAC medical brigades. FM 22-51, FM 8-51, and FM 6-22.5 discuss COSC programs and activities.

CLASS VIII

MEDICAL LOGISTICS AUTOMATION SYSTEM

6-194. Brigade medical elements will use a medical logistics automation system to requisition Class VIII. Users of this system in the brigade include combat battalion/squadron medical platoons, and the BSMC. The Theater Army Medical Management Information System (TAMMIS) Customer Assistance Module (TCAM) is the primary source of Class VIII line item requisitions from the highest supporting supply support activity (SSA)/MEDLOG element, when connectivity is available. When connectivity for medical logistics automation systems is not available and/or not operational, other methods will be employed. These methods may include paper requisitions, coded requests by radio/telephone, or by a disk copy. All Class VIII resupply requisitions are submitted to the highest level supporting SSA. The BMSO submits its Class VIII resupply requisitions to the highest level supporting MEDLOG element. This is accomplished using the current MEDLOG system that has connectivity to the supporting MEDLOG element or by other means as coordinated or other procedures required by the supporting MEDLOG element.

MEDICAL LOGISTICS OPERATIONS

6-195. Class VIII management will be accomplished by BMSO and the battalion HHC medical platoons/BAS using the TAMMIS Customer Assistance Module (TCAM). These enablers provides brigade medical elements a direct link with the BMSO and with supporting MEDLOG element. The health service materiel officer (HSMO) of the BMSO and the MLO of the BSB support operations section coordinates and manages Class VIII resupply for HBCT medical units/elements. Each maneuver medical unit maintains its own basic load of 3 days of medical supplies and the BMSO has 5 days of critical ASL medical supplies. The UEx MEDLOG company is normally in direct support of the HBCT. Once the DS relationship is established, it provides Class VIII resupply for the HBCT and UEx medical elements.

6-196. During deployment, lodgment, and early buildup phases, medical units operate from planned, prescribed loads and from existing pre-positioned war reserve stockpiles identified in applicable contingency plans.

6-197. During the initial employment phase, each BMSO will receives a preconfigured medical resupply push-package every 48 hours, as required, from pre-positioned stock or the continental United States (CONUS) base. Preconfigured medical resupply push-packages will continue until appropriate units of the UEx MEDLOG company are established.

6-198. Initial resupply efforts may consist of preconfigured medical supply packages tailored to meet specific mission requirements. Preconfigured push-packages will normally be shipped directly to the BMSO until replenishment line item requisitioning is established with the supporting MEDLOG element. During this time, medical company treatment and ambulance teams deployed with maneuver elements are resupplied from their BMSO. Battalion medical platoons/ BASs will receive standard push-packages every 12-24 hours, as required. Contents of push-packages can be adjusted as the battle changes. Line item requisitioning will be by exception only during this time. While resupply by preconfigured packages is intended to provide support during the initial phase, continuation on an exception basis may be dictated by operational needs. Planning for such a contingency must be directly coordinated with the BSB MLO and BSMC HSMO who coordinates further Class VIII resupply requirements with the supporting MEDLOG element. The BSB support operations MLO and the BMSO HSMO coordinate all Class VIII requirements for the HBCT with the highest level supporting MEDLOG element as appropriate.

6-199. The HBCT medical elements use TCAM to requisition Class VIII. The TCAM system is the primary source for Class VIII line item requisitions from the BMSO. See Figures 6-13, 6-14, and 6-15 for Class VIII requisitioning and resupply flow for the theater.

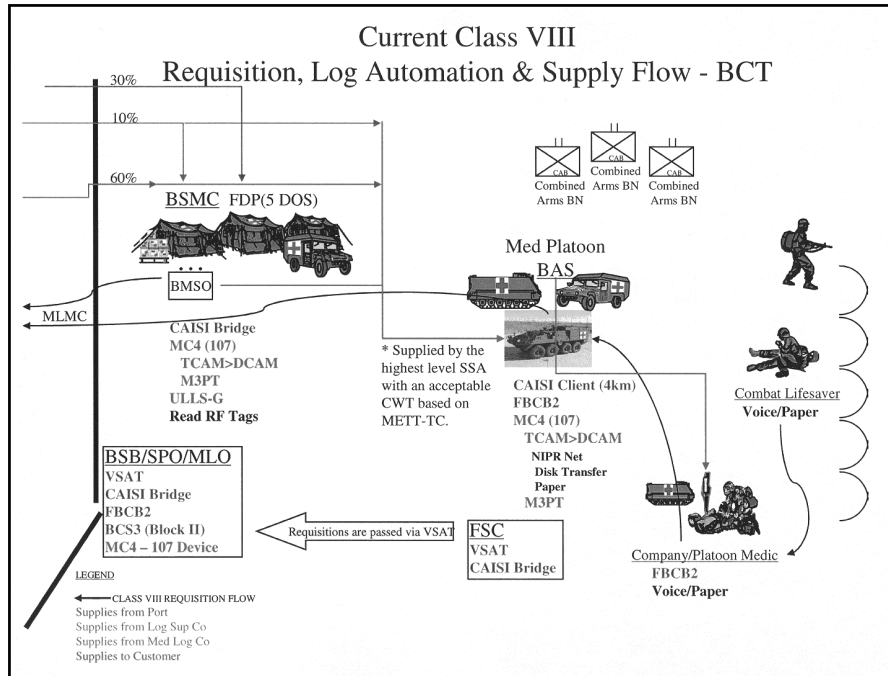


Figure 6-13, Class VIII Requisition Flow HBCT

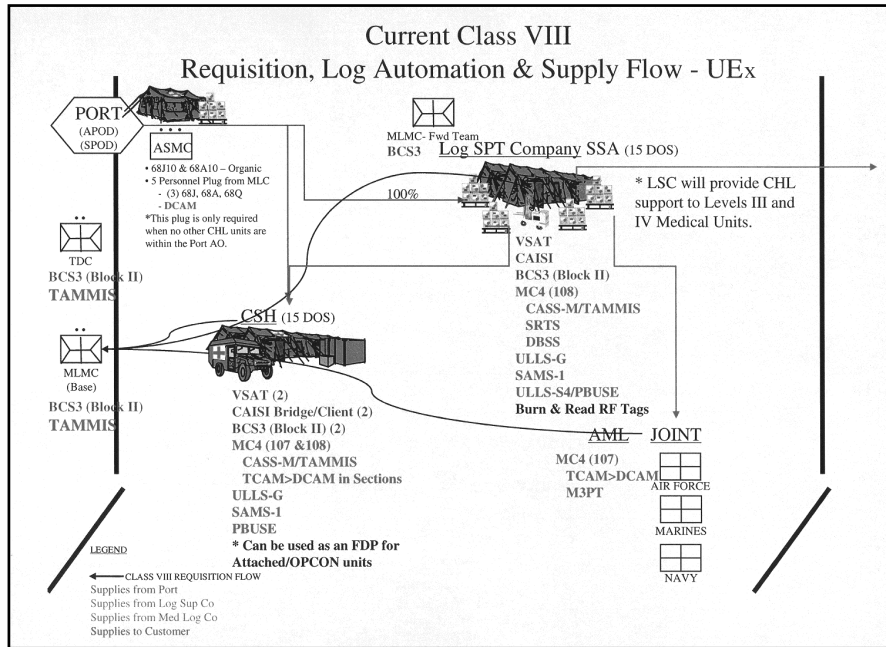


Figure 6-14, Level II Class VIII Resupply UEx

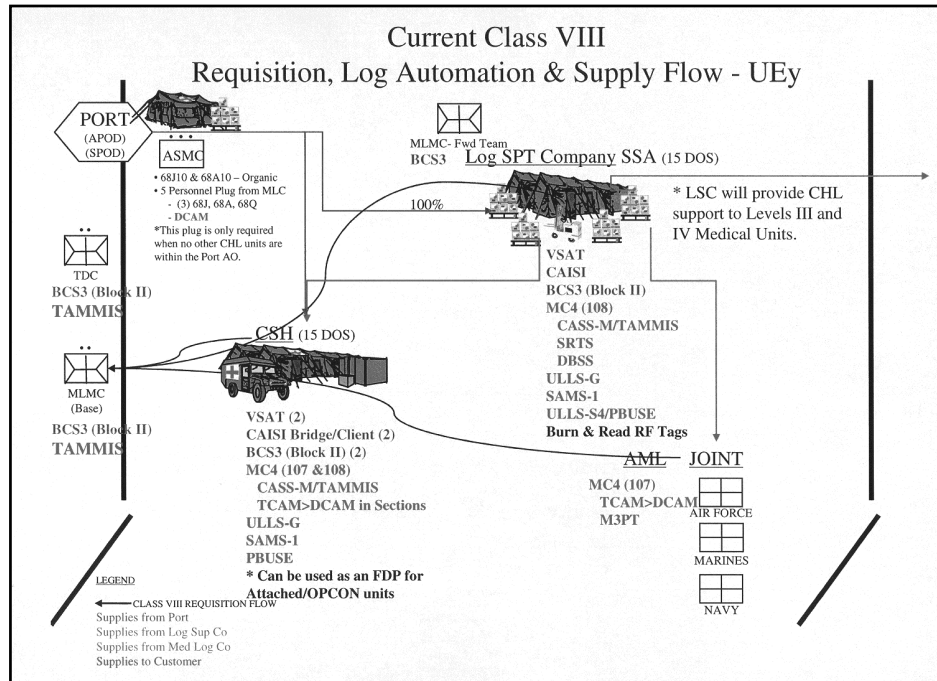


Figure 6-15, Level II Class VIII Resupply UEy

ROUTINE CLASS VIII REQUISITIONS

6-200. Routine requisitions from battalion medical platoons for Class VIII resupply are via a digital, voice, or paper request and sent to the BMSO. If the Class VIII digital system (TCAM) is non-mission capable then other the other methods discussed should be used.

6-201. The FBCB2 could be used to a request for Class VIII supply. The voice procedures for requisitioning of Class VIII need to be spelled out in the TSOP.

6-202. The best method is to establish a 20- to 30-line sheet with numbered resupply items listed. For example, line 1 would be cravats, line 2 would be ringers 1000 ml, and so forth. The radio report would be given a standard report name in the communications SOP. When the individual calls in the request, he would state “Report XXX, line 1-15, line 2-12,” and so forth.

6-203. The BSS receives daily updates on the status of Class VIII resupply from the BSB support operations MLO. The BSB support operations MLO coordinates shortfalls in throughput distribution with the supporting MEDLOG element. The BSB support operations MLO may update priorities with the supporting MEDLOG element to correct deficiencies in the delivery system. The supporting MEDLOG element will forward information to the BSB support operations MLO and to the HSMO of the BMSO on items filled and shipped and on those requisitions that were not filled.

EMERGENCY CLASS VIII REQUISITIONS

6-204. Emergency requisitions from battalion medical platoons are submitted to the BMSO. If the BMSO is unable to fill the request, the requisition is forwarded to the MLMC for action.. Emergency requisitions from BMSO are sent through the BSB support operations MLO to the supporting MEDLOG element for immediate resupply. The MLO maintains a critical shortage list of Class VIII items to ensure visibility of the requisitions and updates the BSS daily on the critical Class VIII items list. This is accomplished utilizing Joint Medical Asset Repository (JMAR) or Telnet into TAMMIS. The HSMO of the BMSO maintains a record of the requisition until it is filled and notifies the MLO when these requisitions are shipped to the requestor. All emergency requests received by the supporting MEDLOG element are processed for shipment by the most expedient transportation available. The support operations MLO report all emergency Class VIII requests to the HBCT BSS.

DELIVERY OF CLASS VIII

6-205. Routine delivery of Class VIII to the requesting medical units in the HBCT are accomplished by logistical packages (LOGPACs) via combat logistics patrols and non-medical transports. Shipment of these Class VIII LOGPACs from the MEDLOG element is coordinated with the UEx movement control officer (MCO). The management and in-transit visibility of Class VIII delivery is accomplished through document number, transportation number tracking and RF tags. The systems that work together to provide this management and coordination are TAMMIS, transportation coordinator's automates information for movement system (TC-AIMS), MTS, and global traffic network (GTN). These systems are located in the MEDLOG element and the BSB support operations section. In some cases, delivery of medical materiel into the HBCT AO may also be achieved through use of the directed Class VIII resupply using medical evacuation resources that are returning to the HBCT's medical units. From the BMSO delivery of Class VIII to battalion medical platoons via LOGPAC or non-medical transports is coordinated by the BMSO with the BSB MLO. For directed Class VIII resupply, transmission of data will be by FBCB2, MSE or amplitude modulation (AM) radio if allowed. Note that if MSE is used, the unit must accomplish prior coordination with the brigade G-6 to obtain a net encryption system or other encryption hardware system in order to send data. The BMSO will use current MEDLOG system, FBCB2, radios and telephones, FAX, and GCSS-A for requisitioning and monitoring Class VIII requirements for the HBCT.

BLOOD MANAGEMENT

6-206. Blood requirements for the HBCT are determined by the HBCT surgeon based on the casualty estimates. Only packed liquid red blood cells are expected to be available to the brigade. Blood products are shipped to BS MC Level II MTFs by the blood support platoon of the Logistic support company. The BSB MLO based on the brigade surgeon's blood requirement estimates, submits a blood request to the EAB blood support platoon or to the Area Joint Blood Program Office. The BSMC treatment platoon submits the blood status report through the support operations MLO to the blood support element. The BSMC treatment platoon submits requests for blood through the BMSO to the support operations MLO to maintain blood supply stock. The support operations MLO keeps the BSS informed on the status of blood at the BS MC. Shipment of blood from the EAB blood support element to the BSMC is coordinated by the blood support element with the EAB movement control center (MCC). It is then transported to the requesting BSMC by dedicated medical vehicles (air and ground).

6-207. The blood support element notifies the BSB support operations MLO when the blood is shipped. Emergency resupply can be accomplished by air ambulance or by medical

personnel on nonstandard medical transports. All blood products issued to the BSMC will be in accordance with TM 8-227-12 and will be distributed to the treatment platoon (area support squad medical laboratory element) for storage, managing, monitoring, and further distribution. The treatment platoon is responsible for the preparation of the blood situation report. Blood products for the supporting forward surgical team (FST) will be issued directly to that unit for use, management, and reporting. See FMs 4-02, 4-02.1, 8-55, and Technical Manual (TM) 8-227-12 for definitive information on blood management.

MEDICAL MAINTENANCE

6-208. The medical equipment repair performs unit-level medical maintenance on organic equipment assigned to the BSMC and for supported and attached units. The HBCT is dependent on the MEDLOG element for medical maintenance support to include medical standby equipment for temporary issue to HBCT medical elements. The HBCT is dependent on the supporting MEDLOG element for field-level/sustainment-level medical maintenance service for the HBCT and its UEx medical augmentation elements. The HBCT may also require assists with unit-level maintenance of medical equipment. See FM 4-02.1 for definitive information on medical maintenance for the HBCT.

SOLDIERS WOUNDED IN ACTION

6-209. Medical treatment of wounded or injured Soldiers during combat operations is a continuous, progressive operation that occurs in a series of separate but interconnecting stages. It involves personnel, equipment, and facilities at virtually every level of the organization. The normal flow of medical treatment for combat casualties is from the injury site to the casualty collection point to the battalion aid station to the brigade support medical company. The following paragraphs discuss responsibilities at each phase of this process.

6-210. **Injury Site.** The combat lifesaver (CLS) is almost always the first person on the scene to begin the process of providing enhanced first aid to wounded and injured personnel. The CLS is a non-medical Soldier trained to provide enhanced first aid and lifesaving procedures beyond the level of self-aid or buddy aid. The CLS is not intended to take the place of medical personnel but to slow deterioration of a wounded Soldier's condition until medical personnel arrive. The vehicle commander is responsible for ensuring that injured crewmen receive immediate first aid and that the commander is informed of casualties. He coordinates with the 1SG and company senior medic for ground evacuation.

6-211. **Company Casualty Collection Point.** At the company CCP, the senior company medic (a trauma specialist) conducts triage of all casualties. He takes the necessary steps to stabilize their conditions and initiates the process of evacuating them to the rear for further treatment. He assists the 1SG in arranging medical evacuation via ground or air ambulance or by nonstandard evacuation platforms. The battalion medical platoon habitually positions an armored ambulance crew with each company CCP. This crew has an emergency care sergeant (vehicle commander), an emergency care specialist, and a driver. When in DS of the HBCT maneuver company, the ambulance crew assists the company medical personnel with treatment and medical evacuations of ill, injured, or wounded company personnel. While in DS of the company, the ambulance crew is directed by the company 1SG and senior company medic. If required, the ambulance crew provides medical evacuation of company personnel from platoon and company CCPs to a supporting treatment team or to the battalion aid station (BAS). In mass casualty situations, nonstandard platforms may be used to assist in casualty evacuation as directed by the unit commander. The time of evacuation from the injury site to the BAS is optimally less than 30 minutes and not greater than two hours. The BAS is normally located one or two terrain features behind the supported unit so as to facilitate timely evacuation of casualties.

6-212. **Battalion Aid Station.** The BAS provides emergency medical treatment (EMT) and advanced trauma management (ATM) for the battalion. Only procedures necessary to preserve life or limb or enable a patient to be moved safely are performed at the BAS. Patients are evacuated from the BAS by BSMC ambulances. The BSMC positions an ambulance at each BAS. It may use an AXP and or ambulance shuttle system to evacuate patients to the BSMC Level II MTF. (See FM 8-10-6 for definitive information on an AXP or ambulance shuttle system.)

6-213. **BSB Medical Company.** The BSMC and Level-II medical care for the HBCT. The BSMC establishes a medical treatment facility to conduct routine medical treatment and advanced trauma management for wounded and DNBI patients. It also provides medical evacuation from the BAS to the BSMC, patient holding, combat operational stress control (CSC) support, Class VIII resupply, preventive medicine support, medical equipment maintenance, x-ray, laboratory, and operational dental care. The BSMC augments the combat battalion MTF as necessary and provides area medical support to the HBCT AO. (See FM 4-02.6 for information on the operations and functions of the BSMC.)

OPERATIONS AND CLINICAL CAPABILITIES FOR HEALTH SERVICE SUPPORT

6-214. Operations and clinical support within the HBCT are based upon several key principles:

- Integrated and task-organized medical support forward to combat and combat support formations (medical platoons, sections, and individual medics).
- Treatment in forward areas, focused on stabilization and sufficient care to permit evacuation provided by trained and credentialed personnel according to the core competencies of their MOS.
- Emphasis on rapid ground medical evacuation during the 96-hour initial entry.
- Centralized management of medical assets within the HBCT; tailoring and augmentation of forward organic medical elements as required.
- Reinforcement and or augmentation support that is tailored to meet the needs of medical elements organic to combat arms elements operating in forward areas. High levels of training for self-aid, buddy aid, and combat lifesaver procedures.
- Medical and environmental surveillance to monitor or identify the medical threat and recommend preventive medicine measures to counter identified or potential health threats.
- Soldiers RTD at the lowest possible.

6-215. The medical force package is integrated into HBCT OPLANs and tailored as required to meet operational requirements by the HBCT surgeon. Using FBCB2, medical communications for combat casualty care (when fielded), and other digital enablers and communication systems, medical units and elements, including treatment and evacuation platforms, ensure medical situational understanding. This situational understanding enhances during operations by decreasing reaction time. Force health protection activities are sustained through responsive support. Reach operations to the sustaining base can place medical expertise in forward areas, enhancing care for the wounded or injured Soldier. They also establish the sustaining base link for continuity of care and support of the footprint within the HBCT AO. This capability maximizes the Soldier's potential RTD and also supports the Army's commitment to the safety and survivability of the Soldier.

6-216. The trauma specialist locates, acquires, and provides emergency medical treatment to battlefield casualties. He receives assistance from the combat lifesaver (who provides advanced first aid) and from Soldier self-aid and or buddy aid. The trauma specialist

performs emergency treatment under the medical direction of a physician or other credentialed providers. The trauma specialist—

- Serves as a clinical technician in inpatient and outpatient areas of MTFs.
- Performs basic force health protection care for individual Soldiers and small units.
- Is trained in combat, stability operations, and support operations care; medical care for patients exposed to weapons of mass destruction; deployable medical systems; aircraft and ground evacuation; and casualty triage and processing.

6-217. The trauma specialists of a medical company or troop must be trained and or credentialed in several areas of core competencies. (See FM 4-02.6 for definitive information.) The core competencies are examples of specific skills that establish the scope by which patients are stabilized by the trauma specialist and then evacuated by the unit's organic ambulances. Treatment teams based in M577A2 tracked carriers are the primary forward treatment platforms throughout the HBCT. The organic treatment capabilities of the combat arms battalion are augmented when required by BSB assets. Patients are evacuated to the BSMC Level II MTF by the BSMC's pre-positioned HMMWV ambulance-based evacuation teams when they require the clinical capabilities available at the BSMC. Forward positioned area support physician and physician assistant-led advanced trauma management team mitigates the increased evacuation times caused by the initial lack of organic or DS aeromedical evacuation.

6-218. Ambulances with vehicle “hardening” are able to move forward protected from some small arms and indirect fire (missiles and or shrapnel), which provide protection for the patient and medical team. Medical evacuation includes en route care enhanced by the trauma specialist and by a protected vehicle environment with adequate lighting and accessible medical equipment. The HMMWV ambulance is the primary evacuation platform for the BSMC's evacuation teams. The use of AXP's and ambulance shuttle systems will be METT-TC dependent and evacuation will be nonlinear based on the Soldier-patient's medical needs.

6-219. The evacuation missions that are most problematic are those conveying the seriously wounded Soldier-patient who cannot tolerate delays. All evacuation assets are integrated parts of the digitized HBCT formation, which helps to reduce the risk of movement along an MSR. However, due to the decentralized and nonlinear nature of HBCT operations, commanders must include provisions for protecting ambulances IAW METT-TC. Certain evacuation missions are routine and can be planned in advance with route clearance and escort. Commanders are responsible for ensuring that treatment teams and patient collection points are positioned to reduce timelines. Expanded care and further evacuation depends upon the enhanced diagnostic, patient holding, and reach capability resident in the BSMC linked to Army, joint, or sustaining base medical support.

HEALTH SERVICE SUPPORT AUGMENTATION

6-220. The BSMC is may be augmented with a UEy forces pool forward surgical team and a forward support medical evacuation platoon (FSMP).

Forward Surgical Team

6-221. The FST is staffed with sufficient medical personnel to service two operating tables. It is organized into four areas: administrative function, triage/preoperative resuscitation function, initial surgery function, and postoperative nursing care function. The mission of the FST is to provide urgent, initial surgery for otherwise non-transportable patients to enable them to withstand further evacuation. This small, lightweight surgical team is designated to provide surgical augmentation to brigade-level medical companies and cannot stand alone. It also provides postoperative acute nursing care for up to eight patients,

simultaneously, prior to further medical evacuation. See FM 4-02.25 and FM 4-02.6 for definitive information on the FST.

FORWARD SUPPORT MEDICAL EVACUATION PLATOON

6-222. The FSMP consists of flight and support personnel to provide UH-60 medical evacuation helicopters. The mission of the FSMP is to provide medical evacuation from forward areas back to the BSA. Because of the expected dispersion of HBCT units, medical evacuation by air ambulance will be the preferred method for evacuating patients. When air ambulances operate in the HBCT AO, they will require A2C2 support from the HBCT. See FM 8-10-26 for definitive information on the FSMP operations.

COMMUNICATIONS CAPABILITY TO SUPPORT FORCE HEALTH PROTECTION OPERATIONS

MEDICAL COMMUNICATIONS FOR COMBAT CASUALTY CARE (MC4)

6-223. The MC4 program is the Army's implementation of the Department of Defense (Health Affairs)-sponsored Joint TMIP. The MC4 will field the computer infrastructure required to run the TMIP medical function software. Additionally, MC4 will develop any software required to meet Army-unique medical information requirements, and will provide integration of the TMIP software with Army Command and Control (C2), Battle Command Sustainment Support System (BCS3), and communications systems. The MC4, with the TMIP software will provide a medical information system linking all levels of care in a theater of operations and provide reach-back to sustaining base medical systems.

6-224. **Capabilities.** The MC4 will allow all levels of care to exchange digital medical information. Through its reach-back capabilities, MC4 will facilitate the maximum use of theater and sustaining base medical specialty skills, diagnostic capability, and treatment regimens. The MC4 system will also provide the medical data required by command surgeons for near real-time medical surveillance. Finally, the system will provide combat commanders with near real-time medical situational understanding through an interface between MC4 and Global Combat Support System—Army/Battle Command Sustainment Support System—BCS3). The MC4 system will integrate with other emerging Army programs such as Land Warrior and the Electronic Information Carrier (EIC).

6-225. **Theater Army Medical Management Information System.** This current Army legacy system interfaces with the medical logistics (MEDLOG) from the BMSO to UEy level 4 MEDLOG elements. Currently TAMMIS is used primarily for medical supply.

6-226. *The TAMMIS Customer Assistance Module.* The TAMMIS Customer Assistance Module (TCAM) is a windows-based extension of the TAMMIS medical logistics module. It allows customers to order medical supplies, review catalogs and check order status and on-hand balance as well as available substitutes. The TCAM can be used anywhere in the world using an internet connection that can be hard-wired or dialed up using satellite communication.

6-227. **Force XXI Battle Command Brigade and Below System (FBCB2).** The FBCB2 is a digital battle command INFOSYS with a hardware/software suite that digitizes C2 at brigade level and below. The FBCB2 provides a common operational picture enabling logistics providers to maintain the operations tempo (OPTEMPO) set by maneuver commanders. The logistics e functionality on FBCB2 includes logistics situation report (LOGSITREP), personnel situation report (PERSITREP), supply point and field services status reports, command tracked item list (CTIL) update message and baseline resource item list (BRIL). It also fields a task management suite, which includes logistics call for support (CFS), logistics task orders (LTO), logistics task synchronization and logistics task

management. Additional FBCB2 logistics reports include medical unit situation reports, mortuary affairs reports, and logistical and tactical situational understanding. The brigade surgeon requires an FBCB2 to maintain situational understanding and to receive update situational reports from brigade medical elements. If the brigade surgeon is not issued an FBCB2, an ambulance from the BSB MC will be used to support the brigade surgeon section.

6-228. Force Health Protection Functions on Force XXI Battle Command Brigade and Below System. The capabilities and details of this system were discussed above. The system is positioned on C2 medical vehicles and on medical vehicles that habitually operate forward of the brigade support area (BSA). This system gives the BSS a common relevant picture of the current FHP situation at BASs, ambulance exchange points (AXPs), and the BSMC. For the first time, the medical organizations and elements are digitally linked to the platforms and organizations they support. The current logistics functionality on FBCB2 gives the combatant a common relevant picture of the current logistics situation at his echelon of command and at subordinate levels. It also provides the personnel and logistics leaders, logistics situational understanding throughout their battle space. It also provides enhanced capability to synchronize support to customer units.

BRIGADE COMBAT TEAM SURGEON

6-229. The HBCT surgeon is responsible for the technical oversight of all medical activities in the command. The brigade surgeon oversees and coordinates HSS activities through the BSS and the brigade staff. He keeps the brigade commander informed on the status of FHP for brigade operations and on the health of the command. The brigade surgeon ensures that clear and accurate patient records are maintained of all clinical encounters for supported deployed personnel through the use of field medical records or through the use of digital patient records used with MC4. See AR 40-66 for management of individual health records (HREC) in the field.

6-230. The purpose of a medical record is to provide a complete medical and dental history for patient care, legal support (for example, reimbursement and tort claims), research, combat development, and education. A medical record also provides a means of communication where necessary to fulfill other Army functions (such as identification of remains). Therefore, each time a patient encounter occurs, an entry will be made on the medical record. It is the responsibility of the brigade surgeon to ensure that written or digital entries made in patient records in the field are transcribed or downloaded to the patients' permanent medical or dental records as soon as the unit redeploys.

SECTION VII – HUMAN RESOURCE SUPPORT

6-231. Human resource support (HRS) encompasses the following functions:

- Manning the force.
- Personnel Services.
- Personnel Support.

MANNING THE FORCE

6-232. Manning the force consists of personnel readiness management, personnel accounting, personnel information management, and replacement operations management. The manning challenge is getting the right Soldier to the right place at the right time with the right capabilities. Manning combines anticipation, movement, and skillful positioning of personnel assets. It relies on the secure, robust, and survivable communications and digital information systems of emerging technologies that provide common operational picture, asset visibility, predictive modeling, and exception reporting. This constitutes a significant reduction of forward-deployed personnel assets that manage the deployed forces.

PERSONNEL READINESS MANAGEMENT

6-233. The purpose of the personnel readiness management system is to distribute Soldiers to units based on documented requirements or authorizations to maximize mission preparedness and provide the manpower needed to support full spectrum operations. This process involves analyzing personnel strength data to determine current mission capabilities and project future requirements. It compares personnel strength of an organization to its requirements, and results in a personnel readiness assessment and allocation decision. This system depends on personnel asset visibility from the foxhole to strategic national provider level.

REPLACEMENT OPERATIONS MANAGEMENT

6-234. Replacement operations management moves personnel from designated points of origin to ultimate destinations. There are two parts to replacement operations management: replacement management and replacement support.

6-235. Replacement management relates to accounting and processing while replacement support is the physical reception, support, and delivery of military and civilian personnel. This includes replacements and return-to-duty (RTD) Soldiers. The system provides primarily for individual replacements and groupings of individuals up through squad, crew, or team level, as required by operations. Replacement management requires real-time access to information about all replacements, movement status from the point of selection, and personnel readiness management information to determine the final destination of replacements and RTD Soldiers.

6-236. While the standard is individual Soldiers, the replacement operations management system must be able to provide squads, crews, or teams. It must also coordinate for their transportation to weapon system link-up and training locations.

6-237. Replacement management operations are both predictive and responsive, and focus on throughput to the lowest possible level. This reduces the assembling of large pools of replacements within the area of operation (AO).

PERSONNEL ACCOUNTING

6-238. Personnel accounting is the system for recording by-name data on Soldiers when they arrive in, and depart from, units; when their duty status changes (for example from duty to hospital); and when their grade changes.

6-239. Strength reporting is a numerical end product of the accounting process. It starts with strength-related transactions submitted at unit level and ends with a database update through all echelons to the total Army personnel database. Standard reports available from the personnel accounting system include the following:

- Battle roster.
- Personnel summary.
- Personnel requirements report.
- Command and control battalion personnel summary.

6-240. Personnel accounting will be accomplished primarily through the application of a database and web enabled processes that facilitate personnel support from home station, thus reducing the personnel footprint on the battlefield.

PERSONNEL INFORMATION MANAGEMENT

6-241. Personnel information management encompasses the collecting, processing, storing, displaying, and disseminating of relevant information about Soldiers, units, and civilians.

Personnel readiness managers, casualty managers, and replacement managers all use a personnel information database when performing their missions. The Defense Integrated Military Human Resource System (DIMHRS) operates as a centralized database of all military personnel (to be fielded in the near future—eMILPO is the interim human resource system until DIMHRS is instituted). Personnel readiness managers, casualty managers, and replacement managers access DIMHRS for the real-time information needed to perform their mission.

6-242. DIMHRS is an internet based single entry integrated military personnel and pay management system for all DoD military services and components during peace and wartime, including mobilization/demobilization. When fielded, DIMHRS will provide the following features:

- Common DoD data definitions, business rules, and functionality in most instances including Service-unique and component-unique features where necessary at both the headquarters and field levels.
- A single (logical) record for each individual that contains the data for personnel and pay purposes and includes historical records of service in all components (true integration of AC/RC).
- A single entry of data with specified standards for timeliness, accuracy, security and interoperability.

6-243. Commanders will have accountability of all personnel assets within their area of responsibility and across the full operational spectrum. This includes capturing and maintaining accurate and timely personnel data in theaters of operation and at home bases.

6-244. DIMHRS will provide Soldiers with convenience and improved customer service throughout their career life cycle. This comprises one stop pay and personnel processing, as well as a Soldier self-service ability including but not limited to:

- Residence, mailing, and employer address changes.
- Emergency data changes.
- TRICARE, family dental care, and SGLI enrollment/changes.
- Assignment preference requests.
- Allotments and thrift savings plan starts and changes.

6-245. The DIMHRS initial operating capability for the Army is expected to be 4th Qtr 2005.

PERSONNEL SERVICES

6-246. Personnel services are integral to unit readiness as well as the human dimension of the force. Personnel services encompass casualty operations management, essential personnel services, and military pay.

CASUALTY OPERATIONS MANAGEMENT

6-247. The casualty operations management system includes the recording, reporting, verifying, and processing of information from unit level to Headquarters, Department of the Army. It also involves notifying appropriate individuals and assisting family members. The system involves collecting casualty information from a number of sources, collating it, and analyzing it to determine the appropriate action. Accuracy and timeliness are critical components of casualty management, and depend on satellite communications and reliable access to personnel information.

6-248. Casualty operations require 100 percent personnel accounting reconciliation. The unit verifies casualty information against the database and emergency data in an individual's deployment packet. Initial and updated reports move through channels to the

human resources command. HR command verifies information in the casualty report against available information systems. It then directs and coordinates notification actions through the appropriate casualty area commander. The casualty area commander (usually a commander of an active duty installation in CONUS) makes the notification to next of kin and provides casualty assistance.

6-249. All commanders, Soldiers, and deployed civilians must be sensitive to the accuracy and sensitive nature of casualty information. Modern communications have increased the risk that family members will get casualty information from sources outside the official system. To combat this risk, casualty managers must use all available means to get casualty information at the earliest possible moment.

ESSENTIAL PERSONNEL SERVICES

6-250. Essential personnel services include—

- Awards and decorations.
- Noncommissioned officer and officer evaluations.
- Enlisted promotions and reductions.
- Officer promotions.
- Enlisted and officer transfers and discharges.
- Identification documents.
- Leaves and passes.
- Line of duty investigations.
- Officer procurement.
- Band support.

6-251. There is a possibility that during combat operations, the current S1 structure can provide only critical wartime personnel support and essential personnel services, limiting and delaying other services throughout the operation.

MILITARY PAY

6-252. Military pay input transactions are an integrated and embedded process within the human resources system architecture. They capitalize on information systems and seamless processes to maintain the critical links between personnel actions and activities that impact pay entitlements.

PERSONNEL SUPPORT

6-253. Personnel support activities encompass the elements of postal operations management; morale, welfare, and recreation; and band operations. The band is not found at the HBCT level; it is a UEx level unit.

POSTAL OPERATIONS MANAGEMENT

6-254. Efficient postal operations rely on the availability of an accurate database, automated sorting, and automated identification technology (AIT) to provide rapid, responsive mail service to Soldiers and commanders. The use of electronic mail, cellular communications, and facsimile transmissions will be developed to provide an automated mail system.

6-255. The postal operations management system provides a network to process mail and provides postal services within a theater of operations.

6-256. Processing mail involves receiving, separating, sorting, dispatching, and redirecting ordinary and accountable mail, conducting international mail exchange, and handling casualty, contaminated, and enemy prisoner of war mail. Postal services involve selling stamps; cashing and selling money orders; providing registered (including classified up to secret), insured, and certified mail services; and processing postal claims and inquiries.

6-257. Official mail moves through the postal system until it reaches the postal services platoon of the unit addressed. FM 12-6 and AR 25-51 address official mail.

MORALE, WELFARE, AND RECREATION AND COMMUNITY SUPPORT

6-258. This system enables commanders to provide Soldiers and civilians with recreational and fitness activities and goods and services not available through appropriated funds. For contingency operations, the MWR network provides unit recreation and sports programs and rest areas for brigade-size and larger units. MWR personnel provide these services and facilities.

6-259. The human dimension of the Soldier will remain as critical as it is today. The human resource element of sustainment to the fighting force contributes to both National will and the will of the Soldier to fight.

S-1: HBCT HUMAN RESOURCE (HR) OFFICER OPERATIONS

6-260. The human resource officer is the commander's principal assistant to manage, organize, coordinate, and accomplish HR support in the HBCT. The HBCT HR officer is the conduit for ensuring the HBCT commander's human resource Title 10 responsibilities of manning the force are accomplished. Manning is a critical HBCT battlefield function that provides the commander with the ability to assess the capabilities of human resource combat power (crews, teams, and individual Soldier human resource strengths), maintain accountability of all personnel accompanying the HBCT, and perform casualty and replacement operations. The HBCT HR section, supported by the HR company, provides the UA the capability to perform essential human resource services and support in all phases of military operations. HR support in the HBCT uses a system of systems approach as the way to provide the best support with the minimum sustainment footprint.

6-261. HR support in the HBCT is an ongoing cycle of three critical phases. Each phase serves to focus on HR critical to the UA at that time. Phases are cumulative in nature.

6-262. **Phase I-Pre-Deployment/Deployment.** The focus of Phase I is Soldier and unit readiness. The HBCT Human Resource section along with the supporting human resources company or military personnel office ensure the personnel effectiveness/combat power of the unit, personnel accountability, individual readiness, and processing tasks, such as legal, financial, personnel, medical and dental, family support and Soldier well-being matters affecting the preparedness for immediate deployability. HBCT human resources personnel concentrate on ensuring teams, squads, and crews are fully staffed and any shortfalls are obtained via cross-leveling or through individual or crew replacements.

6-263. **Phase II-Combat Operations.** When the HBCT is engaged, the human resources Section focuses on maintaining accountability, and performing casualty and replacement operations. Passive accounting reported via operational and tactical enablers reduces much of the data gathering required to accomplish these tasks. Soldiers register on future combat system (FCS) architecture equipped platforms by a variety of methods, to include the common access card (manually, automatically, or voice entry). Once a Soldier registers on a platform, the system at all levels tracks the Soldier's status. Critical data (not readily accessible digitally) is entered by the human resource section and supporting human resource company, which will automatically prompt the human resources system (DIMHRS) and provide the ability to report and track casualties, request replacements, and provide the

status on pending gains, to include personnel in medical facilities being returned to duty. The human resource section also receives and tracks all attached and assigned Soldiers, civilians, and contractors operating in the HBCT area of operation.

6-264. Phase III–Sustainment Operations. Sustainment operations are tasks, while necessary to support the HBCT, may be accomplished during operational pauses, replenishment operations, or as the commander directs. Sustainment can take place in the area of operations or in some cases become part of the operation. Human resource sustainment operations are those essential personnel tasks affecting the combat power of the HBCT, are critical to the command at that time, and impact the health, welfare, morale, and discipline of the HBCT. Essential personnel tasks include awards and decorations, evaluations, leaves, passes, military pay, promotions, mail operations, and morale, welfare, and recreation. These sustainment operations may take place anywhere in the battlespace at determined by the commander's requirements and METT-TC.

6-265. The HBCT HR section receives the human resource support it needs through a balance of structure and automation within the HBCT and reach capability to the supporting human resource service support providers. The HR section of the brigade and each battalion headquarters elements provides human resource support for critical battlefield functions only. Additional human resources support is resident in the human resource company. The HR company, or one of its platoons, is deployed to conduct human resource sustainment support. The HR company deployment is based on METT-TC and capable of supporting one or more HBCT. The full range of human resource support capabilities for the HBCT is provided by a combination of functional support provided by the HR section and the HR company.

HBCT LEVEL HUMAN RESOURCES OPERATIONS

6-266. Manning the heavy BCT battalions is the process of getting the right Soldier to the right place at the right time and with the right capabilities. Manning in the HR process is the recording, reporting, verifying and processing personnel strength and casualty information at the unit level. The connectivity between smart cards, eMILPO (DIMHRS in the future), the integrated total Army personnel database (ITAPDB), and FBCB2 enables the S1 to account for personnel through all operational phases. This capability provides the commander with near real-time personnel information and accurate personnel accounting and is the foundation for successful casualty operations and replacement operations.

6-267. Proper and effective manning is essential to the operational success of any military mission. Manning the force involves the uninterrupted flow of Soldiers from mobilization and deployment through redeployment and demobilization. The manning process includes the tasks of predicting personnel requirements, resourcing units with personnel assets in accordance with the commander's guidance, monitoring the personnel strength posture, assessing unit combat power, and adjusting personnel resources to provide the optimum combination of manpower and equipment to maximize combat power. Manning the force impacts force ratio evaluations and all logistical requirements. To optimize and sustain the commander's lethality, survivability, and high OPTEMPO requirements, the personnel operator must place the right Soldier, at the right place and time with the right capabilities. This process combines anticipation, movement and skillful positioning of personnel assets. The commander must integrate manning information with other combat power factors in a near real-time to execute combat operations successfully.

HBCT S1 RESPONSIBILITIES

6-268. The BSB S1 is the battle staff officer for the BSB commander on all matters concerning human resources. Human resources support encompasses the tasks that current doctrine associates with manning, personnel services and personnel support. Critical combat

tasks include personnel accountability, personnel readiness management, replacement management, and casualty management. In information age operations the commander must also have digitized manning information integrated with other decision support data in order to execute combat operations successfully. Enabling technologies include Electronic Military Personnel Office (eMILPO) and FBCB2/PERSITREP. eMILPO is the next generation of the Army's personnel database and is the Army's human resources interim system as the Department of Defense transitions into the Defense Integrated Management Human Resources Systems (DIMHRS) architecture. The lethality and digitization capabilities associated with the UEx personnel system and the contemporary operational environment battlefield requires that manning be divided into discrete tasks. These tasks are iterative and do not follow a prescribed order or sequence. Personnel service support (PSS) design is focused on providing the minimum assets necessary to conduct the tasks required at their echelon.

6-269. **Predicting** is the process of anticipating the number, grade, and skill of personnel resources required to sustain the battlefield operating system (BOS) of the HBCT as they execute the operational patterns that destroy the enemy's will to fight. The S1 must complete a loss estimate based on threat and friendly force capabilities. This estimate provides planning parameters for replacements, medical facility/support requirements and MA assets.

6-270. **Resourcing** is the process of bringing units to their required strength according to the commander's priorities. Although it occurs at every echelon of command, resourcing is the primary responsibility of The Department of the Army, Deputy Chief of Staff for Personnel (Army G1) which executes this task in order to structure, acquire, train, distribute, and separate the force. Individual replacements move from the CONUS Replacement Center (CRC) under the direction of the Army G1 and CONUS major commands (MACOMs) to resource the force projection theater. At all levels, G1s/S1s provide commanders combat power visibility by properly identifying the status of available personnel resources. The S1 then recommends the allocation of available resources to meet current and future requirements. The HBCT cannot resource itself and must be provided assets from the UEX to accomplish this task.

6-271. **Monitoring** is the process of gathering unit strength data on a real time basis through digitized systems and communications. With digitization, we will eliminate the requirement for unique personnel reporting systems by having the capability to absorb personnel information from tactical communications. The task of digitized strength monitoring begins with establishing the strength baseline. S1s, under the direction of the UEx G1, manifest all deploying personnel. Inbound or prepositioned asset information is available through information systems of the manning the force automation architecture. It is transmitted to G1s/S1s performing manning tasks at the strategic and/or operational level and provided to the UEx. The deployed database and personnel asset visibility establishes the strength baseline. The HBCT S1 maintains unit status by getting updates through ABCS.

6-272. **Assessing** is the process of comparing current and projected unit strength data to personnel capabilities required maintaining OPTEMPO and achieving operational success. It starts by determining the combat power IAW the commander's priorities and intent. The HBCT S1 ICW human resources personnel at EAB, matches current assets with projected losses and replacements and recommends the method to properly resource units.

6-273. **Adjusting** is the process of packaging, positioning and dispatching replacements to deliver them when and where needed. The G1 notifies the UEx Sustainment Brigade of movement requirements as commanders direct the proper adjustment of personnel assets to accomplish pending missions. G1s/S1s at EAB, in coordination with logisticians match personnel and equipment during the adjustment process by providing unit, squad, crew,

team, or individual replacements according to the commander's operational requirements and the needs of the BOS. Movement time and distance factors influence the positioning of personnel replacement units that hold and process replacements until they are dispatched to the gaining unit. The UEx G1 does not have the resources to accomplish the adjustment task and may direct the dispatch of replacements directly from EAB to the gaining unit. In this case he synchronizes the adjustment task by sending teams from the HR company to the gaining units to assist in replacement operations.

6-274. **Manifesting.** When Soldiers deploy to an area of operations, the battalion S1 manifests all Soldiers in the deployment to create the deployed database. Once the S1 establishes the baseline, unit leadership (FBCB2 platform level) report changes to the baseline through FBCB2s PERSITREP.

6-275. **Estimating Losses.** Upon receipt of a mission, the S1 completes a loss estimate based on the various courses of action proposed to the S3. When the commander selects a course of action, the S1 completes a loss estimate using the appropriate casualty estimator, which resides on the personnel module of BCS3. This prediction allows the S1 to requisition replacements to preposition on the battlefield as operations commence. The S1 can reinforce the main effort units using the prepositioned replacements.

6-276. **Personnel service support** is the management and execution of personnel services, chaplain activities, command information services, and legal service support. In the HBCT, the S1 either HBCT level or battalion/squadron level, is responsible for coordinating and managing PSS. At the commander's discretion, the S1 may be delegated responsibility to serve as the organization public affairs officer. The S1 develops the administration SOP for the HBCT or battalion. The S1 with the S4 prepares the administration and logistics portion of the battalion tactical SOP. S1 participates in the OPORD process and develops administrative annex materials.

6-277. S1 ensures personnel service support is fully coordinated with other battle staff elements. S1 pays particular attention to the areas where close coordination is vital to the S1 section mission. These areas include MA, transportation, and force health protection. The HBCT S1 directs the activities of the battalion S1.

6-278. The S1 manages personnel services in the HBCT. Personnel services, that include family and community support may also be provided by the installation directorate of personnel and community support at the unit's home station. Personnel services on the force projection battlefield provide postal operations; personnel information (records) management; morale, welfare recreation; and essential services including identification, awards, evaluations, promotions, transfers, discharges, reenlistment, leaves, line-of-duty investigations, and band operations. Other personnel services include voting and safety.

S1. HBCT PERSONNEL REPLACEMENT PROCEDURES

6-279. Replacements for wounded, killed, or missing personnel are requested through the HBCT S1. The HBCT has no personnel replacement unit to receive and process replacement personnel. Logisticians at the HBCT may have the responsibility to plan for and conduct initial processing of replacements. A new arrival on the battlefield may be scared and disoriented as well as unfamiliar with local SOPs and the theater of operations.

6-280. The HBCT must establish SOPs on the processing of new personnel. Replacements that arrive in the BSA must be fed, billeted, and equipped. The HBCT S1 processes and assigns replacements to battalions.

6-281. The battalion S1 further assigns replacements to company level. In-processing is conducted using TPS and SIDPERS-3 or in the future DIMHRS. New Soldiers may be given a form letter to send to their next of kin telling them where to mail letters and packages,

how to use the Red Cross in emergencies, and introducing them to the chain of command. Once assigned to a company, the battalion S1 arranges for transportation with a LOGPAC. Returning or replacement personnel delivered with the LOGPAC should have already been issued all TA50 equipment, MOPP gear, and other items, including their individual weapon.

ENEMY PRISONERS OF WAR (EPW) MANAGEMENT

6-282. The HBCT has organic military police support assets to take control of and evacuate EPWs and they should be used for this mission. However, logisticians at battalion and below often have the responsibility to plan for and conduct initial processing of EPWs until the military police support is available. Treating EPWs with respect and dignity and ensuring their security and well-being as outlined in the Geneva Convention and Army policy is a command responsibility. See appendix G for field processing detainee operations

6-283. Soldiers capturing EPWs and documents report immediately and coordinate a linkup with the first sergeant (1SG) to turn the prisoners and documents over to him. The 1SG, often assisted by his supply section, moves the EPWs to the vicinity of the combat trains or UMCP for processing and subsequent interrogation by HBCT, battalion, or MI company personnel.

6-284. The combat trains command post (CTCP) plans and coordinates EPW operations, collection points, and evacuation procedures. EPWs are evacuated from the battalion area as rapidly as possible. Prisoners are then moved to the EPW collection point on returning LOGPAC vehicles or by transportation coordinated by the S4. As necessary, the S2 reviews and reports any documents or information of immediate value. The S4 coordinates evacuation of large amounts of enemy equipment.

6-285. The BSB, in coordination with (ICW) the HBCT TOC sustainment cell, allocates space in the BSA for the EPW collection point. The HBCT S3 assigns responsibility for EPW processing. Since there is no organic MP support, it is reasonable to assume that a combat unit could be detailed to operate the EPW collection point until a higher headquarters assumes responsibility for them. See Figure 6-16 for an illustration of EPW handling.

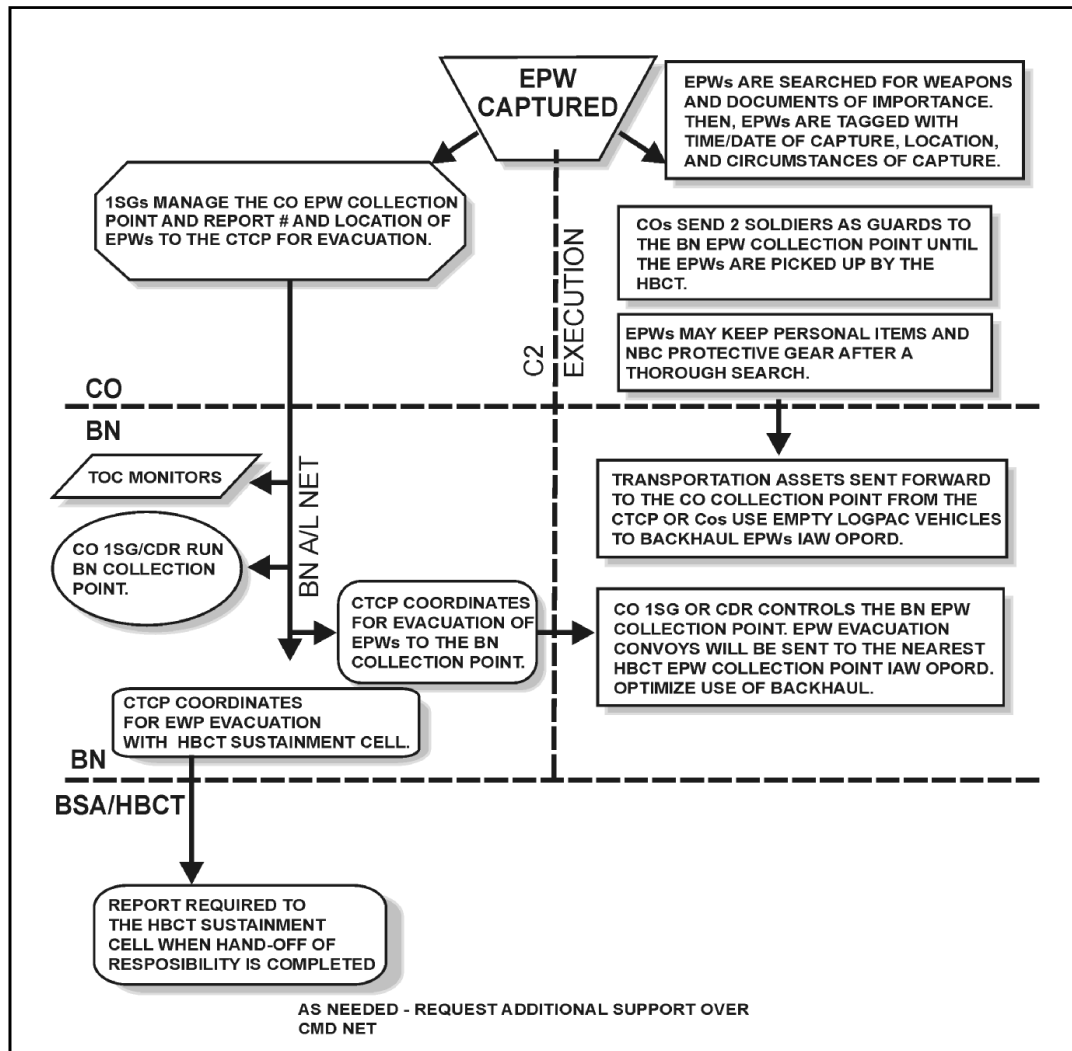


Figure 6-16, EPW Handling

SECTION VIII – FINANCIAL MANAGEMENT OPERATIONS

6-286. The financial management company (FM CO) exercises battle command of the headquarters section, and five to seven FM detachments (DETS). The FM CO commander serves as the senior financial manager for a UEx, providing critical information to the commander on the best allocation of fiscal resources. One FM CO is assigned to each Sustainment Brigade with two additional FM CO's assigned to each UEy. The FM CO provides support on an area basis, typically within a UEx- sized area of operation, to include support to joint and multinational commands, units, Soldiers, and authorized civilian contractors. One finance detachment (FD) will typically support an HBCT.

FINANCIAL MANAGEMENT CAPABILITIES

6-287. Financial management (FM) is comprised of two core functions: finance operations and resource management.

6-288. FM organizations provide a wide spectrum of financial services to include:

- Providing FM support across a dispersed battlefield over extended distance and time.
- Ensuring regulatory guidelines, directives, and procedures are adhered to by all operational elements of the FM CO and subordinate FM DETs.
- Providing direct support to the Soldier readiness processing center.
- Starting, adjusting and stopping deployment entitlements.
- Providing EPW, CI and local national pay support.
- Providing U.S. and non-U.S. pay support.
- Establishing banking relationships and procedures.
- Making payments on prepared and certified vouchers.
- Receiving collections.
- Receiving and controlling all currencies and precious metals.
- Tracking commitments and obligations.
- Evaluating, certifying and reporting execution of funds.
- Maintaining regulatory accountable records.
- Cashing negotiable instruments.
- Making foreign currency conversions.
- Funding subordinate FM DETs and determining the need for currency (US and foreign) and its replenishment.
- Protecting funds from fraud, waste, and abuse.
- Developing budgets.
- Identifying funding for resource requirements including procurement, theater infrastructure construction, materiel, services for ports, communications, and transportation networks.
- Addressing fiscal issues associated with sister services, other federal agencies, and non-governmental organizations (NGO) operating in the AO.
- Establishing a management control process that provides reasonable assurance that government assets are protected and safeguarded.
- Ensuring funds and other assets are protected, and that revenues and expenditures are properly accounted for in accordance with congressionally mandated accounting and reporting requirements.

FINANCIAL INFORMATION SYSTEM SUPPORT

6-289. The Financial Management Tactical Platform (FMTP) is the fundamental system for digitizing financial management battlefield functions. FMTP provides the capability to fully and accurately account for funds and control costs of host nation, contractor, and procurement support essential to austere AOs.

6-290. FMTP is a deployable hardware/software platform, used to support financial management operations. FMTP provides communications interface necessary to operate financial management information systems that support Soldiers, units, and logisticians. FMTP is fielded with standard hardware operating DFAS financial management software to support accounts payable/vendor services, military pay, disbursing, accounting, and travel.

THEATER CONTRACTING SUPPORT

6-291. Theater support contracting is an acceptable means for the HBCT to acquire locally available logistics support for operational requirements. Contracting may be conducted with foreign governments, commercial entities, or civilian agencies. The acquisition community is

currently redesigning their system. Updated contracting support guidance will be published when it is approved.

6-292. The commander or his designated representative (the S4, for example) must identify and prioritize the unit's external requirements for the AO. Contracting can

- Bridge gaps that occur before sufficient organic support is available.
- Reduce dependence on nationally-based logistics system.
- Improve response time and reduce footprint.
- Augment the existing logistics support capability for critical supplies and services.
- Reduce demands for the military resources and improve relationships with the populace.

SECTION IX – LEGAL SUPPORT TO OPERATIONS

6-293. Legal support to operations encompasses all legal services provided by judge advocates and other legal personnel in support of units, commanders, and Soldiers in an area of operation (AO) and throughout full spectrum operations. Legal support to operations falls into three functional areas: command and control, sustainment, and personnel service support (referred to as support).

6-294. Command and staff functions include advice to commanders, staffs, and Soldiers on the legal aspects of command authority, command discipline, applying force, and the law of war (LOW). The primary mission of the BOLT is to provide expert Operational Law legal support to the planning and conduct of military operations (AUTL, Art. 7.4.5). This includes:

- Preparing legal estimates, drafting legal annexes and reviewing operational plans and orders
- Developing, interpreting, and training rules of engagement (ROE) and rules on the use of force (RUF)
- Advising on the application of the law of war (and other humanitarian law) to military operations, including the legal aspects of targeting
- Coordinating determinations on the status and proper treatment of Enemy Prisoners of War (EPWs), detainees, and civilian noncombatants
- Ensuring the proper reporting and investigation of violations of the law of war
- Preparing soldier disciplinary actions (courts-martial, non-judicial punishment, and other routine matters in administering military justice)
- Litigating courts-martial and serving as recorder in administrative separation boards
- Advising on relations with NGOs/PVOs and the release of information to the media

6-295. Sustainment functions include advising on battlefield acquisition and contingency contracting matters, negotiating acquisitions and cross servicing agreements, combat contingency contracting, fiscal law and processing claims arising in an operational environment.

6-296. Personnel service support functions providing legal assistance services and coordinating trial defense services with the trial defense services (TDS) cell located in the UEx sustainment brigade.

LEGAL INFORMATION SYSTEMS

6-297. Modern theater operations frequently take place in a fluid, chaotic, and lethal environment in which mobility is constrained. Legal advice is time-sensitive and influences C2 and support operations. Legal personnel must have access to tactical networks that provide a common operating picture. The common operating picture (COP) allows legal

personnel to apply their professional training to identify potential legal issues and take proactive, timely, and effective steps to eliminate or minimize the impact of those legal issues on mission accomplishment. Avoiding legal issues is always preferable to resolving legal issues; it is the most efficient method and directly contributes to the organization's combat effectiveness. Judge advocates must also be assured access to communications that link them with the commander, subordinate commanders, staff, and the Staff Judge Advocates (SJAs) and other judge advocates in their technical channels. In addition to digital communications across the Army battle command system, judge advocates must use combat net radios (CNRs), area common user (ACU) telephones, Army data distribution system (ADDS) equipment, and other information systems, when necessary, to connect into the BOS tactical networks.

LEGAL SERVICES BY THE BRIGADE OPERATIONAL LAW TEAM (BOLT)

6-298. Assigned brigade judge advocates provide or coordinate all legal support to the brigade. Legal NCOs and specialists in the heavy battalions provide paralegal support for the battalion. The US Army Trial Judiciary and US Army Trial Defense Service are independent organizations that provide military judge and trial defense services to the brigade. The BOLT coordinates provision of these services. See figure 6-17 for processing of requests for legal support.

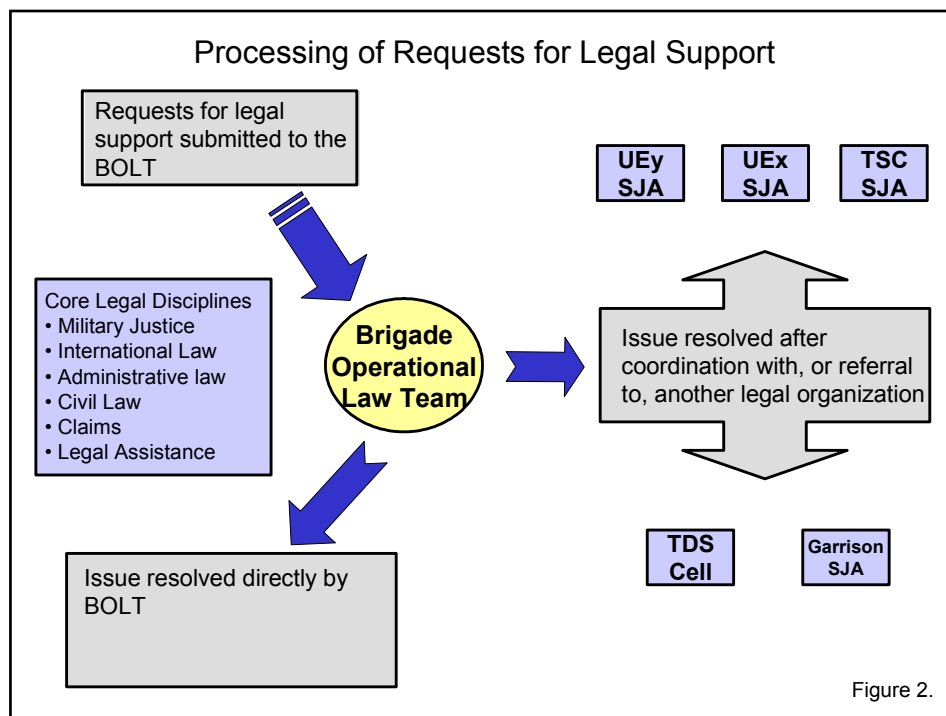


Figure 6-17, Processing of Requests for Legal Support

6-299. Depending on the operations tempos, the BOLT is capable of providing limited legal support and services (AUTL, Art. 6.9) across the six core legal disciplines (FM 27-100) discussed as follows.

6-300. **Military Justice.** The BOLT supports the commander's exercise of Special Court-Martial Convening Authority. Unit commanders consult the BOLT for advice on the

investigation and disposition of reports of misconduct by Soldiers, including the drafting of charges and the imposition of pretrial restraint. In cases of serious misconduct, the BOLT will coordinate with the Unit of Employment staff judge advocate for referral of cases to the General Court-Martial Convening Authority. Battalion paralegal specialists will ordinarily prepare all nonjudicial punishment (Article 15, UCMJ) and chapter separation actions under the supervision of the BOLT's Paralegal NCO. The BOLT will coordinate with the trial defense service cell in the sustainment brigade to provide legal advice and representation to Soldiers pending UCMJ action.

6-301. **International Law.** The BOLT is responsible for advising the command on international law issues relating to US forces overseas, including status of forces agreements (SOFAs), the impact of foreign law on Army activities and personnel, and liaison with host-nation legal authorities. BOLT personnel also monitor foreign trials and the confinement of Army personnel in foreign confinement facilities.

6-302. **Administrative Law.** The BOLT advises the command on military personnel law, government information practices, investigations, and government ethics, including advice on the preparation and filing of public and confidential financial disclosure forms.

6-303. **Civil Law.** The BOLT provides legal advice concerning the rights and duties of military organizations and installations with regard to civil authorities, including contract law, fiscal law, environmental law, and regulatory law.

6-304. **Claims.** The BOLT provides limited claims support to the command. When deployed overseas, this includes the processing of foreign claims and solatia payments. Personnel claims filed by Soldiers at home station will ordinarily be processed by the Installation Legal Office.

6-305. **Legal Assistance.** The BOLT has the capability to assist in ensuring the legal readiness of Soldiers during pre-deployment processing and to provide emergency legal assistance to deployed Soldiers. In all other instances, the BOLT will coordinate with other legal organizations in theater or at home station to provide routine legal assistance to Soldiers.

6-306. **Coordination with Other Legal Organizations.** If the BOLT is not resourced to provide the legal support requested or is precluded from doing so because of professional responsibility concerns (e.g., conflict of interest issues), it will coordinate delivery of the requested legal support or services through other legal organizations such as the Unit of Employment legal staff, Trial Defense Service, or Installation Legal Office when at home station.

6-307. **Equipment.** The BOLT relies upon the mobility and communications capabilities to accomplish its legal mission. Accordingly, the BOLT has its own organic vehicle. In addition, BOLT personnel require reliable connectivity to JAGC Net and other web-based legal information and knowledge management tools to provide accurate and up-to-date legal support to the command.

SECTION X – RELIGIOUS SUPPORT

6-308. Chaplains, on behalf of the commander, provide and perform religious support (RS) in the Army to ensure the free exercise of religion. Chaplains are obligated to provide for those religious services or practices that they cannot personally perform. Chaplains perform religious support when their actions are in accordance with the tenets or beliefs of their faith group. Chaplain assistants assist the chaplain in providing or performing this religious support.

6-309. The First Amendment guarantees every American the right to the free exercise of religion. Title 10 requires the military to ensure that right to military personnel. The Army implements this requirement in AR 165-1. Religious support operations ensure those rights of free exercise of religion to the Soldier, family members, and authorized civilians. This includes religious services, rites, sacraments, ordinances, pastoral care, religious education, family life ministry, institutional ministry, professional support to the command and staff, management and administration, religious/humanitarian support, religious support planning/operations and religious support training. Religious support also includes advice to the command on matters of religion, morals, morale, and the coordination with nongovernmental organizations (NGOs) and private voluntary organizations (PVOs), as appropriate. FM 1-05 and JP 1-05 provide detailed discussions of religious support. See figure 6-18 for the Religious Support Model.

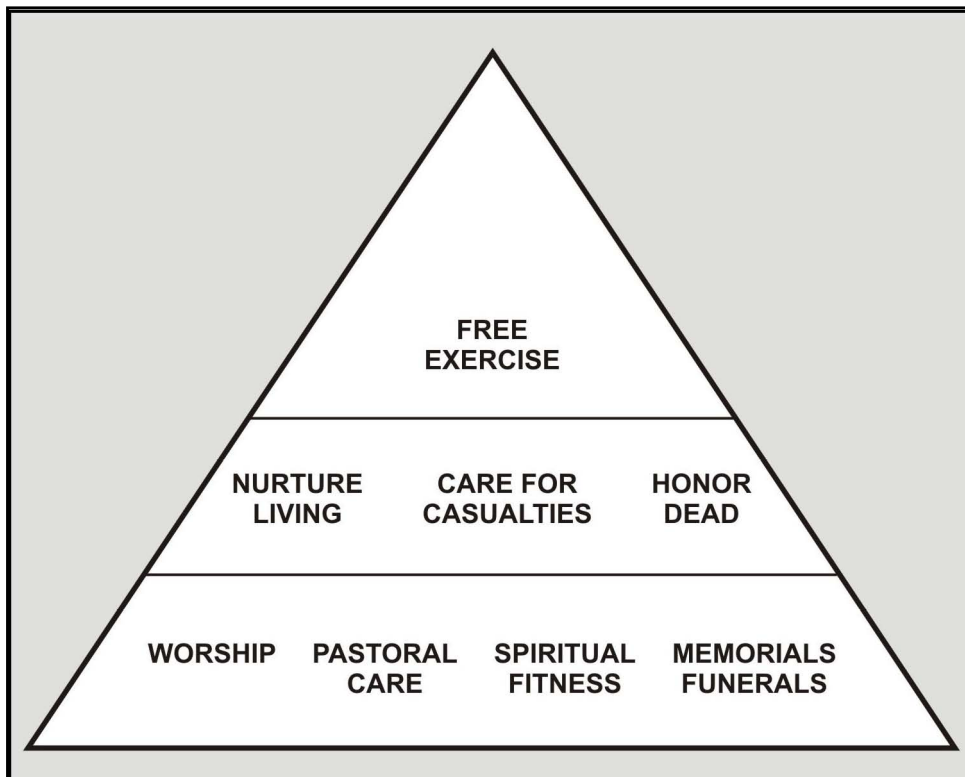


Figure 6-18, The Religious Support Model

6-310. **Religious Support.** The battalion chaplain is the staff officer responsible for implementing the religious program. This program includes:

- Worship opportunities.
- Administration of sacraments.
- Rites and ordinances.
- Pastoral care and counseling.
- Development and management of the unit ministry team.
- Advice to the commander and staff on matters of morals.
- Advice to the commander and staff on matters of morale as affected by religion.
- Ministry to casualties to include support of combat shock casualty treatment.

6-311. The chaplain's assistant is trained to assist the chaplain in religious support and is essential to the religious support mission. The assistant advises the chaplain on matters of Soldier morale and serves as liaison with enlisted Soldiers. The chaplain's assistant also advises the commander in the absence of the chaplain. The chaplain's assistant provides force protection for the unarmed chaplain.

6-312. Chaplains are designated as unit ministry team (UMT) leaders supported by chaplain assistants. Chaplains remain the certified religious professionals. Chaplains remain category non-combatants under the Geneva Conventions and require force protection support. The operations tempo combined with the multi-echeloned requirements of the network for the religious support system require that chaplains and chaplain assistants have the capability to co-ordinate simultaneous requirements for religious support in both the real and present and the virtual and communications networks needed in the different AOs.

6-313. Chaplain assistants plan and execute movement of unit ministry teams with both maximum efficiency and safety. Chaplain assistants leverage appropriate technologies and databases to assist Chaplains in the delivery of concise, focused on use of networks, and accurately religious support across the vast battle space as well as maintain a real-time religious support COP.

Religious Support Operations System

6-314. A comprehensive data-based, real-time, and interactive assessment and prediction tool to:

- Integrate command guidance & mission intent.
- Record & integrate individual Soldier RS requirements.
- Integrate and access global assets available to the CRST (REACH).
- Receive & interact with real-time battle space operational data.
- Monitor historical/statistical self-triggering data points for phasing.
- Access embedded and exportable training modules data base.
- Monitor, record, predict RS activities/logistical requirements.
- Integrate & utilize JIM & Local national religious issues to effect a global, personal, and networked focused RS environment.

Staff Supervision During the Operation

6-315. The battalion chaplain supervises the chaplain assistant NCOIC. The UMT provides direct support and area support to units located within the battalion AO. The UMT coordinates religious support with each unit. The UMT monitors the tactical situation, and plans based on changes in METT-TC. If necessary they recommend changes to religious support annex and ensure supported units receive information concerning changes via FRAGOs. The UMT reports required religious support data to the brigade UMT. The battalion UMT receives operational missions via the brigade operational order/FRAGOs. The brigade UMT is the technical supervisor for the battalion UMT who does prior coordination and establishes contingency plans for the brigade religious support plan.

6-316. Before the battle, the battalion UMT submits a religious support annex that gives guidance to all unit commanders of the religious support provided. The chaplain assistants gathers information that will allow the UMT to battle track the operation, current unit positions, overlays, special operating instruction (SOI) information and successfully navigate the battlespace.

6-317. The UMT before, during and after a phase of operation will coordinate with the battalion treatment and forward surgery teams to provide comprehensive religious support to Soldiers being treated and to the team itself. The UMT coordinates their efforts in

conjunction with the movement of the casualties. The UMT maintains contact via radio, casualty feeder cards etc. with the brigade UMT in the form of SITREPS on their location, health, statistics, and ability to provide religious support such as mass casualty (MASCAL).

6-318. The battalion UMT considers the spiritual condition of the Soldiers in follow-on planning. The severity of the previous operation and the number of casualties suffered are key factors in planning, preparing and executing cycle that is a nonstop process.

BSB UNIT MINISTRY TEAM IN THE BRIGADE SUPPORT AREA

6-319. The brigade support area (BSA) is generally located behind the rear boundary of the combat battalion sector. The BSA often contains the support elements for the brigade support battalion (BSB), UEx augmentation units and the field trains for all the combat battalions are just a few of the logistics assets in the BSA (FM 3-90.3).

6-320. Normally, the combat battalion UMT rarely visits this area because of the distance from the battalion fight. There will be a supply route (SR) from the BSA into each battalion sector.

6-321. The FSC Commander is in charge of the field trains and will have a FSC command post. The FSC CP has the job of tracking the battle and coordinating the logistics actions in the BSA. The distribution platoon locates here (including mess and maintenance) and thus the LOGPAC system for the battalion begins here. The FSC commander will also attend the tenant's meetings given by the BSB leadership to coordinate sustainment issues.

6-322. The BSB is a critical asset for the BDE. The medical company will provide evacuation assets to the TF medical platoon as well as serve as a replacement treatment team if needed. The flow of ambulances between the BSB medical company and the battalion Level I MTF provides a readymade transportation/communications network.

6-323. Companies evacuate wounded to a patient collection point where a tracked ambulance from the Level II MTF collect the wounded. The Soldier receives further treatment in the BSB before further evacuation. The BDE chaplain will assign a UMT to work with the wounded in the BSB (normally the BSB UMT). Communications can go by the evacuation route. If the battalion UMT uses this method, make prior coordination so BSB ambulance personnel understand their role in passing messages, and the BDE UMT arranges to get the messages. This should be in the TSOP for both combat battalion and BSB to insure no misunderstanding.

6-324. Tenant's meetings held at the BSA by the BSB leadership are for all elements of the BSA community. Normally leadership from all units in the BSA attends this meeting. This is a good opportunity for the UMT to conduct coordination and provide information like scheduled services and to receive requests for religious support.

SECTION XI – ARMY BAND SUPPORT

6-325. Army bands are capable of a wide variety of musical support. Bands perform indoors and outdoors in most climatic conditions. See AR 220-90 for regulatory guidance on use of Army bands. A band's committing authority is normally the UEx G1/AG. The HBCT S1 will request a band support through the UEx G1/AG.

SECTION XII –LOGPAC OPERATIONS VIA COMBAT LOGISTICS PATROLS

6-326. The aforementioned sustainment operations were discussed in a singular nature of how they individually supported the HBCT. The following material provides methods to provide support to the HBCT during combat operations. Methods to conduct resupply and how to move a LOGPAC via combat logistics patrols are provided. See chapter 7 for

movement operations. The methods work for the combined arms and fires battalions as well as the reconnaissance squadron.

SUSTAINMENT OPERATIONS REQUIREMENTS

6-327. The HBCT S4, ICW battalion S4s and the BSB SPO, must coordinate replenishment actions. This form of sustainment operations is generally classified as routine or immediate (emergency) and conducted in a SRO or CRO. Cues and procedures for each method are specified in battalion, BSB, and HBCT SOPs and are rehearsed during field training exercises. The use of logistics rally points and the actual method selected for resupply in the field depends on the METT-TC factors of the situation.

6-328. Logistics rally points (LRPs) locations are determined by the S4 based on the tactical situation. They should be well forward (in a linear battlefield) and easily located. Normally, two to four LRPs are planned by the battalion S4. Logistics rally points, as well as the MSR, combat trains' location, field trains location and or battalion support area locations are included on the operations overlay. The battalion CTCP notifies company CPs and the field trains/battalion support area CP well in advance which LRP(s) is to be activated. The LOGPAC's combat logistics patrol arrival time at the LRP and the length of time it remains normally are established by SOP or as often happens, by the amount of time required, if the unit logistics rehearsal is at the LRP. If the tactical situation dictates otherwise, the S4 must determine the time and notify units accordingly. LOGPACs may be scheduled to arrive shortly after arrival at a battle position (BP) or intermediate objective. Heavy units will also require more frequent Class III (B) re-supply. Subordinates must ensure that the replenishment vehicles are returned to the LRP as soon as possible so that the vehicles can return to the field trains' location and begin preparation for the next mission. If the LOGPAC's replenishment operation cannot be completed on schedule, the battalion CTCP must be notified.

ROUTINE REPLENISHMENT

6-329. Routine sustainment operations may include any and all classes of supply (less classes V, VI and VIII) s requested by the units. The BSB will provide the distribution of supplies to battalion level (i.e. the FSC). The FSC will push the supplies forward to the companies/troops; throughput when practicable can be supported by the BSB and supporting UEx/y units, if desired by the supported battalion. Typically, distribution points are established for a specified period of time and a single point will serve several different units and or serve as a materiel collection point. The FSC's will carry a portion of the supported units' second combat load, while the BSB will carry the remainder of the second combat load. Replenishment from the FSC to the supported units will be on an as required and METT-TC basis. This may be once a day, twice a day, or every other day. Class IX is an exception and will be pushed to the field maintenance teams daily.

6-330. Traditionally the company 1SG is the commander's primary leader he tasks for logistics operations. The 1SG advises and assists the commander and company XO to plan, coordinate, and supervise logistical activities that support the overall tactical mission (FM 3-90.2). The commander normally tasks the unit 1SG to evacuate casualties and vehicles off the battlefield, in addition to handling company logistics, administrative actions, and managing personnel for his unit, he also expects him to interface with the unit leaders to ensure individual/crew proficiency in the tactical aspects of preparing for the fight. He executes the company logistics plan by directly controlling and supervising the company trains ICW the company and battalion TACSOP. The 1SG collects the logistics reports from the platoon sergeants and passes that information to the respective recipient at the logistics release point. Additionally, the 1SG:

- Receives, consolidates, and forwards administrative, personnel, and casualty reports to the CTCP or to the S1 and S4 representative at the LRP meeting.
- Directs the medical evacuation section and field maintenance team forward, when the situation requires.
- Establishes and organizes the company re-supply point.
- Meets the LOGPAC at the LRP, guides them to the company re-supply point, and supervises the operations there.
- Assigns replacements to the platoons and orients new personnel to the company.
- Supervises the evacuation of casualties, EPW, and damaged equipment.
- Maintains battle roster for the company.
- Assists/guides emergency re-supply as required.
- Monitors the “pulse” of the unit (morale and fighting spirit).

6-331. **Battalion Replenishment Operations.** The most efficient re-supply of tactical units is accomplished by logistics packages (LOGPACs) via combat logistics patrols. LOGPACs are organized in the field trains’ area by the company supply sergeant under the supervision of the FSC commander and the distribution platoon leader; the HHC XO may be directed to assist with this supervision but that is a METT-TC decision by the battalion XO or commander. LOGPACs are organized for each company/separate element in the battalion and conduct replenishment missions (CRO or SRO) on a cycle as determined by the needs of the units. LOGPACs move in the combat logistics patrol normally under the control of the distribution platoon leader. LOGPACs to conduct a sustainment or combat replenishment operation (SRO or CRO) are organized and dispatched as required by the tactical situation and logistical demands. The S4 must plan and coordinate sustainment operations to ensure that they fully support the commander's tactical plans. The battalion SOP establishes the standard LOGPAC and how the sustainment mission is executed via the combat logistics patrol. LOGPACs for platoon-sized attachments are usually loaded on a single truck. Water and Class III (B) re-supply can be accomplished by using fuel vehicles, 5-gallon cans and water vehicles. Normally, a company LOGPAC includes the following elements:

- **Unit Supply Vehicle.** This vehicle contains the Class I requirements based on the ration cycle. The supply truck tows a water trailer (HIPPO) and carries some full water cans for direct exchange. In addition, the truck carries any Class II supplies requested by the unit, incoming mail, and other items required by the unit. The truck may also carry replacement personnel and if necessary, it will perform duties as a non-standard CASEVAC vehicle. This vehicle normally should not be used in conjunction with mortuary affairs requirements.
- **POL Vehicle.** These vehicles transport Class III (B) fuel and packaged POL products.
- **Ammunition Vehicle.** These vehicles contain a mix of ammunition for the weapons systems of the company team. Unit SOP establishes a standard load; reports and projected demands may require changes to this standard load. This vehicle should support mortuary affairs requirements if another vehicle has not been designated for that requirement by the unit 1SG.

6-332. **Resupply Requirements.** The FBCB2 system has automated the logistics status reporting for HBCT units.

- Each company (1SG or XO) compiles company status and requirements reports using FBCB2. These logistics situation reports (LOGSITREPs) are forwarded to the CTCP using FBCB2.

- The CTCP reviews the reports and forwards individual company reports to the HBCT main TOC sustainment cell where they are consolidated and forwarded to BCS3.
- The BSB prepares supplies and delivers them based on HBCT OPORDs and SOPs. Delivery may be to a company, battalion, or area-based LRP. The HBCT TOC sustainment cell advises the CTCP of the exact quantities of supplies, LRP locations, and timing for LOGPACs.

6-333. **Logistics Package Operations.** The LOGPAC technique is a simple, efficient way to accomplish routine replenishment operations. HBCT battalion and BSB SOPs specify the exact composition and execution order of the LOGPAC. See Figure 6-19 for LOGPAC operations conducted via combat logistics patrols. Combat logistics patrol is a term used by units due to the threat in our contemporary operational environment. This orientation on force protection should be taken into account whenever discussing replenishment convoys like LOGPAC operations that are in reality combat logistics patrols due to the enemy threat our forces often face in the COE.

6-334. **Preparation (FSC not BSB).**

- The FSC commander coordinates preparation of the LOGPAC.
- The FSC distribution platoon prepares HEMMT tankers and HEMMT-LHS vehicles with fuel and water.
- The FSC distribution platoon ICW the unit supply sergeants configures flatracks of supplies, repair parts, and munitions.
- The FSC maintenance platoon prepares equipment returning to the battalion from maintenance. Vehicles returning from maintenance will require drivers from the owning battalion.
- The FSC distribution platoon is responsible for delivering supplies throughout the battalion's area of operation.
- The platoon leader or his NCOs lead the combat logistics patrols to the LRPs where they are released to company control if throughput is desired. If throughput is not desired, then the supplies are transloaded and the FSC pushes the supplies forward.
- The HBCT's TOC sustainment cell and the battalion's CTCP must coordinate for other activities to accompany the LOGPAC. These activities include—
- Replacement personnel and Soldiers returning from medical treatment.
- Mail and personnel action documents (including awards, finance and legal documents) from the battalion S1 section.
- UMT visits.

6-335. When FSC LOGPAC preparations are complete, the CTCP advises the company. When the company portion of the FSC's LOGPAC has been formed, it is ready to move forward under the control of the company supply sergeant. The FSC's distribution platoon leader normally organizes a combat logistics patrol for movement of all company LOGPACs under his control; in emergencies, he dispatches unit LOGPACs individually. The combat logistics patrol may contain additional vehicles such as a maintenance vehicle with Class IX to move to the UMCP or an additional ammunition or fuel vehicle for the combat trains. The LOGPACs move along the MSR to a logistics release point (LRP), where the unit first sergeant or a unit guide takes control of the company LOGPAC.

6-336. **Actions at the Logistics Release Point (LRP).** The LRP is a linkup point on the ground where the companies LOGPACs, led by the company supply sergeants, are met by the unit 1SG or unit guide from the individual company trains i.e. someone familiar with the terrain, current tactical situation, and route to the company trains location. The escorts from the companies arrive at the LRP early and take a concealed position near the LRP where

they can quickly identify the LOGPAC as it moves toward the LRP. The individual company LOGPACs do not stop but roll through the LRP, picking up the escort and moving toward the individual companies.

6-337. At least one senior representative from the combat trains (S4, S1, or senior NCO) should be present at the LRP while it is in effect. His purpose is to meet with the unit first sergeants and the distribution platoon leader for coordination of logistical requirements and to ensure that the LOGPAC release and return takes place efficiently. A brief meeting is normally held immediately before the 1SG picks up his LOGPAC. Coordination may include:

- Changes in logistical requirements reflecting any last-minute task organization.
- Reports on personnel, logistics, and maintenance from the first sergeants.
- Confirmation of receipt of digital LOGSITREPs (if FBCB2 equipped)
- First hand updates on the tactical situation and logistical status.
- Delivery, receipt, and distribution of unit mail.

6-338. The individual company LOGPACs do not stop but roll through the LRP, picking up the escort and moving toward the individual companies. From the LRP, the company first sergeant or guide controls the LOGPAC and conducts re-supply as described in FM 3-90.1. The unit first sergeant informs his supply sergeant of requirements for the next LOGPAC. The supply sergeant collects outgoing mail, personnel, and equipment for movement to back to the support area. The LOGPAC then follows the unit SOP and returns to the LRP, field trains' location, or battalion support area.

6-339. **Resupply Procedures.** Companies can use the service station or tailgate resupply method discussed later in this section. It must be conducted as quickly and efficiently as possible, both to ensure operational effectiveness and to allow the company LOGPAC to return to the LRP on time.

6-340. **Return to the LRP.** Once resupply operations are complete, the LOGPAC vehicles are prepared for the return trip. Vehicles requiring evacuation for maintenance are lined up and prepared for towing. Recoverable parts, human remains and their personal effects, and EPWs are backhauled on the LOGPAC vehicles. All supply requests and personnel action documents are consolidated for forwarding to the CTCP where the appropriate staff section processes them for the next LOGPAC. The supply sergeant leads the LOGPAC back to the LRP where he links up with the FSC distribution platoon leader or the BSB transportation platoon leader if the BSB is involved with a throughput replenishment operation. It is critical that the LOGPAC continue to move through the LRP to avoid interdiction by enemy forces or artillery. The reunited LOGPAC convoy returns to the BSA/combat battalion's support area or it may move to another LRP. The BSB distribution company's transportation platoon leader decides when to return his empty vehicles back to the BSA.

6-341. While the routine methodology of LOGPACs formed in the field trains location are the preferred methods of replenishment, there will be times when other methods of replenishment are required:

- **Re-supply from the Combat Trains (Immediate Replenishment).** The combat trains have a limited amount of Class III (B) and Class V for emergency re-supply. The S4 coordinates emergency re-supply from the combat trains and then refills or replaces the combat trains' assets.
- **Pre-stocking (cache).** Pre-stocking is the placing and concealing of supplies on the battlefield. This is normally done during defensive operations when supplies are placed

in subsequent battle positions in a linear fight. The same concept can be used in the noncontiguous battlefield, too.

- **Mobile Pre-positioning.** This is similar to pre-stocking (cache) except that the supplies remain on the truck, which is positioned forward on the linear battlefield or as determined by the commander on the noncontiguous battlefield.

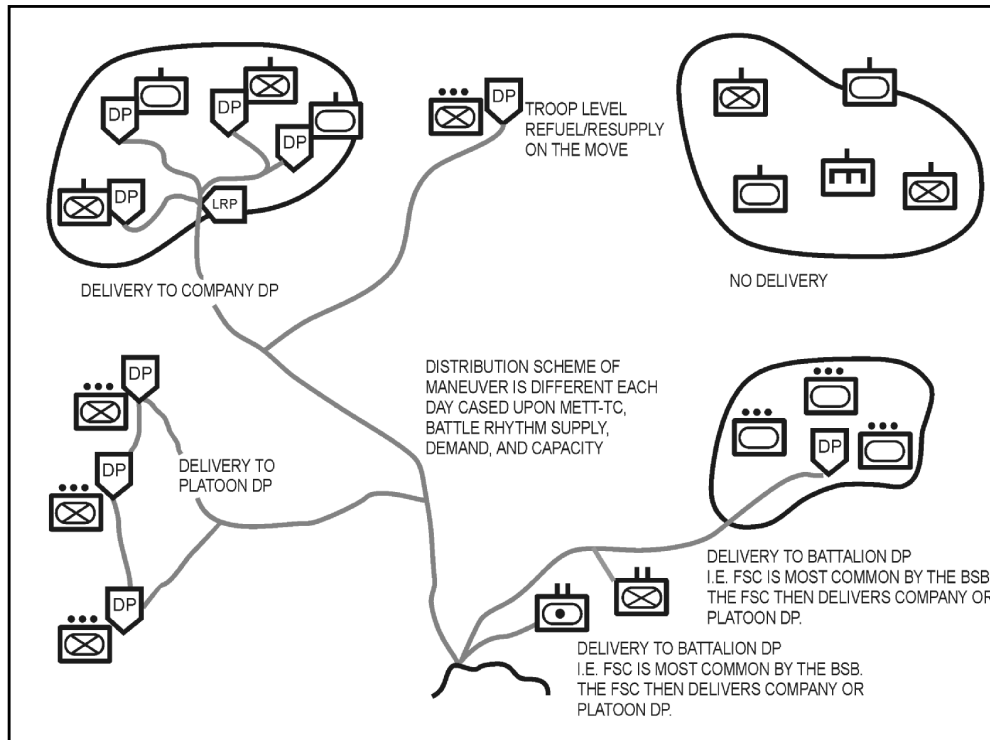


Figure 6-19, LOGPAC Deliveries

CRO'S UNDER IMMEDIATE REPLENISHMENT CONDITIONS

6-342. Occasionally (normally during combat operations), a unit may have such an urgent need for resupply that it cannot wait for a routine combat replenishment operation (CRO). Combat replenishment operations that are conducted under immediate replenishment conditions may involve Classes III, V, and VIII, as well as CBRN equipment and, on rare occasions, Class I. If the FSC does not have the needed supplies on-hand and the BSB does, the HBCT will use BSB vehicles and its medical assets to conduct emergency resupply as identified. Immediate resupply requirements not related to combat loss may indicate a breakdown in coordination and collaboration between logistician and customer. The BSB has a limited capability to prepare sling loads should the HBCT be augmented with air support. The HBCT must ensure that the medical vehicles with their Red Cross do not violate the Geneva Convention by transporting items other than medical supplies.

6-343. Immediate replenishment procedures start with the redistribution of supplies, (e.g. the redistribution of ammunition in individual vehicles, followed by cross leveling of ammunition within the platoon as designated by the commander). It is often best to have four Bradley Fighting Vehicles (BFVs) with 50 rounds of 25-millimeter ammunition each than two BFVs with 100 rounds and two others with none.

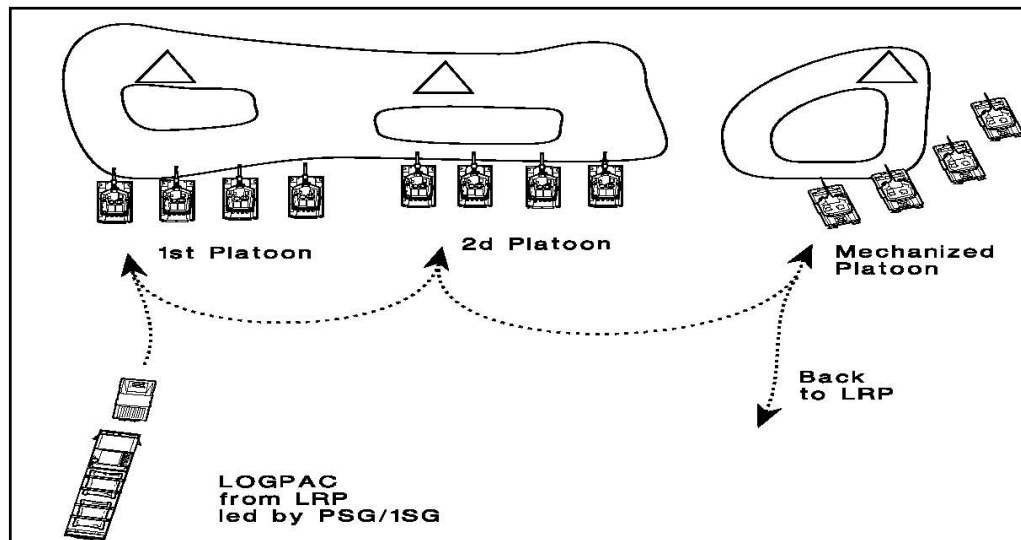
6-344. The commander, XO, or 1SG transmits a call for support for Class III/IV/V through FBCB2, FM, MSE, or most expedient means to the battalion S4 or the FSC commander. Immediate supplies are brought forward by the distribution platoon of the FSC or the distribution platoon of the Distribution Company depending upon where the needed supplies are positioned. Based on the enemy situation, the combat platoon may conduct resupply while in contact with the enemy. Two techniques are used to resupply platoons in contact:

- Limited supplies are brought forward to the closest concealed position, where the tailgate technique of resupply is used.
- Individual vehicles or sections disengage and move to a resupply point, obtain their supplies, and then return to the tactical mission. This is a version of the service station technique.

TECHNIQUES OF RESUPPLY

6-345. The tactical situation will dictate which technique of resupply the company will use: tailgate, service station, a variation of one type, or a combination of both types. The situation will also dictate when to resupply via replenishment operations.

6-346. In the tailgate technique, fuel and ammunition trucks, which have been handed off to the platoon sergeants (PSGs), are brought to individual vehicles. This method is used when routes leading to vehicle positions are available, and the company is not under direct enemy observation and fire. It is time-consuming, but it is useful in maintaining stealth during defensive missions because the vehicles do not have to move. If necessary, certain supplies can be hand carried to vehicle positions to further minimize signatures. See Figure 6-20 for



tailgate LOGPAC.

Figure 6-20, Tailgate LOGPAC

6-347. In the service station technique, vehicles move to a centrally located point for rearming and refueling, either by section, platoon, or an entire company. Service station resupply is inherently faster than the tailgate method, because vehicles must move and concentrate; however, it increases the security risk. See Figure 6-21 for service station technique.

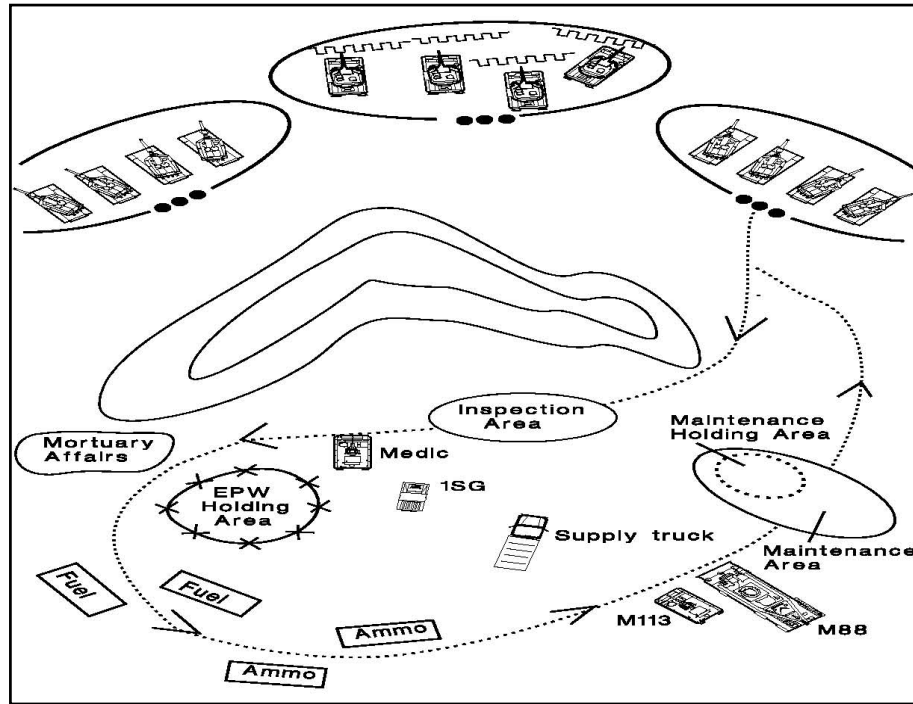


Figure 6-21, Service Station LOGPAC

6-348. A maneuver company commander can vary the specifics of the two basic techniques, or he can use them in combination for various platoons. During a defensive mission, for example, he may use the tailgate technique for selected forward observation post (OPs), and the service station method for the remainder of the company located in their positions. See Figure 6-22 for modified tailgate LOGPAC replenishment of battalion TOC, combat trains and support units.

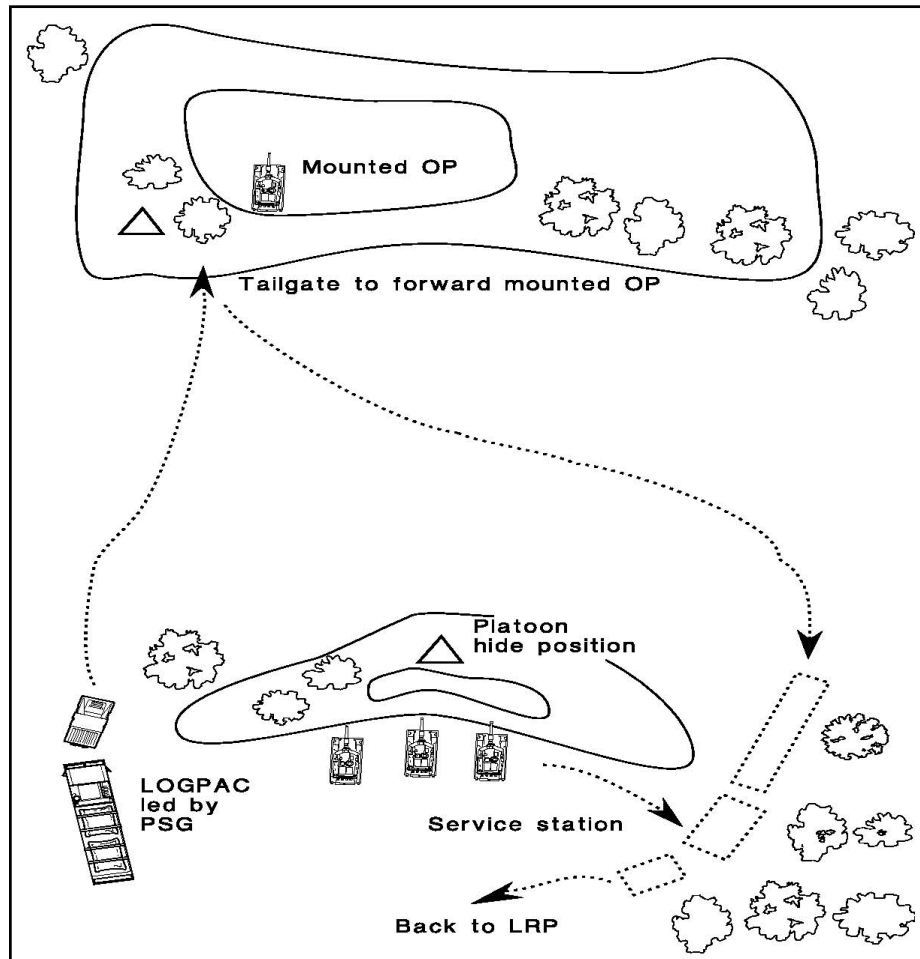


Figure 6-22, Modified Tailgate LOGPAC

6-349. Replenishment of the battalion main CP, combat trains, and attached support units must be planned and coordinated by the HHC 1SG who coordinates and supervises re-supply of these elements. The HHC 1SG normally operates out of the battalion combat trains. The platoon sergeant of these elements or senior NCO at a facility must report his requirements to the HHC first sergeant or to the combat trains CP. The most desirable method of replenishment is to from small LOGPACs for these elements, which the platoon sergeant picks up at the LRP in the same manner as a company first sergeant. Attachments larger than a platoon must come to the battalion with sufficient logistics vehicle (s) to carry their LOGPACs.

6-350. Units in direct support or under OPCON of the battalion are responsible for the coordination of re-supply of their elements operating within the battalion's AO. The parent unit S4 or company commander of the supporting element coordinates with the battalion S4 or HHC commander on re-supply of the forward elements. Normally, the supporting units' re-supply elements assemble in the BSA and move to the battalion's field trains area. The HHC commander then dispatches these re-supply elements, along with the battalion LOGPACs, to the LRP.

6-351. At the LRP, the platoon sergeant of the supporting element takes control of the re-supply element. These re-supply elements maintain contact with the combat trains CP while

forward in the battalion area. If coordinated between the supporting parent unit and the battalion, the re-supply of these supporting elements is directly managed by the battalion. The parent unit provides the additional logistical assets necessary to supplement the battalion's capabilities, especially if it is larger than a platoon-sized unit e.g. a company, operating in the battalion's AO. No matter how support was coordinated, any element within the battalion area of operation must either be under the battalion commander's control or at least remain in contact with the battalion combat trains CP to avoid interfering with the battalion's maneuver.

SECTION XIII – SUPPORTING MILITARY OPERATIONS OPERATIONAL GUIDANCE

6-352. The following information provides information to consider when conducting operations in the offense, defense and urban operations.

SUPPORTING OFFENSIVE OPERATIONS

6-353. The main purpose of logistics in the offense is to maintain the momentum of the attack. If offensive momentum is not maintained, the enemy may recover from the shock of the first assault, gain the initiative, and mount a successful counterattack. Therefore, the logistics priority must be to maintain the momentum of the attack. A key part of the plan is the logistics overlay produced digitally by the HBC and battalion/squadron S4; as necessary an analog overlay is produced for units without digital capability. The digital overlay ensures that both the supported units and the BSB and FSC know the location of all support assets in relation to the maneuver units and maximizes the support given. The logistics overlay can be sent digitally via FBCB2 or distributed manually. To maintain mobility and keep up with the maneuver units, the combat battalion support area (field trains) remains uploaded as much as possible. Whereas the combat trains need to remain 100% mobile except for mechanics repairing vehicles. The brigade support area also must maintain mobility to support the concept of maneuver. The BSB is 100% mobile with organic transportation. A well-defined SOP or plan should determine when and how the support area moves in relationship to the main body. The FSC or BSB must maintain the lines of communication and supplies with his supporting logistics unit (e.g. BSB or sustainment brigade). The BSB or FSC commander must be able to determine and recommend to their supported S3 the proper positioning and movement windows for the support area so uninterrupted support continues. The distribution platoon (FSC) or company (BSB) must be ready to push immediate resupply forward quickly via combat logistics patrols. Additionally, the combined arms and, fires battalion or reconnaissance squadron combat trains should be postured to provide immediate maintenance and recovery support.

6-354. **Anticipate.** Logistics planners must be proactive in planning sustainment operations. The logistics system must be flexible to support contingencies or future operations. Anticipating the unit's logistics requirements is crucial to maintaining the momentum of offensive operations. Some considerations for anticipating logistics in the offensive include the following:

- Increased consumption of Classes III, V, and IX.
- Sustainment operations that take place over longer distances. Hence the BSB's use of a forward logistics element or request by the FSC or BSB for additional transportation assets or throughput distribution is warranted.
- Heavy requirements on heavy BCT combat battalion's distribution assets.
- An increase in equipment maintenance requirements.
- Processing and evacuating EPWs.

6-355. **Classes V.** Special considerations concerning Class V availability are necessary before and during offensive operations. Some of those considerations include the following:

- Ensure subordinate units are fully resupplied with Class V prior to the operation.
- The combined arms, fires and brigade troops battalions and reconnaissance squadron should carry additional stockages of critical ammunition.
- Use and request preconfigured unit or mission loads.
- Ensure resupply of special Class V requirements.
- Place field artillery ammunition on the ground at the initial firing position so that when the battery departs it leaves with a full combat load.

6-356. In addition, ensure subordinate units are fully resupplied with Class V prior to the operation and plan for resupply during the operation with the FSC's and BSB's combat load for the supported units. The S4 and support operations officer plan for ammunition resupply to arrive at designated points during combat replenishment operations or sustainment replenishment operations. The ammunition will then be moved forward by the logistics distribution assets. The ATHP is located as far forward as possible and use throughput distribution whenever feasible. Additionally, combat battalions and the squadron should carry additional stockages of critical ammunition. When practical, consider pre-positioning artillery ammunition at initial firing positions to prevent firing batteries from using their combat loads during preparatory fires.

6-357. **Maintenance Support.** The following are planning considerations for maintenance support in offensive operations:

- Ensure rapid repair and return of non-mission-capable equipment to support the operation.
- Establish command maintenance priorities based on what systems and units are critical to the success of the operation.
- Emphasize BDAR.
 - Plan a series of maintenance collection points that are ideally collocated at or near casualty collection points for mutual security purposes.
 - Establish criteria for requesting additional recovery assets. Consider the feasibility of splitting recovery assets to provide broader coverage for attacking companies.
 - Identify critical combat spares and have them ready to move forward on short notice.

6-358. In addition, ensure rapid repair and return of non-mission capable equipment to support the operation. The commander establishes his maintenance priorities based on what systems and units are critical to the success of the operation. Maintenance procedures must place emphasis on BDAR. The BSB can send limited back-up forward to support the FSC's FMTs at the UMCPs to ensure support is positioned well forward. Forward supporting maintenance teams from the BSB maintenance company must have the necessary transportation, communications assets, tools, and repair parts. This applies to the FSC FMTs too. When feasible, consider the use of air transportation to bring critical repair parts forward.

6-359. **Class VIII and Force Health Protection.** Offensive operations challenge logistics planners with historically higher casualty rates, high Class VIII consumption, and extended evacuation distances. Offensive operations often prevent detailed route reconnaissance and rehearsals, and require medical units to maintain SU of moving friendly and enemy units. Offensive operations have some advantages as well. Planners can predict when and where casualties are likely to occur and plan for the event. In addition, as the attack continues to advance it is easier for medical personnel to approach and acquire the patient, and may create conditions for aeromedical evacuation. Planners should consider the following: place

BSB medical assets as far forward as possible. Ensure all treatment teams have a full combat load of supplies before the operation begins. Push prepackaged sets of Class VIII supplies to BASs and Level II care. Position additional ground evacuation assets at BASs. Ensure responsive medical support is established for forward reconnaissance elements and cross-FLOT extraction. Identify and coordinate ambulance exchange point (AXP)s along the axis of advance and on the objective. Identify triggers to control movement of medical assets. Retain the flexibility to shift nonstandard evacuation assets to support mass casualty situations. Ensure integration of air ambulance support to include coordination of A2C2 requirements, establishing clear lines of authority to launch a MEDEVAC, and identification of PZs and LZs. Ineffective medical support during offensive operations can slow the advance and significantly detract from mission accomplishment.

6-360. Medical Considerations for Deliberate Attack. The deliberate attack is based on more detailed knowledge of the threat disposition and likely enemy courses of action. Specific terrain and routes/avenues of approaches can be selected. While there may be FHP requirements during the approach (e.g. dismounting points or staging areas) the assault on the objective will produce the greatest number of casualties. Both must be planned thoroughly and synchronized with the maneuver plan. FHP considerations include: higher percentage of casualties, casualties will be more concentrated in time and space, and once the objective is secure, treatment teams can move to the objective instead of evacuating patients from the objective to the treatment teams. Use of air ambulances to overcome some obstacles may be required, and there is a higher likelihood of wounded EPWs.

6-361. Medical Consideration for Exploitation and Pursuit. Since exploitation and pursuit operations can rarely be planned in detail, evacuation operations must adhere to tactical SOPs and innovative command and control. These actions are often characterized by: fewer casualties, decentralized operations, unsecured ground line of communications, exceptionally long evacuation routes, increased reliance on convoys and air ambulances, and more difficult communication (line of sight (LOS) challenges).

6-362. Some general considerations in planning medical support for offensive operations include the following:

- Anticipate the potential of high casualty rates and decrease long evacuation times. Analyze the S1 casualty estimate to determine where and how many casualties the supported unit is likely to take. Develop CCPs and evacuation routes to support these sites.
- Place attached or assigned BSB medical assets as far forward as possible. Typically the BSB Medical Company augmentation is the AXP or skilled medical coverage co-locating with a battalion aid station. This does not mean that they are forward to the combat platoons unless the MDMP outcome decided it was necessary.
- Ensure all company team ambulance squads have a full combat load of supplies before the operation begins, to include CL VIII and water.
- Position prepackaged sets of Class VIII supplies at the BAS.
- Ensure responsive medical support is established for battalion scouts and the reconnaissance squadron.
- Position additional ground evacuation assets at the BAS.
- Identify and coordinate AXP)s along the axis of advance and on the objective.
- Identify non-medical transportation assets to support mass casualty evacuation situations.
- Ensure integration of air ambulance support to include coordination of A2C2 requirements.
- Establish clear lines of authority and criteria to execute a MEDEVAC mission.
- Identify PZs and LZs along the axis of advance to support MEDEVAC operations.

6-363. **Class III (B).** Immediate resupply of Class III (B) is critical in offensive operations. Some planning considerations include the following:

- Ensure all units are topped off with fuel and are carrying their basic load of POL package products prior to execution.
- Ensure all forward stocks are re-supplied and the Class III point is prepared to move forward rapidly. Set up tactical refueling points and refuel-on-the-move (ROM) sites.
- Plan refueling operations based on the consumption estimates for each individual battalion and squadron and smaller HBCT units.
- Combat replenishment or sustainment replenishment, as envisioned by the combined arms or fires battalion and reconnaissance squadron commander, will be as important in defining these windows as consumption estimates.

6-364. **Synchronized Support.** The most successful operations are those that are synchronized. The following are considerations for the synchronization of support:

- Plan support and resupply operations based on anticipated support needs of each supported unit.
- Integrate refueling and resupply operations with the scheme of maneuver to ensure proper timing and to avoid interfering with likely or planned maneuver actions.
- Plan for refueling and resupply operations as far forward as possible in covered and concealed locations.
- Plan triggers for activating and deactivating casualty collection points, ambulance exchange points, and LRPs based on the combat battalion's scheme of maneuver.
- Coordinate the locations, displacements, and routes of logistics assets and units to maintain responsive support.
- Include security of the MSRs in the tactical plan to minimize the risk to support elements. Security is also a HBCT, BTB, combined arms and fires battalion and squadron S3 function—this cannot be an independent operation i.e. integrate security plans with the appropriate level of command. The BTB commander is responsible for security in the rear area or the grey area in a non-contiguous battlespace.
- Ensure open lines of communications and coordination are maintained with the FSC CP, BSB support operations section, the brigade movement control officer and the sustainment brigade distribution management center on all information regarding throughput deliveries.
- When planning subsequent positions, consider throughput delivery schedules. Always plan logistics through the entire range of maneuver plans (e.g. HBCT follow on plans—whether branches or sequels—must have developed logistics/FHP planning for them).

6-365. **Security.** As discussed previously, logistics assets are vulnerable and may need security support. See chapter 7: Tactical Enabling Operations. Possible security considerations include the following:

- Movement to avoid detection from staying in one area too long.
- Dispersion of assets to avoid clumping together for an easy target with multiple pay-offs.
- Hiding assets in urban areas or use of the terrain to avoid detection.
- Ensuring adequate security of routes and logistics assets based on the potential threat of undetected enemy forces. This once again is a combat unit S3 and for the rear area or non-contiguous battlespace is a BTB commander responsibility.
- The conduct of rehearsals so that dedicated security forces (if available) and logistics units are prepared for enemy contact.

- Anticipation of the need for route clearance and reconnaissance to support the movement of wheeled vehicles based on the terrain and roads available. (This is especially true if logistics traffic moves across previous enemy positions that may contain obstacles and large amounts of unexploded ordnance.)
- Ensuring sustainment preparations for the mission do not give away tactical plans.

SUPPORTING DEFENSIVE OPERATIONS

6-366. The aim of logistics activities in the defense is to support defensive preparations, security operations, and the main battle area engagement and to transition to the offense or subsequent missions.

6-367. A plan for the support of the mobility, counter-mobility, and survivability effort in the combat battalion's AO is critical. Class IV supplies should be pushed from UEx sustainment brigade directly to the emplacement site. Class V is most often given by commanders the highest priority of all critical supplies during defensive operations. The increased expenditures of ammunition significantly affect transportation assets. Use throughput supply to expedite deliveries as far forward as possible. As in offensive planning, the S4 prepares and distributes the logistics overlay. It includes MSR's, Class IV and V stockage points, and LRPs. In the defense, logistics units are often positioned farther to the rear to avoid interfering with the movement of maneuver units between positions and the forward movement of the counterattack force. Most often the BSB will likely be further back, but battalion or squadron assets could be tucked in corners where they can give very responsive support from covered/concealed positions out of enemy Avenues of Approach and friendly maneuver routes). The use of depth for security yet maintaining responsive support is the important key to understand in the defense. The following paragraphs describe logistics considerations during the defense.

6-368. **Anticipation of Requirements.** The following areas require proactive planning:

- Anticipate increased consumption of Classes IV, V, and VIII; a decrease in Class III requirements; and the potential for mass casualties. If there is a significant chemical threat anticipate a large water requirement.
- Establish mass casualty criteria for battalion and company commanders.
- Anticipate the immediate requirement to replenish ammunition and provide additional ammunition stocks based on subordinate unit tasks. Maneuver and fires battalions and the reconnaissance squadron will want to cache ammunition at various points throughout the defense.
- Anticipate that the demand for decontamination and chemical protection equipment may increase.
- Estimate the requirements for Class IV and V obstacle materials and push materials forward early to facilitate defensive preparations. Plan for unit guides to link-up at the LRP.
- Plan and allocate additional Class III and maintenance support for engineer assets during the preparation phase.
- Do more maintenance forward, but this may be lessened due to when the battle is engaged i.e. some assets moved back to the BSA as the unit gets close to their defend by time or as the battle develops.

6-369. **Positioning.** Logistics assets are most vulnerable in defensive operations. Properly positioning these assets can deter detection by the enemy. The following are considerations for positioning logistics assets:

- Avoid positioning logistics sites and units along enemy ground or air avenues of approach, in the vicinity of artillery units, or near templated enemy CBRN target areas.

- Coordinate movement and terrain requirements with maneuver plans and the positioning of other units such as artillery.
- Position the Combat Trains and UMCP as far to the rear as possible but close enough to provide responsive support. However, far to the rear is often not the point at battalion level, in fact sometimes you want assets like the BAS and UMCP as far forward as possible, within survivability reason.
- Position the combat battalion support area and logistics units out of enemy artillery range, but close enough to provide responsive support. However, within survivability considerations, positioning medical and maintenance assets as forward as possible is prudent.
- Periodically move combat trains and other logistics assets, based on the threat level, to decrease their vulnerability of detection.
- Maximize the use of cover and concealment, dispersion, and the protection provided by the terrain.
- Rehearse emergency resupply, vehicle and casualty evacuation, day and night, in MOPP4 and out of MOPP4.

6-370. **Avoiding Patterns.** Creating patterns of support increases the risk to logistics units. Some recommendations include the following:

- Avoid setting patterns of support in order to decrease vulnerability to enemy interdiction.
- Vary combat logistic patrols times and LRP locations.
- Consider conducting combat logistics patrols and other routine logistics activities during limited visibility or periods when the enemy is least active.
- Maintain OPSEC. Always ensure you are conducting security operations and executing your intelligence, surveillance and reconnaissance (ISR) annex.

Providing Support in Depth (most often in a linear fight)

6-371. Ensure the logistics structure supports the entire defense in depth. Normally, the initial focus of support is to the defensive preparation effort. Ensure maintenance, resupply, and evacuation plans support security forces and forward reconnaissance assets. As the battle develops, the logistics priorities normally shift to support the units with the priority mission. MSRs support the entire scheme of maneuver to include all contingencies, subsequent positions, and offensive options. The logistics plan contains alternate MSRs that will provide flexibility. Develop and rehearse triggers for the movement, displacement, and evacuation of logistics sites based on the enemy situation and the scheme of maneuver. logistics planners should consider the following during defensive planning:

- Ensuring the initial focus of support is to the defensive preparation effort.
- Establishing sustainment procedures for both mounted and dismounted reconnaissance missions.
- Establishing sustainment procedures for air versus ground insertion of reconnaissance assets.
- Developing procedures for both aerial and ground sustainment.
- Developing resupply techniques, to include—
 - Using multiple/false LZs away from outposts as cache drop-off points.
 - Predetermining the locations and times for resupply of Classes I, III, IV, V, VII, and XI.
 - Establishing locations for caches on successive missions/insertions.

- Ensuring maintenance, resupply, and evacuation plans support security forces and forward reconnaissance assets. As the battle develops, the logistics priorities normally shift to support the combat unit's main battle area.
- Ensuring any and all logistics control measures to include MSR support the entire scheme of maneuver to include all contingencies, subsequent positions, and counterattack options.
- Planning alternate and contaminated MSR for contaminated equipment and casualties to provide flexibility.
- Developing and rehearsing triggers for the movement, displacement, and evacuation of logistics sites based on the enemy situation and the scheme of maneuver.

6-372. The following is a method to use that can assist a logistics planner with adjusting to changes in the scheme of maneuver or enemy situation:

- Where possible and practical, logistics and maneuver graphics should be the same. For instance, when using pre-designated LRPs as a planned method, but in a long operation the HBCT, battalion or squadron S3 shop is likely to have a series of check points noted throughout the AO especially in the offense. These check points are often arbitrary and can be adjusted if the S4 says he needs a check point at a specific spot.
- Logistics planners can make verbal checkpoints for positioning, and this lends itself to matrix movement execution plans (e.g. when the lead company crosses Phase Line Blue, the combat trains jumps to vicinity Check Point 7). This avoids the phases issues and gets into actual events that trigger other events.
- If the logistics planner uses check points as a control measure, he must be careful to integrate his numbering system with the maneuver planners. The HBCT does not need two different Check Point 7s (one logistics, one maneuver).

6-373. **Classes IV (Obstacle Material and V).** The proper placement and resupply of obstacle materials is critical to a successful defense. The following are some placement and handling considerations:

- Identify Class IV and V requirements to support units and directed obstacle belts early in the planning process.
- Synchronize movement plans with obstacle construction so that friendly vehicles do not run into friendly obstacles, nor get blocked for retrograde movement. (Make note of how often this happens in training.)
- Identify locations of combat battalion Class IV and V points early by coordinating with the combat battalion S3.
- Push materials forward as soon as possible. Work with the supported S3 shop to establish clear linkup criteria, then coordinate with the appropriate representatives on the ground prior to downloading the materiel.
- Ensure Class IV and V points are located to support directed obstacle belts while remaining concealed from the enemy. They do not necessarily need to be centrally located, they need to be as close as possible to the point or points they are supporting.
- Coordinate for material-handling equipment at each Class IV and V point.
- Coordinate sufficient manpower from supported units to organize materials and uncrate mines, cut overhead cover for fighting positions, and load material onto haul assets.
- Closely track the usage of Class IV and maintain the flexibility to shift materials based on refinements to the plan, changes in the situation, and the progress of obstacle construction.

- Plan to withdraw unused Class IV and V supplies based on an event trigger to prevent the loss of unused materials.
- Consider attaching additional transportation assets to engineers to support the movement of obstacle materials to construction sites.
- Maximize the use of UEx or UEy sustainment brigade throughput to transport Class IV and V supplies directly to combat battalion Class IV and V points. You may also have CL IV and V (mine) responsibilities to the Reconnaissance Squadron, which could pose challenges based upon their dispersion forward in the HBCT battlespace.

6-374. **Class V.** Improperly resupplying Class V in defensive operations will result in failure. Some planning considerations include the following:

- Push as much Class V forward as possible based on the commander's priorities of support and the anticipated ammunition requirements of each unit.
- Pre-stock ammunition at primary and subsequent positions and ensure it is properly guarded and stored.
- Ensure the resupply plan supports specialized ammunition requirements of all units, such as engineers.
- Maintain emergency resupply stocks within the combat trains and with the combat battalion support area (field trains/BSA) in depth.

6-375. **Maintenance Support.** Responsive maintenance support speeds up the return of essential combat systems to battle. Maintenance planning should include—

- Maintenance priorities approved or established by the commander.
- Maintenance teams dispatched as far forward as possible to reduce the requirement to evacuate equipment. The thrust of the maintenance effort is to replace forward and fix rear.
- Rapid evacuation of damaged equipment from the UMCP to the BSA in the event defending forces must reposition.

Class VIII and Force Health Protection

6-376. Defensive operations give the logistics planner the advantage of historically lower casualty rates occupation of the AO during planning and preparation phases. This allows detailed route reconnaissance, rehearsals, and site selections. Conversely, medical assets are more vulnerable to enemy action as they move into forward positions to conduct evacuation and to enemy attacks in the rear area. Logistics planners should position AXP's and MEDEVAC assets to support timely casualty evacuations. Coordinate evacuation routes and plans with maneuver plans and obstacle locations. Develop a contingency plan for the loss of battalion aid stations. Ensure medical support to combat support and supporting external elements such as C2 facilities, engineers, AMDO, and communication nodes. Maximize the use of nonstandard ambulances to replace lost ambulances or provide additional evacuation support. Always plan for mass casualties and ensure adequate evacuation means, to include air evacuation, are developed and rehearsed.

6-377. Medical support planning is critical to provide rapid treatment and avoid confusion. The following are considerations for medical support during reconnaissance operations:

- Deploying trauma specialist and medical assets in DS of recon operations, as required and appropriate.
- Planning for CASEVAC/extraction operations with non-standard evacuation assets e.g. units own vehicles. MEDEVAC is with medical evacuation assets.
- Developing FHP SOP for supporting recon elements deployed deep into enemy territory.

- Coordinating evacuation routes and plans with maneuver plans and obstacle locations. Selecting evacuation sites (remember that all cache sites are potential casualty evacuation sites).
- Developing TTPs for cross-FLOT casualty extraction.
- Establishing the time for pickup and the pickup point for aerial extraction of casualties. (The last known/reported location is normally the aerial pickup point and the best time is 30 minutes prior to beginning morning nautical twilight [BMNT] or 30 minutes after end evening nautical twilight [EENT].)
- Developing a detailed plan for ground extraction, to include link up to the force assigned the quick-reaction force (QRF) mission and escort to casualty exchange point.
- Conducting rehearsals for day and night extractions.
- Requesting escort if a force with a QRF mission is not established.

6-378. During reconnaissance missions if a member or members of the reconnaissance squadron become casualties, initial care will be self-aid, CLS advanced first aid, or EMTs from a trauma specialist. Trauma specialists may be deployed as a crew member in one of the reconnaissance vehicles or an ambulance team may be tasked from the BSBs medical company to provide support directly to the recon squadron (evacuating casualties to the nearest AXP or BAS). If casualties/patients require extraction/medical evacuation, it becomes a combat mission. Since this is a combat mission that may require offensive action, medical personnel are placed under the control of the force leader with the QRF mission. Provided in Figure 6-23a is a technique for conducting cross-FLOT ground extraction and lists the overall considerations. Figure 6-23b is a technique for conducting cross-FLOT air extractions and lists the overall considerations.

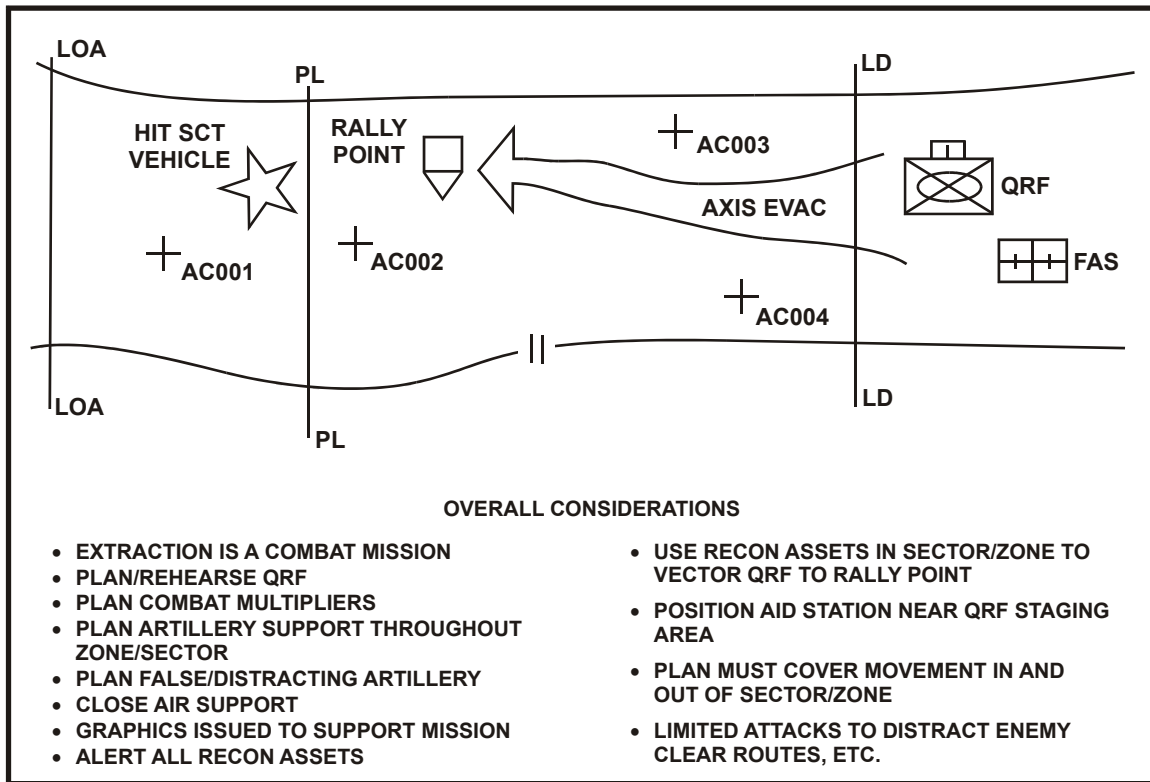


Figure 6-23a, A Technique for Cross-FLOT Ground Extraction

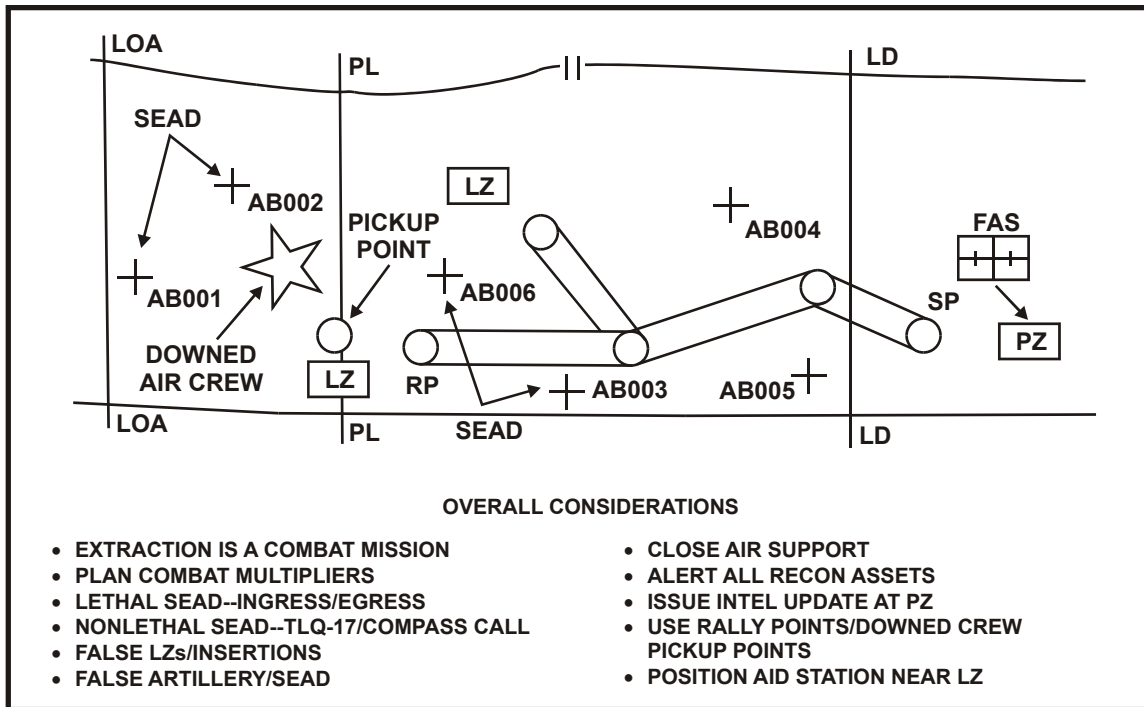


Figure 6-23b, A Technique for Cross-FLOT Air Extraction

SUPPORTING URBAN WARFARE OPERATIONS

6-379. There is an increased likelihood of U.S. Forces fighting in urban environments that is the preferred battlespace for many potential adversaries. Most wars have included major battles in and around urban areas with U.S. deployments being centered on or in the vicinity of urban areas. The logistics organizations must have the capabilities to support units in combat and peace operations in urban environments. Mechanized and armored units, although not ideally suited for urban operations, may have to conduct various missions in or in the vicinity of urban areas.

6-380. Sustainment of military operations on urbanize terrain (MOUT) is a unique type of military operation and presents many challenges. Each urban area is different. The key to providing successful sustainment for urban combat is with the ability for the logistician at all levels to properly plan for and anticipate requirements. The logistics planner must apply the basic logistics characteristics, doctrine and methodologies used in all military operations. The logistics planners should understand that urban combat is not a separate military task or operations, but a unique condition on the battlefield.

6-381. MOUT is a significant challenge for logistics personnel to prepare for the support of the HBCT. Commanders identify those cities in their areas of responsibility that could become urban battlefields and direct their staffs to prepare detailed studies for those possible contingencies.

6-382. When planning and executing logistics operations in an urban environment, it requires the logistician to have thorough understanding of urban combat and logistics doctrine. The logistician should understand the concepts addressed in FM 3-06.11, *Combined Arms Operations in Urban Terrain*. These concepts allow logistician to understand techniques used in urban operations, thereby allowing them to accurately anticipate logistics requirement during urban operations. Additionally the logistician requires knowledge of

these combat skills for their own survival in MOUT. Chapter 7 of FM 3-06.11 outlines in more detail the unique logistics requirements for urban operations. The logistician should also review the logistics principals, characteristics and functions outline in FM 4-0, *Combat Service Support*. Anticipation and improvisations are the most important characteristic found in FM 4-0 in supporting MOUT. In addition, FM 63-20, *Forward Support Battalion*, Appendix C, *Deception*, provides the logistician with method on how to conceal and secure supplies; a required skill that is a must for urban operations.

6-383. Developments and refinements in force structure, equipment design, and sustainment procedures support the tactical mission. During MOUT, the terrain and the nature of the operations create unique demands on support units and operations. The logistics units must be included in joint and multinational urban warfare training. Increased ammunition consumption, high casualty rates, and transportation difficulties resulting from rubble and the decentralized nature of operations all make logistics challenging.

6-384. Historically, urban combat operations have required a significant amount of time and quantities of ammunition and other logistics. Assaults on cities cause heavy military and civilian casualties and shattered cities resulting in increased stress on sustainment systems.

6-385. The HBCT may be called upon to supply food, shelter and public safety services to indigenous populations.

LOGISTICS SITUATIONAL UNDERSTANDING IN URBAN OPERATIONS

6-386. Knowledge of the urban battlespace as it pertains to logistics preparation of the (urban) battlefield (LPB) is critical in terms of the following:

- Supported commanders' intents and concepts of operation.
- Transportation infrastructure (air, rail, waterways, pipelines, subway).
- Telecommunications and automation network posture.
- Traffic patterns/flow/selection of main and alternate supply routes.
- Local resources with military sustainment value.
- Local population sentiments (friendly/non-friendly).
- Contracting, bartering, and trading capabilities.
- The logistics commanders' access to intelligence preparation of the battlefield (IPB) products.

6-387. Urban combat requires a high expenditure of certain supplies, especially small arms ammunition. The logistics planner must plan for this increase in the usage of supplies. Chapter 7 of FM 90-10.1 outlines the types of supplies that will have a high-usage rate during urban combat. The field manual recommends an increased ammunition usage of our time the normal consumption rate. Other logistics factors in an urban environment:

- Expect increased consumption of precision munitions.
- Expect decreased consumption in certain large-caliber and area-type munitions.
- Consider the ammunition basics load for armor vehicles e.g. more high explosive anti-tank (HEAT) rounds for tanks.
- Consider how much fuel is needed (e.g. determining fuel consumption rates for armor vehicles using time rather than distance).
- Consider how close the supplies can be to a city.
- Consider what special supplies are required (goggles, gloves, kneepads, etc and how many).
- Consider how supplies get to the Soldier on the third floor of a building.
- Consider how Soldier get medical care.
- Consider how civilian refugees will affect sustainment operations for the mission.

- Expect increased usage of non-lethal munitions.
- Expect increased aerial resupply requests.
- Expect increased medical workload (increased casualties).
- Expect increased mortuary affairs workload.
- Routes within an urban area can be denied easily.
- Movement control is more complex.
- Force protection of logistics nodes and convoys is exacerbated in urban areas. Vertical ambushes and other terrorist-type attacks are real threats to logistics activities. The close fight may be fought between the 1st and 2d floors of a building.
- Smaller resupply vehicles (HEMTT/PLS) may be in greater demand than tractor-trailers.
- Armored or hardened gun trucks are required to protect convoys.
- Expect the operation to be asymmetric (not linear) and multidimensional (building tops can be the high ground).
- Adequate logistics C2 may be nearly impossible within a large urban area. Avoid sites where communications are severely degraded.
- Urban areas afford numerous logistics hide locations (warehouses/industrial parks).
- Understanding The Law of Land Warfare (FM 27-10) and applicable rules of engagement (ROE) are imperative.
- Expect refugee and displaced person sustainment missions.
- Expect support requirements from other services, combined or coalition organizations, non-governmental organizations (NGOs), and private volunteer organizations (PVOs).

6-388. The sustainment of the HBCT through the aforementioned supply and services with the techniques described in this chapter are a key core function of the HBCT. Without the supplies and services necessary to conduct sustainment of combat operations, the HBCT will not be able to execute its missions. The ability to conduct combat logistics patrols and protect the brigade support area and the combat battalion support areas is another key function described in the next two chapters.

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Chapter 7

Tactical Enabling Operations: Movement Operations, Assembly Operations, and Route Security

In order to support the HBCT, logisticians conduct movement operations by the movement of troops, materiel and supplies from one place to another by any available means. The ability of the HBCT commander to posture his force for a decisive or shaping operation depends on his ability to move that force and provide logistics for it. The brigade support battalion's movement is governed by the use of its prevailing organization, support from the HBCT as necessary to mitigate risk and the use of its technology to move, occupy, and sustain the HBCT. The essence of battlefield agility is the capability to conduct rapid and orderly movement to concentrate the effects of combat power and its sustaining components at decisive points and times. Successful movement convoys and combat logistics patrols (replenishment operations as discussed in Chapters 5 and 6) places troops, materiel and supplies at their destination at the proper time to support a unit's readiness for combat. This chapter discusses the methods of movement by the HBCT's brigade support battalion, road marches, BSB assembly area operations, and an example for a convoy (combat logistics patrol) commander's briefing and types of route security.

Further information on convoy survivability is at the Combined Arms Support Command's website:

http://www.cascom.army.mil/td/td_trans/Training_Products/newindex.htm

SECTION I – METHODS OF MOVEMENT: THE BRIGADE SUPPORT BATTALION

7-1. The HBCT uses movements made by motor transport and air for most of its movements and use of rail and water when METT-TC conditions are best for their use. The method employed depends on the situation, the size, and composition of the unit to be moved, the distance the unit must cover, the urgency of execution, and the condition of the soldiers executing the mission. It also depends on the availability, suitability, and capacity of the different means of transportation. Unit movements over extended distances have extensive logistics considerations.

MOUNTED MARCHES

7-2. The BSB conducts mounted marches when it employs combat and tactical vehicles to move personnel (combat and those to provide logistics support e.g. maintenance), materiel and supplies. The HBCT's routinely conducts mounted marches. The speed of the march and the increased amounts of supplies that can accompany the unit characterize this march

method. The HBCT is normally self-sufficient to conduct mounted marches over short distances. Light maneuver units and some units other than combat units are not 100% mobile in one lift and might need assistance from transportation elements to conduct mounted marches. (FM 4-01.30 discusses considerations for mounted marches.) Considerations for mounted marches over extended distances include:

- The ability of the route network to support the numbers, sizes, and weights of the tactical and combat vehicles assigned to or supporting the unit making the move.
- Available refueling and maintenance sites and crew-rest areas.
- The need for recovery and evacuation assets.

ARMY AIR MOVEMENTS

7-3. Army air movements are operations involving the use of utility and cargo rotary-wing assets for other than air assaults. The commander conducts air movements to move troops and equipment, to emplace systems, and to transport ammunition, fuel, and other high-value supplies. He may employ air movements as a substitute for a ground tactical movement. Army air movements are generally faster than ground tactical moves. The same general considerations that apply to air assault operations also apply to Army air movements. (See FM 1-113 for additional information concerning air movement.)

CONSIDERATIONS FOR MOVEMENTS BY AIR AND WATER

7-4. Tactical forces can use rail and water modes to conduct the HBCT's movement, if they are available within an area of operations (AO). Their use can provide flexibility by freeing other modes of transport for other missions. Their use normally involves a mixture of military and commercial assets, such as defense freight railway interchange railcars pulled by privately owned diesel-electric engines to transport tanks along railroad right of ways from one rail terminus to another. Responsibility for coordinating the use of railroads and waterways resides within the ARFOR headquarters within the theater of operations. (FMs 4-01.41 and 4-01.50 provide additional information concerning these two transportation modes.)

SECTION II – ROAD MARCHS

7-5. Logistics units conduct two kinds of movement: administrative and tactical. An administrative movement is a movement in which troops and vehicles are arranged to expedite their movement and conserve time and energy when no enemy interference, except by air, is anticipated (J.P. 1-02). It considers tactical implications, but its primary emphasis is on expediting movement and conserving time and energy. Administrative movements are based on the assumption that contact with the enemy during or shortly after the move is unlikely, but still the movement must prepare for enemy contact. A tactical road march is a rapid movement used to relocate units in a combat zone in order to prepare for combat operations. Hostile contact is anticipated; hence the unit must maintain security measures and be prepared to react to enemy contact. The section on road marches discusses battalion level operations, but the information is also used to plan, prepare and execute lower level movements. All road marches in a theater of operations under the contemporary operational environment (COE) should be considered as a tactical road march with contact with the enemy likely. The term used for logistical resupply convoys in theater is combat logistics patrols.

ADMINISTRATIVE MOVEMENT

7-6. Administrative movement is a movement in which troops and vehicles are arranged to expedite their movement and conserve time and energy when no enemy interference, except

by air, is anticipated (JP 1-02). The commander conducts administrative movements only in secure areas. Examples of administrative movements include rail and highway movement within the continental United States. Once a unit deploys into a theater of war, administrative movements are the exception, not the norm. Since these types of moves are non-tactical, the echelon logistics officer (the G4 or S4) usually supervises the moves. (FM 55-30 discusses administrative movement and combat logistics patrol planning.)

TACTICAL ROAD MARCH

7-7. A tactical road march is a rapid movement used to relocate units within an area of operations to prepare for combat operations (FM 3-0). Security against enemy air attack is maintained (if a threat) and the unit is prepared to take immediate action against an enemy ambush. Doctrine states that, although contact with enemy ground forces is not expected, for tactical road marches, the contemporary operating environment (COE) would have contact likely once in the theater of operations. Hence, once in theater commanders should expect enemy contact and should be planned, prepared for and executed accordingly, i.e. there are no administrative road marches and all tactical road marches expect enemy contact when conducting combat logistics patrols.

7-8. The primary consideration of the tactical road march is rapid movement. However, the moving force employs security measures due to the COE, hence the use of the term combat logistics patrols for LOGPAC operations as a way to emphasize force protection requirements. Units conducting road marches may or may not be organized into a combined arms formation. During a tactical road march, the commander is always prepared to take immediate action if the enemy attacks.

BATTALION LEVEL RESPONSIBILITIES FOR MOVEMENT

GENERAL CONSIDERATIONS FOR PREPARATION OF BSB MOVEMENT

7-9. The BSB staff has very important responsibilities in the conduct of road marches and replenishment operations via combat logistics patrols. Once in theater and due to the COE all road marches for the BSB and the tenant units in the BSA are planned by the BSB S3 ICW the BSB SPO and BSB S4 as coordinating staff officers, especially if there is a replenishment operation that is impacted or required by the movement. The road marches are resourced with the appropriate combat forces given the level of threat; this is done ICW the BTB commander and the HBCT S3. These tactical missions must be controlled (use of movement matrix with control numbers assigned). The S2/3 pre-briefs current operations and the latest intelligence on the threat in order to ensure the best possible situational understanding of the combat logistics patrol commander and his leaders. The staff also has the responsibility to provide feedback to the BSB commander about proposed movements, ongoing and upcoming missions. In addition, the BSB commander should know about integrated combined/joint operations that may have an impact on not just the HBCT's forces, but also the surrounding community (AO), that in the COE, the BSB will possibly interact with on a daily basis.

PLANNING CONSIDERATIONS

7-10. Road marches require extensive planning. Commanders and staff use the military decision-making process to determine how best to execute a move from one point to another. (Refer to FM 4-01.30 for a detailed discussion of movement planning considerations, terms, and movement time computation.)

Factors for Consideration

7-11. The following factors are considered when planning a road march:

- Requirements for the movement.
- Organic and non-organic movement capabilities.
- Unit movement priorities.
- Enemy situation and capabilities, terrain conditions, and weather.
- Organization of the march units.
- Internal logistics support for movement.
- Security measures before and during the movement and at the destination.
- Assembly of the march units.
- Actions at the destination.
- Restrictions at points along the route of march where movement may be hindered or obstructed e.g. bridges, intersections and bypasses. The march planner should stagger start times or adjust speeds to compensate for restrictions, or he should plan to halt the column en route until the restriction is over.

Sequence of Road March Planning

7-12. When preparing for a tactical road march, the battalion uses the following sequence of march planning, as time permits.

- Prepare and issue an oral warning order as early as possible to allow subordinates time to prepare for the march.
- Analyze routes designated by higher headquarters and specify organization of the march serial.
- Prepare a detailed movement plan and assembly area plan.
- Prepare and issue the march order.
- Conduct backbriefs and rehearsals.
- Organize and dispatch reconnaissance and quartering parties as required.

CONTROL MEASURES

7-13. The commander uses the control measures discussed in the following paragraphs to assist in controlling his unit during the road march.

Graphics

7-14. The overlay or strip map should show the route of march, start points (SPs), release points (RPs), checkpoints, critical points (such as bridges), light line, and traffic control points (TCPs). Other graphic control measures include assembly areas (AAs) and phase lines. The start point is a location on a route.

7-15. Road march graphics should include, at a minimum, the SP, release point (RP), and route.

- **Strip Map.** The strip map should depict the following: start point, release point, scheduled halts, combat logistics patrol routes, major cities and towns, critical points and checkpoints, distance between CPs, and north orientation.
 - A start point (SP) is a well-defined point on a route where the march elements fall under the control of a designated march commander. It should be far enough from the assembly area to allow units to be organized and moving at the prescribed speed and interval when the SP is reached.

- A release point (RP) is a well-defined point on a route where marching elements are released from centralized control and return to the authority of their respective commanders. At the RP, each element continues its movement (possibly on multiple movement routes) toward its own destination. Marching units do not stop at the RP; instead, as they move through the RP, unit guides meet each march unit and lead it to assembly areas (AAs) or their area of operation (AO).
- Scheduled halts as discussed earlier may be needed to provide rest, mess, refuel on the move sites, and maintenance. Dining and refueling halts should coincide, if possible.
- Critical points or checkpoints on a route are places used for information references, places where obstructions or interference with movement might occur, or places where timing may be a critical factor. They are also used as a control measure for control and maintenance of the schedule. Guides or signs may be used at designated critical points and or checkpoints to ensure the smooth flow of movement. The commander positions manned traffic control points (TCPs) along the route to prevent congestion and confusion.
- Light lines are a designated phase line, forward of which vehicles are required to use blackout lights during periods of limited visibility. Commanders at either BCT or UEx echelon establish it based on the risk that the enemy will be able to detect moving vehicles using white light.
- **Digital Overlays.** When using the Force XXI Battle Command for Battalion and Below (FBCB2), digital overlays enhance mounted navigation. They display waypoints and other information concerning unit locations along the route of march and facilitate maintaining a common operating picture (COP).
 - **Communications.** Use of movement tracking system (MTS) as a communication tool during movement should always be planned. Because of the need to stay off the radio during some types of military operations, road guides are then an important way to control the speed of march units and the interval between them. The battalion can also use road guides to pass messages from one march unit to a following march unit if radios and MTS are not used.
 - **Traffic Control.** The headquarters controlling the march may post road guides and traffic signs at designated traffic control points. At critical points, guides assist in creating a smooth flow of traffic along the march route. Traffic problems may arise if actions at each of these points are not well rehearsed.

7-16. Although combat logistics patrol size, passage time, and march speed are not graphic control measures, they determine how long it takes to execute the combat logistics patrol security mission. Rules of engagement (ROE) are also not a graphic control measure, but they greatly influence how a commander conducts combat logistics patrol security operations.

MOVEMENT ORDER

7-17. The movement order format is the same for administrative and tactical movements, in accordance with (IAW) FM 1-02. The movement order is prepared as an annex to an operation order, as a separate operation order, or as a fragmentary order (FRAGO).

MARCH ELEMENTS

7-18. The elements of a road march include the march column, serial, and march unit.

March Column

7-19. A march column provides excellent speed, control, and flexibility, but sacrifices flank security. It provides the ability to deploy forces to the front of the column. The commander uses a march column when speed is essential and enemy contact is unlikely. However, the commander spaces BOS elements, such as air and missile defense operations and signal, throughout the column to protect and support the movement.

7-20. A march column includes all elements using the same route for a single movement under control of a single commander. A HBCCT conducting a tactical road march is an example of a march column. A large march column may be composed of a number of subdivisions, each under the control of a subordinate commander. The subordinate elements of a march column are march serials and march units.

Serial

7-21. A march serial is a major subdivision of a march column that is organized under one commander who plans, regulates, and controls the serial. It consists of elements of a march column moving from one area over the same route at the same time. An example is a brigade support battalion serial formed from a brigade-size march column. All the elements move to the same area and are grouped under a serial commander. A serial may be divided into two or more march units.

March Unit

7-22. A march unit is a subdivision of a march serial. It moves and halts under the control of a single commander who uses voice and visual signals. An example of a march unit is a company from a battalion-size march serial (e.g. the BSB's Medical Company or normally a squad, section, platoon). A march unit is the smallest subdivision of a march column and normally consists of no more than 25 vehicles using the same route for a single movement and under the control of a single commander. It moves and halts under control of a single commander. Use of movement tracking system (MTS) or FBCB2 greatly facilitates C2 if all the vehicles or must key leader vehicles have it. The combat logistics patrol commander uses visual signals and then radio only when it can use no other means of communication.

7-23. Before starting a march, each march unit of a serial reconnoiters its route to the start point (SP) and determines the exact time to reach it. The movement order states the time the serial will arrive at and clear its start point. The serial commander then determines and announces the times for march units of his serial to arrive at and clear the start point. Arrival time at the start point is critical. Each march unit must arrive at and clear the start point on time; otherwise, movement of other elements may be delayed.

EXECUTION OF THE MOVEMENT

7-24. During movement, march units move at the constant speed designated in the order, maintaining proper interval and column gap. Elements in a column of any length may simultaneously encounter many different types of routes and obstacles, resulting in different parts of the column moving at different speeds at the same time. This can produce an undesirable accordion-like action or whip effect. The movement order gives march speed, rate of march, and maximum catch-up speed. March units report crossing each control point as directed by the march order. They maintain air and ground security during the move.

7-25. Communications are vital to the success of combat logistics patrol movements. The combat logistics patrol commander must plan for radio communication and ensure the availability and compatibility of communication means between combat logistics patrol elements and indirect-fire support and air cavalry assets, as well as with units and host nation agencies in areas along the movement route. The combat logistics patrol commander

prearranges visual and sound signals, such as colored smoke, identification panels, whistles, or horns. Many of these signals can be SOP items. He must ensure that all combat logistics patrol members understand these signals and rehearse the actions required by each. This is necessary because of the at times limited number of radios and other communications equipment in tactical vehicles.

MARCH COLUMN ORGANIZATION

7-26. March columns, regardless of size, are composed of four elements: reconnaissance party, quartering party, main body, and trail party. March columns are organized to maintain unit integrity and to maintain a task organization consistent with mission requirements. An element or a group of elements in a march column receives a numerical or alphabetical designation for planning, scheduling, and controlling.

Reconnaissance Party

7-27. Engineer, CBRN and other BOS assets may augment the reconnaissance party. It performs route reconnaissance to determine travel time, capacities of underpasses and bridges, and locations of ferries and fords; it identifies critical points, including choke points and obstacles. Route reconnaissance confirms and supplements data from map studies, higher headquarters, and air reconnaissance.

7-28. Instructions to the reconnaissance party should state the nature and extent of information required and the time and place the report is submitted.

Quartering Party

7-29. A unit quartering party usually accompanies the reconnaissance effort to the designated assembly area (AA). Unit standing operating procedures (SOP) establish the exact composition of the quartering party and its transportation, security, and communications equipment needs, and its specific duties. The quartering party secures, reconnoiters, and organizes an area for the main body's arrival and occupation. It typically reconnoiters and confirms the tentative locations selected by the commander of its parent element, based on a map reconnaissance. When required, the quartering party changes previously assigned unit locations within the AA. The quartering party guides the main body into position from the release point (RP) to precise locations within the AA. (See Section II for additional information on quartering party responsibilities when occupying an assembly area.)

Main Body

7-30. The main body of the march column consists of the remainder of the unit, including attachments minus the trail party, the BSB CP, and any battalion trains moving with the BSB. POL vehicles required for refueling during nontactical marches may move ahead of schedule to establish a service station refuel point.

Trail Party

7-31. The trail party is the last march unit in a march column and normally consists of primarily maintenance elements in a mounted march. It maintains communications with the main body. The function of the trail party is to recover disabled vehicles or control stragglers in a dismounted march. If the trail party cannot repair a disabled vehicle immediately, it tows the disabled vehicle and moves its crew and passengers to a unit maintenance collection point (UMCP) located at a secure area near the movement route. The BSB's trail party normally consists of elements of the battalion maintenance platoon and medical support. The trail party is the last march unit in the battalion's serial led by the maintenance

company's automotive maintenance technician. The function of the trail party is to recover disabled vehicles. If at all possible, some security element such as an additional mechanized infantry platoon should accompany the trail party for protection.

MECHANICAL FAILURES

7-32. If a vehicle cannot be repaired or towed, it is moved off the road and into a secure area. The drivers and crewmembers, supplied with sufficient food and water, remain with the vehicle. The BMO reports the location and reason for leaving the vehicle behind to the battalion S4. This happens only in a safe environment. With most operations in the COE, the vehicle is either moved or destroyed or left with an adequate security force. The crew is not put at risk.

Recovery

7-33. Once the trail party completes the road march, maintenance priority becomes the recovery of disabled vehicles. A road march is not complete until all march units and vehicles arrive at the destination.

TACTICAL MARCH TECHNIQUES

7-34. Units conducting tactical road marches employ three tactical march techniques: open column, closed column, and infiltration. Each of these techniques uses scheduled halts to control and sustain the road march. The factors of METT-TC require adjustments in the standard distances between vehicles and Soldiers. During movement, elements within a column of any length may encounter many different types of routes and obstacles simultaneously. Consequently, parts of the column may be moving at different speeds, which can produce an undesirable accordion-like effect. The movement order establishes the order of march, rate of march, interval or time gaps between units, column gap, and maximum catch-up speed. Unless the commander directs them not to do so for security reasons, march units report when they have crossed each control point. During the move, the commander maintains air and ground security.

7-35. In an open column, the commander increases the distance between vehicles to provide greater dispersion. The vehicle distance varies from 50 to 100 meters; however, the factors of METT-TC determine actual dispersion. The open column technique is normally used during daylight on well-marked routes with good visibility. It may also be used at night with infrared lights, blackout lights, or passive night-vision equipment. Using an open column roughly doubles the column's length and thereby doubles the time it takes to clear any given point when compared to a close column. The open column is the most common movement technique because it offers the most security while still providing the commander with a reasonable degree of control. In an open column, vehicle density varies from 15 to 20 vehicles per kilometer.

Closed Column

7-36. Closed column is normally used during limited visibility or on poorly marked or congested roads. It is characterized by vehicle intervals of 25 to 50 meters. This technique takes maximum advantage of the traffic capacity of the route but provides little dispersion of vehicles. The commander normally employs a close column for marches during darkness under blackout driving conditions or for marches in restricted terrain. This method of marching takes maximum advantage of the traffic capacity of a route but provides little dispersion. Normally, vehicle density is from 40 to 50 vehicles per kilometer along the route in a close column.

Infiltration

7-37. Infiltration has no defined structure. The commander dispatches vehicles in small groups, or at irregular intervals, at a rate that keeps the traffic density down and prevents undue massing of vehicles during a move by infiltration. Infiltration provides the best possible passive defense against enemy observation and attack. It is suited for tactical road marches when there is enough time and road space and when the commander desires the maximum security, deception, and dispersion. The disadvantages of an infiltration are that more time is required to complete the move, column control is nearly impossible, and recovery of broken-down vehicles by the trail party is more protracted when compared to vehicle recovery in close and open columns. Additionally, unit integrity is not restored until the last vehicle arrives at the destination, complicating the unit's onward deployment.

SECURITY

7-38. During the movement, march units maintain security through observation, weapons orientation, dispersion, and camouflage. Commanders assign sectors of observation to their personnel to maintain 360-degree observation. Main weapons are oriented on specific sectors throughout the column. The lead elements cover the front, following elements cover alternate flanks, and the trail element covers the rear. Each vehicle with its occupants should be able to observe and fire in 360-degrees for self-protection. However for fratricide prevention reasons, the use of fire control measures should be implemented so that there is not indiscriminate firing in 360 degrees.

HALTS

7-39. During extended road marches, halts are necessary to rest personnel, service vehicles, and adjust movement schedules as necessary. The march order or unit standing operating procedures (SOP) regulates when to take halts. In motor movements, the commander schedules short halts for every two to three hours of movement and may last up to an hour. Long halts occur on marches that exceed 24 hours and last no more than two hours. Long halts are not scheduled at night, which allows maximum time for night movement.

7-40. During halts, each unit normally clears the march route and moves to a previously selected AA to prevent route congestion and avoid being a lucrative target. Units establish security and take other measures to protect the force.

7-41. The commander emphasizes the need to maintain security during halts. Once a unit stops moving, there is a natural tendency for Soldiers to let their guard down and relax their vigilance. The commander addresses this problem by explicitly defining unit actions in his SOP for various types of halts, such as maintenance halts, security halts, and unexpected halts.

7-42. While taking part in a road march, the march elements must be prepared to conduct both scheduled and unscheduled halts.

- **Scheduled Halts.** Scheduled halts are planned along the march route for maintenance and rest or to follow higher level movement orders. At scheduled halts, vehicles and Soldiers move to the side of the road while maintaining march dispersion. Local security is set up immediately, and drivers perform during-operations maintenance checks. The unit is ready to move at a moment's notice.
- **Unscheduled Halts.** Unscheduled halts and actions may be caused by unforeseen developments such as obstacles, traffic congestion, or equipment failure. Unit leaders receive prompt notification of the time and approximate length of unscheduled halts. If a halt is necessary, the march column's first priority is to establish security.

AIR AND MISSILE DEFENSE OPERATIONS (AMDO)

7-43. When operating in an air threat environment, planning for air defense augmentation and implementing all forms of air defense security measures are imperative, as there are no organic AMDO assets in the HBCT. Therefore, the commander must ensure the battalion plans and uses all passive and active air defense measures that can be implemented at company level. Each vehicle in a motor march has an air guard to provide air security. Specific vehicles may be designated as air guard vehicles performing air rather than ground observation.

OBSTACLES

7-44. The battalion should bypass obstacles reported by the reconnaissance if possible. If it cannot bypass obstacles, the lead march unit goes into a defense to cover and overwatch and breaches the obstacle, working with engineers if available. If not, then use a combat vehicle or truck that can reduce the obstacle enough for movement through it. As the lead march unit breaches the obstacles, the other march units move at decreased speed or move off the road and monitor the battalion command net.

Enemy Indirect Fire

7-45. Should the battalion come under attack by enemy indirect fire during the road march, the unit in contact continues to move. The remainder of the battalion attempts to bypass the impact area.

Enemy Air Assault

7-46. Should the battalion be attacked by hostile aircraft during the march, the march unit under attack moves off the road into a quick defensive posture and immediately engages the aircraft with all available automatic weapons. The rest of the battalion moves to covered and concealed areas until the engagement ends.

Disabled Vehicles

7-47. Disabled vehicles must not obstruct traffic. They are moved off the road and their status reported immediately. Security is established, and guides are posted to direct traffic. If the operator repairs the vehicle, it rejoins the rear of the column. If the operator cannot repair the vehicle, trail party maintenance elements pick it up.

Limited Visibility

7-48. Units must be able to operate routinely under limited visibility conditions caused by darkness, smoke, dust, fog, heavy rain, or heavy snow. Limited visibility decreases the speed of movement and increases the difficulty in navigating, recognizing checkpoints, and maintaining proper interval between units. To overcome command and control problems caused by limited visibility, commanders may position themselves just behind lead elements. More restrictive control measures, such as additional checkpoints, phase lines, and use of a single route, may become necessary. Use of night vision devices for all drivers and the assistant driver becomes very important during limited visibility operations.

7-49. The movement of the BSA's units requires certain actions to be taken to occupy the BSA. The use of actions for Assembly Area (AA) occupation allow the BSB and its tenant units in the BSA to occupy the area with requisite security, organized to occupy known areas and in a location able to provide security and sustainment operations.

SECTION III – ASSEMBLY AREA OPERATIONS

7-50. An assembly area is a location where a force prepares or regroups for further action. While in assembly areas, units execute the organization, maintenance, resupply, and personnel actions necessary to maintain the combat power of the force. Designation and occupation of an assembly area may be directed by a higher headquarters or by the unit commander during relief or withdrawal operations or unit movements.

ASSEMBLY AREAS

7-51. Assembly areas are areas occupied by forces where enemy contact is likely and commitment of the unit directly from the assembly area to combat is possible or anticipated. Examples of units likely to be in assembly areas units going through mission staging operations (MSO) such as when conducting reconstitution, as they are rotated out of combat by the UEx, units completing a rearward passage of lines, units preparing to move forward to execute a forward passage of lines followed by offensive operations or units performing tactical movements.

7-52. Units position themselves in the new area in accordance with their parent unit's tentative plan. Quartering parties typically guide units into position. The units accomplish occupation smoothly from the march without halting or bunching of units at the release point (RP). Subordinate units normally establish routes and separate start points (SP) and RP for march elements that extend from the march column's route or RP toward the march units' positions. This technique clears the route quickly, maintains march unit C2, and prevents bunching of units at the march column RP. The battalion begins movement to the area with an updated movement route, specific coordinates for vehicle locations, and a confirmed defensive scheme for occupation of the new area. This enables the battalion to transition quickly from the road march into the actual occupation while maintaining overall security for the main body. Occupation area should provide:

- Ability to conduct sustainment mission if required.
- Concealment from air and ground observation.
- Cover from direct fire.
- Terrain masking of electromagnetic signal signature.
- Sufficient area for the dispersion of subunits and their vehicles consistent with the enemy and friendly tactical situation.
- Sufficient areas for maneuver units sustainment support areas, unit trains, maintenance operations, and C2 facilities.
- Suitable entrances, exits, and internal routes. (Optimally, at least one all-weather paved surface road transits the area and connects to the MSR in use.)
- Terrain allowing the observation of ground and air avenues of approach into the area.
- Good drainage and soil conditions that support heavy vehicle movement.

ORGANIZATION

7-53. The commander, XO, SPO or S3 chooses a method (unit SOP or METT-TC) for occupation (entire BSA in one-location or separate subunit areas) and tentative subunit locations based on METT-TC. He then considers selecting tentative locations. To operate effectively, selected subunits may have specific positioning requirements, such as being near water or on hardstand for maintenance. Based on METT-TC, the commander or S3 develops contingency plans that address the possibility of significant enemy contact in the area. Time available and the likelihood of enemy contact determine the level of detail in contingency plans. These plans typically include fire support plans and alternate positions or rally points

in case the battalion is forced out of its initial location. Battalion tactical assembly areas may be organized using one of two methods.

Method 1

7-54. The battalion may assign sectors to subordinate companies to include the HBCT battalions' field trains and require them to tie in their fires and observation with each other. The BSB CP is located near the center of the assembly area. Ideally, company sectors are assigned to balance the BSA against the appropriate enemy avenue of approach. Reconnaissance occupies observation posts at key points around the entire perimeter of the BSA or screens along the most dangerous or likely avenue of approach. Companies exchange sector sketches, fire plans, and roving guard/patrolling plans with adjacent units. Having a tactical SOP for tenant units not in the support battalion is very useful to accomplish this requirement.

7-55. This method configures the battalion in a perimeter defense with companies oriented outward. This is the most common organization of BSA assembly areas.

Method 2

7-56. The BSB may assign separate individual assembly areas to subordinate companies HBCT battalion field trains moving with the BSB, which establish their own 360-degree security. Areas between companies are secured through surveillance and patrolling. The main CP establishes a position central to outlying companies. If the battalion is dispersed over a large area, ADA assets (if augmented as there are none in the HBCT) may need to collocate with companies for adequate air defense.

7-57. A combined arms, fires battalion, and reconnaissance squadron usually establishes echelons of trains by locating the field trains with the BSB in the BSA and positioning the combat trains centrally within the maneuver/fires battalion assembly area. However, when METT-TC conditions dictate such a risk is minimal and the desire to have the unit field trains closer to their parent unit, the brigade does not form a BSA with unit field trains. In this case, the maneuver battalion establishes unit trains in the center of its assembly area (i.e. a CABSA, FBSA or RSSA).

QUARTERING PARTY

7-58. A quartering party is a group of unit representatives dispatched to a probable new site of operations to secure, reconnoiter, and organize an area before the main body's arrival and occupation. Unit SOP establishes the exact composition of the quartering party and its transportation, security, communications equipment, and specific duties. Quartering parties typically reconnoiter and confirm the route and tentative locations previously selected from map reconnaissance. Quartering parties also serve as a liaison between their parent headquarters and the quartering party of their higher headquarters to change unit locations in the assembly area based on the results of their reconnaissance.

Planning Considerations

7-59. The S2 routinely receives intelligence information from brigade headquarters throughout the battalion's deployment and operations. From this information, the S2 determines the characteristics and likelihood of the air and ground threat to the quartering party during its movement to and occupation of the assembly area. This information assists the battalion staff and the quartering party OIC in determining the mode of transportation and security required and the desirability of maintaining the quartering party in the assembly area during the movement of the rest of the battalion.

- The quartering party typically moves to the new assembly area by infiltration. For security, it may move with another subunit quartering party, depending on the likelihood of enemy contact. In this case, it may be necessary to move as a march unit of a road march if the number of vehicles exceeds local SOP restrictions on vehicular infiltration.
- Ideally, the quartering party moves over the routes to be used by the battalion and executes a route reconnaissance and time-distance check.
- The quartering party typically includes an OIC or NCOIC and representatives from the BSB CP, combat battalion's field trains, and the combat battalion's subunits, as appropriate. The HHC XO, S1, S3 Operations NCO and CSM are potential quartering party leaders.
- Composition of company or forward support company (FSC) field trains quartering parties is usually determined by the company commander but may be specified by the battalion commander. HHC representatives typically include NCOs from key support sections such as communications, maintenance, or supply.
- The BSB CP quartering party identifies potential CP locations based on tactical requirements such as cover and concealment, satellite requirements and the line-of-sight signal requirements of FM radios.
- An alternative technique is to send the operation's tactical operations center (TOC) van with the quartering party to establish C2 while the BSB main body is moving. If planning time is short, key members of the staff can move with the quartering party. This enables the staff to begin detailed planning immediately upon arrival in the assembly area. This technique also facilitates transitions to new missions by pre-positioning key staff members so planning can occur concurrently with the movement of the main body.
- Unit SOP establishes the composition, deployment, and actions of the quartering party.
- If the battalion moves and occupies its assembly area as part of a brigade, the brigade makes all coordination for fire support. If the battalion moves and occupies the assembly area without fire support (FS) planning by its higher headquarters, it conducts its own FS coordination with the BTB.
- The BSB SPO must estimate the sustainment requirements for the HBCT's movement and plan appropriate sustainment missions during the movement.
- During the BSB's planning, the staff must determine internal (i.e. BSB combat service support requirements for the quartering party). The estimate of necessary supplies and equipment must cover the entire quartering party, including accompanying staff section representatives and BOS assets.
- The quartering party may move under radio listening silence or other emission restrictive posture, especially during movement to tactical assembly areas. Use of the movement tracking system (MTS) should always be planned.

Preparation

7-60. The quartering party OIC or NCOIC plans his operations through coordination with battalion staff officers.

7-61. **Intelligence.** The S2 ensures the quartering party OIC and or NCOIC is aware of the current enemy situation, probable enemy courses of action, the weather forecast, and the terrain and vegetation likely en route to and in the new assembly area.

7-62. **Maneuver.** The OIC or NCOIC coordinates with the S3 to determine the mission of the quartering party, whether or not the quartering party is to remain in the assembly area and await the remainder of the battalion, and the route and movement restrictions to be used by

the quartering party. The OIC or NCOIC ensures subordinate unit quartering parties know where and when the BATTALION quartering party will be located in the assembly area.

7-63. **Engineer Support.** If assigned BSB responsibilities, an engineer coordinates with the quartering party OIC or NCOIC to determine whether sending engineer personnel with the quartering party for the reconnaissance and evaluation of routes, bridges, and cross-country mobility is recommended or required.

7-64. **Command and Control.** After the OIC or NCOIC has completed his planning, he assembles the members of the quartering party at a time and place of his choosing to brief them. This briefing follows the standard five-paragraph field order format. Emphasis is on actions at halts and critical areas, actions of the quartering party in the assembly area, contingency plans, and procedures to request and receive BOS assistance as appropriate. He should cover in detail medical evacuation procedures, actions on contact, and actions to take if separated from the quartering party. Leaders with MTS and other long-range communications systems should understand their capability and rehearse how to use those systems especially for calling in a MEDEVAC. It is very important to know the MEDEVAC frequency for the AOs that the combat logistics patrol will traverse. The leadership should also know the frequency to use call for tactical assistance from the nearest response force. Rehearsals are a very good tool to ensure that all processes and actions to be taken are in place and understood.

Execution

7-65. The following considerations apply to quartering party execution:

- **Maneuver.** The quartering party navigates by infiltration to the assembly area, generally along one route. (Infiltration may not be used in all types of operations, hence it is appropriate to say this is METT-TC dependent.) If the quartering party moves along a route to be used by the main body and the main body has not yet sent a reconnaissance party forward, the quartering party conducts a route reconnaissance during its movement. The quartering party may also execute a time-distance check of the designated route. Driving the march speed of the battalion's main body march units, the OIC or NCOIC notes the time and actual vehicle odometer distances between the CPs along the route. He reports these times and distances to the BSB CP after moving through the RP. Upon arrival in the assembly area, the quartering party navigates to assigned positions and executes the required reconnaissance. The quartering party also has the following responsibilities at the assembly area:
 - Determines locations for individual vehicles.
 - Identifies unit left and right limits of fire, records this information, and sends updates to the unit's commander.
 - Determines the location for the BSB CP and records it.
 - Verifies subordinate unit locations and sectors of fire to ensure there are no gaps in coverage.
 - Ensures necessary routes are cleared.
 - Transmits changes or updates to the BSB CP to alert the main body to changes in the route and assembly area.
- If reconnaissance of proposed locations reveals the area is unsuitable for occupation, the quartering party OIC or NCOIC attempts to adjust unit locations in the area assigned. If such adjustments do not correct the problem, he immediately notifies the S3, SPO or commander.
- If an element of the BSB CP has accompanied the quartering party, it moves to the location reconnoitered by its representative and establishes forward C2 for the

BSB. If air defense assets have accompanied the quartering party, they occupy advantageous firing positions oriented on air avenues of approach. Representatives organize their respective areas by selecting and marking positions for vehicles and support facilities. If designated, guides move on order to preselected checkpoints or RPs to await main body march unit elements.

- If the BSB quartering party is not going to remain in the assembly area, it does not depart the assembly area until all subordinate unit quartering parties have reported. The unit quartering parties should provide the results of their reconnaissance and identify requested changes to their tentative locations.
- Each commander or unit leader must decide if and when guides are required to assist in occupying the assembly area. Normally, the use of guides is planned for occupations during periods of limited visibility.

Engineer Support

7-66. In some cases, mobility support is required to repair or replace damaged bridging or roadways where no feasible bypass is available. Engineer units supporting the BSB may accompany the quartering party to execute mobility operations.

Logistics Assets

7-67. Logistics assets may accompany the quartering party. Logistics elements generally conduct resupply and maintenance operations for the quartering party or as appropriate combat replenishment operation (CRO) for supported units at scheduled halts or in the new assembly area.

OCCUPATION

7-68. Units position themselves in assembly areas in accordance with their parent unit's tentative plan. Quartering parties typically guide units into position. The units accomplish occupation smoothly from the march without halting or bunching of units at the RP.

7-69. Subordinate units normally establish routes and separate SPs and RPs for march elements that extend from the march column's route or RP toward the march units' assembly area positions. This technique clears the route quickly, maintains march unit C2, and prevents bunching of units at the march column RP. The battalion begins movement to the assembly area with an updated movement route, specific coordinates for vehicle locations, and a confirmed defensive scheme for occupation of the assembly area. This enables the battalion to transition quickly from the road march into the actual occupation while maintaining overall security for the main body.

Intelligence

7-70. The S2 assists in planning the assembly area occupation by identifying enemy avenues of air and ground approach into the new assembly area and the degree and type of rear area threat to the battalion in its new location. The S2 also identifies and disseminates the security requirements for the battalion and begins preparing the reconnaissance and Surveillance (R&S) plan for the assembly area. In coordination with the S3, the S2 makes preliminary plans for reconnaissance and surveillance tasks to be assigned to subunits in the battalion, including the combat battalion trains moving with the BSB and occupying the BSA.

Maneuver

7-71. The commander or S3 chooses a method for occupation (whole BSA assembly area or separate subunit assembly areas) and tentative subunit locations based on METT-TC. He

then considers selecting tentative assembly area locations. To operate effectively in the assembly area, selected subunits may have specific positioning requirements, such as being near mess units, near water for decontamination, or on hardstand for field maintenance. Based on METT-TC, the commander or S3 develops contingency plans that address the possibility of significant enemy contact in the assembly area. Time available and the likelihood of enemy contact determines the level of detail in contingency plans. These plans typically include FS plans and alternate assembly areas or rally points in case the BSA is forced out of its initial assembly area.

Fire Support

7-72. FS requirements are coordinated with units already positioned near the new assembly area. Support shortfalls between requirements and availability are coordinated with either higher or adjacent units. FS planning includes support for battalion contingency plans in case of enemy ground contact.

Engineer Support

7-73. The type and extent of engineer support required in the assembly area depends on the anticipated length of stay, type and degree of enemy threat, terrain in the assembly area, and the follow-on mission of the BSB. Engineer support requires augmentation to the HBCT based upon METT-TC analysis. The BSB is responsible for all mobility and survivability tasks in the assembly area.

Positioning of Sustainment Assets

7-74. The SPO recommends external support unit positioning to the commander and the BSB S3. BSB HHC support elements position themselves in relation to the BSB TOC.

Command and Control

7-75. The XO and S2 determine tentative locations for BSB C2 facilities from map reconnaissance based on METT-TC. The overriding consideration for selecting these locations is the ability of the various CPs to communicate higher, lower, and laterally. Establishing the BSB CP in the new assembly area should occur early in the occupation so subunit CPs can locate based on their requirement to communicate with the BSB CP.

ACTIONS IN THE ASSEMBLY AREA

7-76. The battalion focuses all actions in the assembly area on preparing for future operations to include sustainment missions for the HBCT and internal missions such as resupply, personnel replacement, maintenance, reorganization, rest, and the planning of future operations.

7-77. The battalion initiates administrative personnel actions in the assembly area if time permits.

7-78. Internal to the BSB and external support to the HBCT maintenance activities concentrate on deadline faults and those degrading the unit's ability to shoot, move, and communicate. The unit pays special attention to those maintenance tasks that are too time-consuming or difficult to perform during combat operations.

7-79. The units conduct resupply actions in the assembly area to replenish items used in previous operations, to assemble stocks for future operations, and to replace damaged and contaminated supplies as required. Refueling during the move to the assembly area is easier and faster than refueling after arrival in the assembly area. The BSB SPO should plan these types of operations with the HBCT S4 for the HBCT.

7-80. The unit conducts planning and preparation for future operations concurrently with maintenance and administrative activities.

7-81. The unit may require training if issued new or modified equipment while in the assembly area. Small unit training may be necessary if large numbers of replacement personnel are introduced into the unit, especially if significant numbers of key leaders are replaced.

Security

7-82. Security comprises measures taken by a military unit to protect itself against surprise, observation, detection, interference, espionage, sabotage, or annoyance that may impair its effectiveness. Security is essential to the protection and conservation of combat power.

7-83. Security is achieved by establishing and maintaining protective measures or through deception operations designed to confuse and dissipate enemy attempts to interfere with the secured force. Effective security prevents the enemy from gaining an unexpected advantage over friendly forces.

Security in the Assembly Area

7-84. Forces in tactical assembly areas are provided a degree of security by their separation from the line of contact and by the presence of other units between them and the enemy. In UEx/y rear areas or non-contiguous areas, security is provided through battle contingency plans. If the assembly area is well forward, security is provided by proximity to other BOS units or the Maneuver Enhancement Brigade depending upon the commander's allocation of combat power. In keeping with their mission and the tactical situation, units in tactical assembly areas employ active security measures. These measures include reconnaissance and patrolling, visual and electronic surveillance of ground and air avenues of approach, and establishment of OPs. Regardless of the security that may be provided by other units or agencies, the commander takes whatever actions or precautions he deems necessary to secure his command.

Positioning of Companies

7-85. The BSB positions its companies and if moving with the BSB the combined arms, fires battalion and reconnaissance squadron support area (CABSA, FBSA and RSSA) with respect to avenues of approach and access routes into the assembly area. Keep in mind the medical company has limited capability to conduct force protection beyond its immediate self-protection. Companies tie in their fires, observation, and patrolling with one another. This is fairly easy for the battalion because the companies typically occupy a portion of a BSA perimeter and are immediately adjacent to another company or unit. Companies/units exchange sector sketches, fire plans, and patrolling plans with adjacent units.

OPSEC

7-86. The BSB practices the usual operations security (OPSEC) measures to enhance the security of the unit while in the assembly area. OPSEC includes active and passive measures that attempt to deny the enemy information about friendly forces. Units in the BSA practice noise and light discipline, employ effective camouflage, and eliminate or reduce radio traffic. Also reducing the satellite antennae's physical signature as much as possible is desirable.

Noncombatants

7-87. Movement of civilians and refugees near assembly areas is strictly controlled to prevent guerrilla forces dressed as civilians or refugees, enemy sympathizers or covert agents from obtaining information about the battalion. Units may remove unit markings and uniform

patches in some cases to retain unit anonymity. When possible, the unit conducts rehearsals in areas not subject to enemy observation and performs extensive movements and resupply under limited visibility. OPSEC measures vary because of higher headquarters deception efforts.

Reconnaissance & Surveillance Plan (R &S)

7-88. The BSA R&S plan directs the employment of intelligence assets under BSB control and assigns intelligence and security tasks to subordinate units. Companies typically provide security patrols to their fronts and establish OPs in accordance with the R & S plan. Patrols are established to maintain contact between units when companies occupy separate assembly areas.

DEPARTURE FROM THE ASSEMBLY AREA

7-89. The planning considerations for occupying the assembly area are based largely on the anticipated future missions of units. Units are positioned in the assembly area so they can depart the assembly area en route to their assigned tactical missions without countermarching or moving through another unit.

Placement of Start Point (SP)

7-90. Units departing the assembly area must hit the SP at the correct interval and speed. To achieve this, the SP must be located a sufficient distance from the assembly area to allow units to maneuver out of their positions and configure for the road march before reaching the SP. The SP for a battalion movement should be located an adequate distance from the assembly area to permit the company to attain proper speed and interval before crossing it.

Liaison Officers (LNO)

7-91. When unit-to-unit dispersion or terrain in the assembly area prohibits visual contact, LNOs maintain contact between departing units and return to their parent units to initiate movement at the correct time.

SECTION IV – COMBAT LOGISTICS PATROLS

7-92. Convoy resupply operations (LOGPACs) conducted on the modern asymmetrical battlefield are combat operations commonly called combat logistics patrols in our COE. While their purpose may be to deliver people or supplies or other types of logistics from one point to another, the combat logistics patrol planner must assume that his combat logistics patrol will encounter enemy attempts to disrupt movement or inflict damage and casualties. Therefore, a combat logistics patrol should be planned and prepared using the same techniques that are used in any combat arms operation; troop leading procedures (TLPs). These TLPs have been proven in combat to provide leaders with detailed and effective procedures for developing, issuing and preparing for a sound tactical plan. Using TLPs will insure that all key tasks are accomplished, making maximum use of the leader's most critical resource-time. While TLPs are standardized through the Army, this section will discuss how they are tailored to specifically fit combat logistics patrol operations. Following the section on using TLPs there is a discussion on planning considerations for combat logistics patrols.

TROOP LEADING PROCEDURES (TLP) AND THE MILITARY DECISION MAKING PROCESS (MDMP)

7-93. TLP extends the MDMP to small unit level. The MDMP and TLP are similar but not identical. Commanders with a coordinating staff use the MDMP as their primary planning process. Company-level and smaller units do not have formal staffs and use TLP to plan and prepare for operations. This places the responsibility for planning primarily on the commander or small unit leader.

7-94. Troop leading procedures is a dynamic process used by small unit leaders (company level and below) to analysis a mission, develop a plan, and prepare for an operation. These procedures enable leaders to maximize available planning time while developing effective plans and adequately preparing their unit for an operation. TLP consist of the eight steps as depicted in Figure 7-1. The sequence of the TLP steps is not rigid. They are modified to meet the mission, situation, and available time. Some steps are done concurrently while others may go on continuously throughout the operations.

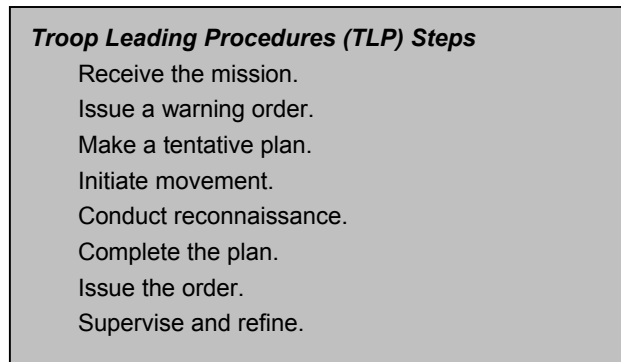


Figure 7-1, TLP Steps

7-95. Normally the first three steps (receive the mission, issue a WARNO, and make a tentative plan) of TLP occur in order. However, the sequence of subsequent steps is based on the situation. The tasks involved in some steps (for example, initiate movement and conduct reconnaissance) may occur several times. The last step, supervise and refine, occurs throughout.

7-96. Ideally, a battalion headquarters issues at least three WARNOS to subordinates when conducting the MDMP as depicted in Figure 7-2. WARNOS are issued upon receipt of mission, completion of mission analysis, and when the commander approves a COA. However, the number of WARNOS is not fixed. WARNOS serve a function in planning similar to that of fragmentary orders (FRAGOs) during execution. Commanders may issue a WARNO whenever they need to disseminate additional planning information or initiate necessary preparatory action, such as movement or reconnaissance. It is this requirement for movement of the BSB and replenishment operations that WARNOS are so important to allow time for subordinate leaders to start their TLP.

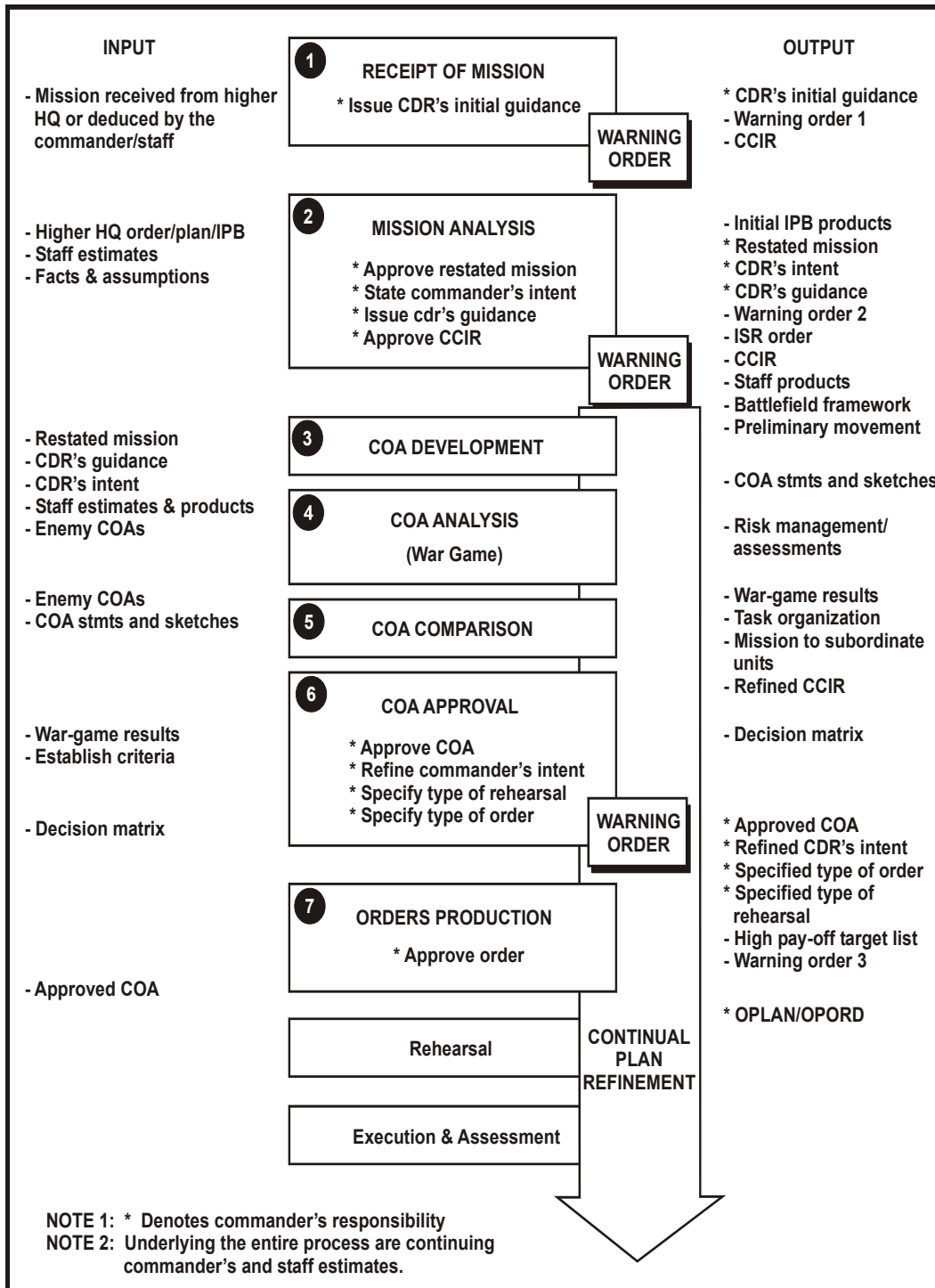


Figure 7-2, The Military Decision-Making Process

7-97. Army leaders begin TLP when they receive the initial WARNO or perceive a new mission. As each subsequent order arrives, leaders modify their assessments, update tentative plans, and continue to supervise and assess preparations.

COMBAT LOGISTICS PATROL ORIENTED TROOP LEADING PROCEDURES

Step One: Receive the Mission

7-98. The combat logistics patrol commander may receive the mission in a warning order, an operations order (OPORD), FRAGO, transportation movement request (TMR), or verbally due to shortage of time.

7-99. The combat logistics patrol commander should ensure he completely understands the mission and tasks involved. He takes this opportunity to ask clarifying questions and seeks further guidance if necessary.

7-100. The combat logistics patrol commander should then quickly analyze his unit's current capability to accomplish the assigned task. See yourself means making a rapid assessment of any problems (people, supplies, or maintenance) that could jeopardize the mission. If the issues are serious enough to require assistance from the commander, he should be informed immediately.

7-101. During TLP step one, Army leaders perform an initial assessment of the situation (METT-TC analysis) and allocate the time available for planning and preparation. (Preparation includes rehearsals and movement.) This initial assessment and time allocation form the basis of their initial WARNO. Army leaders issue the initial WARNO quickly to give subordinates as much time as possible to plan and prepare. They issue the best WARNO possible with the information at hand and update it as needed with additional WARNOs.

Step Two: Issue the Warning Order (WARNO)

7-102. WARNOs are issued to insure that subordinate leaders of elements have key information they need to maximize their preparation time. The WARNO contains as much detail as possible. It informs subordinates of the unit mission and gives them the leader's time line. Army leaders may also pass on any other instructions or information they think will help subordinates prepare for the new mission. This includes information on the enemy, the nature of the higher headquarters plan, and any specific instructions for preparing their units. The combat logistics patrol commander may issue multiple WARNOs as he receives additional information or changes from higher.

7-103. WARNOs follow the five-paragraph OPORD format in FM 5-0, Appendix G. Normally an initial WARNO issued below battalion level includes—

- Mission or nature of the operation.
- Time and place for issuing the OPORD.
- Units or elements participating in the operation.
- Specific tasks not addressed by unit SOP.
- Time line for the operation.

Step Three: Make a Tentative Plan

7-104. Once they have issued the initial WARNO, company commanders develop a tentative plan. This step combines MDMP steps 2 through 6: mission analysis, COA development, COA analysis, COA comparison, and COA approval. At levels below battalion, these steps are less structured than for units with staffs. Often, leaders perform them mentally. They may include their principal subordinates—especially during COA development, analysis, and comparison. However, a company commander, not their subordinates, selects the COA on which to base the tentative plan being developed by the company commander. TLP can be used at all levels within the company, so the point being made is that the leader in charge of the mission makes the COA decision.

7-105. A simplified approach to tactical analysis and planning makes use of the following basic considerations of mission, enemy, terrain/weather, troops and support available, time available and civil considerations (METT-TC).

MISSION

7-106. The combat logistics patrol commander must review, and then plan to execute all of the tasks and guidance found in his Higher Headquarters Concept of Operations, Specified, Implied, and Essential Tasks and Constraints. Examples of Constraints are detours, restricted routes, prohibition of an action, a requirement such as following the ROE.

7-107. The product of this part of the mission analysis is the restated mission. The restated mission is a simple, concise expression of the essential tasks the unit must accomplish and the purpose to be achieved. The mission statement states who (the unit), what (the task), when (either the critical time or on order), where (location), and why (the purpose of the operation).

ENEMY

7-108. Combat logistics patrols in our COE are generally conducted in familiar areas (continuous operations in assigned AOs). This permits units to develop detailed records of historical information concerning enemy activity along frequently traveled routes. A pattern analysis of intelligence is necessary for understanding and reacting to the threat(s). All leaders and personnel of units conducting combat logistics patrols must be thoroughly knowledgeable and current on the threats they face.

Types of Threats to Combat Logistics Patrols

- Improvised Explosive Devices (IEDs).
- Vehicle Borne Explosive Devices (VBEDs).
- Mines
- Sniper (small arms/rocket propelled grenade (RPG)).
- Ambushes (open/blocked).

Threat Analysis

- Each type of threat should be further analyzed to be fully understood.
- Capability. Weapons (s)/Devices and Effective Range.
- Organization/Strength.
- Times.
- Location. A continuous pattern analysis of historical contacts along frequently scheduled routes provides excellent indications where increased patrolling between combat logistics patrols and increased vigilance during combat logistics patrols must occur.
- Photographs/Diagrams/Videos from unmanned aerial vehicles (UAVs). These provide a leader and Soldier with an ability to visualize the threat and better prepare themselves to avoid them.

Unit Intelligence Responsibilities

7-109. Units must actively record and analyze the threats in their AO. Relying solely on intelligence from the battalion S2's analysis is only a starting point. Combat logistics patrols that see routes on a daily basis and are debriefed regularly, by the 2, will provide much more detailed information. Tasking an appropriate person at the company level (XO or 1SG) to provide this intelligence support to combat logistics patrol commanders will insure that hard

won, detailed and current intelligence is disseminated to the individuals who must face the threats. Recommendations include:

- Develop route specific battle books that focus on the actual threat(s) and pattern analysis being employed along frequently traveled routes.
- Threat Hot Spots should be further identified on the strip map(s) issued to combat logistics patrols.
- For leaders and Soldiers to become thoroughly familiar with the threat in the area of operations, regular briefings must be conducted. This cannot be accomplished solely during combat logistics patrol briefings.
- Tactical risk management begins here as unit leaders identify the hazards and implement control measures to lower the risks based upon what they know about the specific threat.
- Avoid creating your own patterns of behavior of when and how movements are conducted. The enemy is looking for patterns to act upon just as much as the S2.
 - Use different times of the day for movement.
 - Use feints to mislead the enemy as to when the true mission begins/ends.
 - Expand the battlespace so that the enemy, especially in an urban environment, is presented an ever changing environment of movement (e.g. move checkpoints out further, add more checkpoints or move locations of checkpoints).
- When actionable intelligence is used provide feedback to the Soldiers who provided it, so they know their efforts are of use to the overall mission of force protection.

TERRAIN

7-110. Normally leaders focus on the standard military aspects of terrain for combat operations, OCOKA:

- **Observation and Fields of Fire.** Observation is the condition of weather and terrain that permits a force to see the friendly, enemy, and neutral personnel and systems, and key aspects of the environment (FM 6-0). A field of fire is the area that a weapon or group of weapons may cover effectively from a given position (JP 1-02). Observation and fields of fire apply to both enemy and friendly weapons. Army leaders consider direct-fire weapons and the ability of observers to mass and adjust indirect fire.
- **Avenues of Approach.** An avenue of approach is an air or ground route of an attacking force of a given size leading to its objective or key terrain in its path (JP 1-02). Avenues of approach include overland, air, and underground avenues. Underground avenues are particularly important in urban operations.
- **Key Terrain.** Key terrain is any locality or area, the seizure or retention of which affords a marked advantage to either combatant in a given course of action (FM 6-0). Terrain adjacent to the AO may be key if its control is necessary to accomplish the mission.
- **Obstacles.** Obstacles are any obstruction designed or employed to disrupt, fix, turn, or block the movement of an opposing force, and to impose additional loss in personnel, time, and equipment on the opposing force. Obstacles can be natural, manmade, or a combination of both (JP 1-02). Obstacles include natural features, man-made structures, and military reinforcing obstacles, such as minefields.
- **Cover and Concealment.** Cover is protection from the effects of fires (FM 6-0). Concealment is protection from observation and surveillance (JP 1-02). Terrain that offers cover and concealment limits fields of fire. Army leaders consider friendly and enemy perspectives.

7-111. While this traditional approach is occasionally necessary during combat logistics patrol operations, the primary focus should be the route to be used. This analysis cannot be accomplished using only a map. Combat Imagery Base (CIB) products, available through the battalion S2 imagery channels are additional tools. If possible, nothing else substitutes for a thorough ground reconnaissance by the combat logistics patrol leader. Detailed notes should be taken that pertain to navigation, trafficability, congestion and the threat. The primary method for providing information concerning the route to combat logistics patrol leaders is the strip map. These sketches are easily developed, refined and produced. For long haul routes, they should be constructed at high levels of command, but maps for local short haul routes are ideally produced at battalion or lower levels.

7-112. A strip map with movement graphics is a valuable tool for all personnel in a combat logistics patrol. It provides an easily used navigational aid, route control and battle tracking information such as control measures and use of grid coordinates and kilometers between locations, operational and logistical support points, major terrain features, key built up areas, highway infrastructure, danger areas and enemy "hot spots". Although a strip map may be generated at a higher command level, companies should improve these products with information obtained locally to maximize their utility. Strip maps should be continuously updated based on the reconnaissance and debriefing of unit combat logistics patrols. This is particularly important for depicting current enemy intelligence along the route. It is a company level responsibility to reproduce these strip maps and insure that one is issued to each vehicle in a combat logistics patrol.

Light Data

7-113. The following information concerning light data should be collected and reviewed prior to each operation. The effects of light could provide advantages to the threat and therefore should be taken into consideration as part of the leader's risk mitigation techniques.

Beginning of Morning Nautical Twilight (BMNT) and End of Evening Nautical Twilight (EENT)

7-114. BMNT and EENT are defined as the first and last time of the day that an individual Soldier can engage a target at the maximum effective range of his weapon system unaided.

Percentage of Illumination

7-115. The percentage of illumination is defined as the percentage of illumination present based on the moon. An example would be $\frac{1}{4}$ moon is 25%, $\frac{1}{2}$ moon is 50% and full moon is 100%. In order to analyze illumination, there is also a requirement to understand Moon-Rise (MR) to Moon-Set (MS). During the hours of darkness, before the moon rises and after the moon sets, percentage of illumination is 0%.

TROOPS AND SUPPORT AVAILABLE

7-116. Perhaps the most important aspect of mission analysis is determining the combat potential of one's own force. Army leaders know the status of their soldiers' morale, their experience and training, and the strengths and weaknesses of subordinate leaders. They realistically determine all available resources. This includes troops attached to, or in direct support of, the unit. The assessment includes knowing the strength and status of soldiers and their equipment. It also includes understanding the full array of assets in support of the unit. Army leaders know, for example, how much indirect fire, by type, is available and when it will become available. They consider any new limitations based on level of training or recent fighting.

7-117. Here the combat logistics patrol commander again attempts to see yourself by analyzing the positive or negative affects of the factors listed below in Table 7-1. Any limitations noted result in increased risks for the combat logistics patrol and should be mitigated during the preparation or execution phase.

Table 7-1, Troops and Equipment

<i>Troops</i>	<i>Equipment</i>
Rest/Morale	PMCS Feedback
Mission/Route Experience	Hardening vs Enemy Risk
Convoy Training	Weapon Maintenance
Convoy Weapon Employment Experience	Ammunition Available
Gun Truck/ Security Experience	Pyrotechnics Available
Tasked Training/Experience	Communications Systems
Troop/Leader Experience	Medical Assets/Equipment

TIME AVAILABLE

7-118. Company commanders and their leaders not only appreciate how much time is available; they understand the time-space aspects of preparing, moving, force protection fighting, and sustaining. They view their own tasks and enemy actions in relation to time. They know how long it takes under such conditions to prepare for certain tasks such as, orders production, rehearsals, and subordinate unit preparations. Most important, company commanders and their leaders monitor the time available. As events occur, they assess their impact on the unit time line and update previous time lines for their subordinates. Time lines list all events that affect the unit and its subordinate elements.

7-119. A realistic schedule that uses all of the time available from publishing of the WARNO to SP time is key to proper combat logistics patrol planning and preparation. All preparatory tasks are listed with the responsible individuals assigned. It begins with pre-combat checks (PCCs) and individual/vehicle rehearsals supervised by subordinate combat logistics patrol leaders. The combat logistics patrol brief is scheduled to be completed leaving a minimum of 2/3 of the preparation time remaining to subordinates (1/3–2/3 rule). Though there are conditions when it should be a 1/6–5/6 rule such as limited time is provided as the mission is similar in nature to previous missions. This does not mean that preparation should be any less just that similarity allows planning time to be reduced due to the limited time allotted to execute. Pre-combat inspections (PCIs) are scheduled to insure that all individuals, vehicles, weapons and communications are inspected by the combat logistics patrol chain of command. Logistic preparations are scheduled around these essential tasks.

7-120. A time schedule of the series of requirements to prepare for the combat logistics patrol should be established with the following items:

- When the requirement starts.
- What is to be accomplished.
- Where the requirement is to occur.
- Who is responsible for the requirement should be established by the combat logistics patrol commander.

CIVIL CONSIDERATIONS

7-121. Civil considerations are how the man-made infrastructure, civilian institutions, and attitudes and activities of the civilian leaders, populations, and organizations within an area of operations influence the conduct of military operations (FM 6-0). Rarely are military

operations conducted in uninhabited areas. Most of the time, units are surrounded by noncombatants. These noncombatants include residents of the AO, local officials, and governmental and nongovernmental organizations (NGOs). Based on information from higher headquarters and their own knowledge and judgment, Army leaders identify civil considerations that affect their mission. Civil considerations are analyzed in terms of six factors. These are known by the memory aid ASCOPE (see FM 6-0):

- Areas.
- Structures.
- Capabilities.
- Organizations.
- People.
- Events.

7-122. Heavy civilian presence in operational areas will be a major complicating factor along any combat logistics patrol route. The potential interference may vary when considering the types of potential civilian activity:

- Active insurgents.
- Criminals (pilferage/theft).
- Sympathizers (non-lethal harassment such as children throwing rocks.)
- Unwilling accomplices.
- Innocent bystanders.
- Vehicle traffic.
- Legitimate armed police/militia.
- Civilian/government property.

7-123. Reconnaissance of routes can identify where this activity may be more prevalent or dangerous. Historical data on problem areas should be collected, recorded and used to develop methods of avoiding civilian casualties and damage to private property. A concerted effort must be made to insure that all Soldiers understand applicable laws of war (LOW) and the theater's rules for use of force, particularly for use of deadly force. A theater ROE emphasizes four broad principles:

- Attack enemy forces and military targets.
- Spare civilians and civilian property if possible.
- Conduct yourself with dignity and honor
- Comply with the Law of War. (If you see a Violation, Report It!)

7-124. Additional classes should be conducted within the unit to foster a detailed understanding of the law of war (LOW) and the theater rules for use of force. Combat logistics patrol planners must emphasize these requirements during every combat logistics patrol briefing.

Firing in Close Proximity to Innocent Civilians

7-125. A decision to engage is an operational decision that must be made by individual Soldiers within seconds from a rapidly moving combat logistics patrol. The four broad principles previously mentioned provide a general understanding of when to shoot. When faced with hostile action on the move, in close proximity to innocent civilians; an individual decision to shoot should be based on a rapid analysis of two factors: risk to yourself and the combat logistics patrol.

Risk to Yourself and the Combat Logistics Patrol

7-126. A sniper or RPG gunner aiming or shooting a weapon within 100 meters and surrounded by civilians signifies a high risk to yourself or the combat logistics patrol. An individual aiming a rifle at a distance greater than 100 meters surrounded by civilians signifies a low risk to yourself or the combat logistics patrol.

- The firing distance of 100 meters is commonly accepted as appropriate for decision-making. However, based upon the enemy's capabilities, the firing distance may be greater or lower for the determination of HIGH and LOW risk. That is a command decision based upon experiences or developed intelligence.

7-127. Evaluate your ability to hit an enemy threat without endangering civilians in the area.

- If you are stationery or moving slowly and there is a clear path to the enemy threat this is a high probability of a hit.
- If you are moving rapidly and your enemy threat is in close proximity of innocent civilians this is a low probability of a hit.

7-128. If the risk to yourself or the combat logistics patrol is HIGH and your probability of hitting the enemy threat is HIGH, an individual should engage. If the risk to yourself or the combat logistics patrol is LOW and the probability of hitting the enemy threat is LOW, an individual should not engage.

OTHER PLANNING CONSIDERATIONS FOR COMBAT LOGISTCS PATROLS

Leaders Lead

7-129. Leaders must be located where they can best command and control the combat logistics patrol or their portion of it. Generally, a leader should be centrally located in the unit within the order of march, but may need to maneuver to get to a vantage point that will allow him visibility of the battlefield when required. It is not recommend that leaders be in the lead or trail vehicle. Leaders must maintain a common operating picture and be aware of their unit's situation at all times. They must achieve a situational understanding with the information presented to them.

Medical Planning

7-130. Combat lifesavers, medics, and aid and litter teams should be positioned towards the rear and front of the combat logistics patrol to enable them to easily move forward or rearward if they need to render aid after action has been taken against the threat or during if able to reach the wounded. The aid and litter team should be different than the combat lifesaver or medic. Ensure the designated medical evacuation (MEDEVAC) vehicle has been configured in a way to rapidly load and transport casualties. All members must know MEDEVAC procedures, and their aide bags need to be checked toe ensure they are complete. Leaders with MTS and other long range communications systems should understand their capability and rehearse how to use those systems especially for calling in a MEDEVAC. It is very important to know the MEDEVAC frequency for the AOs the combat logistics patrol will traverse.

Communications

7-131. Communications and signals need to be developed in order to be seen or heard during tactical combat logistics patrol operations. Factors of engine noise, gunfire, distance, dust and other things that interfere must be considered. Always have a primary and alternate method to communicate both within and outside the combat logistics patrol.

Force Protection

7-132. Force Protection is critical. Consider the following when planning:

- Harden vehicles with sandbags, steel plating, wire mesh, ballistic blankets, extra fragmentation vest, or any other material that will add protection while not handicapping mobility.
- Ammunition allocation and location needs to be standardized with both an individual basic load and a vehicle combat load.

Intelligence

7-133. Units need to develop a system of receiving daily intelligence briefs, providing intelligence summary, intelligence reports and graphics for posting the map in the operations room, and making this information available so that leaders at all levels can walk in and study it daily. The unit should have a standard operating procedure (SOP) as to how often intelligence information is provided to supported units and a method to ensure that key personnel receive the information (i.e. need to confirm receipt rather than just send the email).

Recovery and Maintenance

7-134. Recovery and maintenance teams must be capable of functioning en route and under fire. Take a look at the unit's capabilities, rehearse them, and ensure every member of the unit is trained on them. All vehicles should carry commonly used spare parts, with recovery and maintenance teams having more parts and necessary tools and diagnostic equipment. This is a tough requirement to balance—not too little and not too much.

Obstacle Reduction

7-135. Obstacle reduction may be needed if a road is blocked. The preferred method, assuming bypassing is not possible, is to simply push through an obstacle with a truck or combat vehicle that is best capable of moving the obstacle out of the way. Use caution since a blocked road is a trap for another type of attack: the unit is in a kill zone and needs to get out of it. If the combat logistics patrol cannot proceed or bypass, then it needs to go to a rear rally point. Should this not be possible, the combat logistics patrol will go into the box formation and prepare to defend itself until assistance arrives to defeat or destroy the enemy.

Sources for Planning Combat Logistics Patrols

7-136. There are many sources of information for conducting combat logistics patrol operations: Center for Army Lessons Learned (CALL), Army Training and Readiness Program (ARTEP) manuals, Field Manuals (FMs) and documents produced for the most current operations. Further information on convoy survivability is at the Combined Arms Support Command's website:

http://www.cascom.army.mil/td/td_trans/Training_Products/newindex.htm

7-137. The enemy threat is intelligent and learns as we do from actions on contact. They react to actions that the U.S Army develops to defeat or destroy them. The enemy always has a vote in combat. Use this information and information to glean from other documents and lessons learned in the theater of operations concerned to best determine what is needed to conduct successful combat convoys that reduce or overcome the threat to Soldiers and materiel.

Step Four: Initiate Movement

7-138. Army leaders initiate any movement necessary to continue mission preparation or position the unit for execution, sometimes before making a tentative plan. They do this as soon as they have enough information to do so, or when the unit is required to move to position itself for a task. This is also essential when time is short.

7-139. During the preparation period it may be necessary to move elements of the combat logistics patrol for refueling, rearming or pick-up loads. The combat logistics patrol should schedule these moves in the timeline and delegate execution to subordinate leaders so that the combat logistics patrol planning is not disrupted.

Step Five: Conduct Reconnaissance

7-140. Whenever time and circumstances allow, Army leaders personally observe the AO for the mission. No amount of intelligence preparation of the battlefield (IPB) can substitute for firsthand assessment of METT-TC from within the AO. Unfortunately, many factors can keep leaders from performing a personal reconnaissance. The minimum action necessary is a thorough map reconnaissance, supplemented by imagery and intelligence products. In some cases, subordinates or other elements (such as scouts) may perform the reconnaissance for the leader while the leader completes other TLP steps.

7-141. Review the discussion of terrain in Step Three to assist with reconnaissance.

Step Six: Complete the Plan

7-142. During this step, company commanders incorporate the result of reconnaissance into their selected COA to complete the plan or order. This includes preparing overlays, coordinating the sustainment assets for the mission, command and control requirements, and updating the tentative plan as a result of the reconnaissance. At lower levels, this step may entail only confirming or updating information contained in the tentative plan.

7-143. Typically, Army leaders below company level do not issue a commander's intent. They reiterate the intent of their higher and next higher commander. The combat logistics patrol briefings are generally verbal orders; however a number of planning products should be completed and used during the briefing. The following list contains the recommended planning products to be used.

- Manifest.
- Timeline.
- Strip Map.
- The combat logistics patrol Briefing Format using the 5 paragraph order format. (See FM 5-0)
- The combat logistics patrol Commander Risk Management Card.
- Risk Reduction Worksheet.

Step Seven: Issue the OPORD (The combat logistics patrol Brief)

7-144. A site conducive to giving an order for a combat operation must be determined and properly set up for the combat logistics patrol brief. This site should support the use of multiple visual aids such as charts, map blow-ups and a whiteboard/butcher board. The motor pool is not a satisfactory location. The combat logistics patrol commander must prepare carefully and rehearse the presentation with all visual aides. Maintaining eye contact, speaking clearly so that everyone can hear and using visual aids professionally is essential to properly communicating mission essential details. All combat logistics patrol orders should be concluded with confirmation back briefs by subordinate leaders.

Step Eight: Supervise Execution and Refine Plan

7-145. Throughout TLP, company commanders and their leaders monitor mission preparations, refine the plan, perform coordination with adjacent units, and supervise and assess preparations. Normally unit SOPs state individual responsibilities and the sequence of preparation activities. Army leaders supervise subordinates and inspect their personnel and equipment to ensure the unit is ready for the mission.

7-146. A crucial component of preparation is the rehearsal. Rehearsals allow Army leaders to assess their subordinates' preparations. They may identify areas that require more supervision. Army leaders conduct rehearsals to—

- Practice essential tasks.
- Identify weaknesses or problems in the plan.
- Coordinate subordinate element actions.
- Improve soldier understanding of the concept of operations.
- Foster confidence among soldiers.

7-147. Company and smaller sized units use five types of rehearsals:

- Confirmation brief.
- Backbrief.
- Combined arms rehearsal.
- Support rehearsal.
- Battle drill or SOP rehearsal.

Note: See FM 6-0 for more information on rehearsals.

Confirmation Brief

7-148. Immediately after receiving the order, subordinate leaders brief their superior on the order they just received. They brief their understanding of the commander's intent, the specific tasks they have been assigned and their purposes, and the relationship of their tasks to those of other elements conducting the operation. They repeat any important coordinating measures specified in the order. The confirmation brief is normally used with other types of rehearsal.

Backbrief

7-149. The backbrief differs from the confirmation brief in that subordinate leaders are given time to complete their plan. Backbriefs require the fewest resources and are often the only option under time-constrained conditions. Subordinate leaders explain their actions from start to finish of the mission. Backbriefs are performed sequentially, with all leaders going over their tasks. When time is available, backbriefs can be combined with other types of rehearsals. Doing this lets all unit leaders coordinate their plans before performing more elaborate drills. If possible, backbriefs are performed overlooking subordinates' AOs, after they have developed their own plans.

Combined Arms Rehearsal (Rehearsal with participating members/units)

7-150. A combined arms rehearsal requires considerable resources, but provides the most planning and training benefit. Depending on circumstances, units may conduct a reduced force or full dress rehearsal.

7-151. **Reduced Force.** Circumstances may prohibit a rehearsal with all members of the unit. Unit leaders and other key individuals may perform a reduced force rehearsal, while

most of their subordinates continue to prepare for the operation. Often, smaller scale replicas of terrain or buildings substitute for the actual AO. Army leaders not only explain their plans, but also walk through their actions or move replicas across the rehearsal area or sand table. This is called a rock drill. It reinforces the backbrief given by subordinates, since everyone can see the concept of operations and sequence of tasks.

7-152. **Full Dress.** The preferred rehearsal technique is a full dress rehearsal. Company commanders rehearse their subordinates on terrain similar to the AO, initially under good light conditions, and then in limited visibility. Small unit actions are repeated until executed to standard. Full dress rehearsals help soldiers to clearly understand what is expected of them. It helps them gain confidence in their ability to accomplish the mission. Supporting elements, such as aviation crews, meet soldiers and rehearse with them. An important benefit is the opportunity to synchronize the operation. The unit may conduct full dress rehearsals. They also may be conducted and supported by the higher headquarters.

Support Rehearsals

7-153. At any point in TLP, units may rehearse their support for an operation. For small units, this typically involves coordination and procedure drills for aviation, fire, combat service, engineer support, or casualty evacuation. Support rehearsals and combined arms rehearsals complement preparations for the operation. They may be conducted separately and then combined into full dress rehearsals.

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Battle Drills or SOP Rehearsal

7-155. A battle drill is a collective action rapidly executed without applying a deliberate decision making process. A battle drill or SOP rehearsal ensures that all participants understand a technique or a specific set of procedures.

7-156. Throughout preparation, units rehearse battle drills and SOP actions. These rehearsals do not need a completed order from higher headquarters. Company commanders and their leaders place priority on those drills or actions they anticipate occurring during the operation. For example, a transportation platoon may rehearse a battle drill on reacting to an ambush while awaiting the movement order.

7-157. Company level leaders refine their plan based on continuing analysis of their mission and updated intelligence. Most important, Army leaders know that they create plans to ensure all their subordinates focus on accomplishing the same mission within the commander's intent. If required, they can deviate from the plan and execute changes based on battlefield conditions and the enemy. Company level leaders oversee preparations for operations. These include inspections, coordination, reorganization, fire support and engineer activities, maintenance, resupply, and movement. The requirement to supervise is continuous; it is as important as issuing orders. Supervision allows Army leaders to assess their subordinates' understanding of their orders and determine where additional guidance is needed. It is crucial to effective preparation.

SECTION V – EXAMPLE FORMAT FOR A COMBAT LOGISTICS PATROL COMMANDER’S BRIEFING

7-158. It is important that a combat logistics patrol commander uses a standardized methodology to conduct their briefings prior to departure. The following example should be used to determine what is best based upon your METT-TC situation.

Table 7-2, Example Convoy Brief Format

<p>Example Convoy Brief Format (Modified from FM 55-30 in CALL Handbook No. 03-33 and CJTF-7 OIF Smart Card 2)</p>	
<p>Movement Order No. _____</p>	
<p>References:</p>	<p>A. _____ (Maps, tables and relevant documents)</p> <p>B. _____</p>
<p>TASK ORGANIZATION: (Internal organization for convoy—Manifest).</p>	
<p>1. Situation:</p>	
<p>a. Enemy Forces:</p> <ol style="list-style-type: none"> 1) Weather. General forecast. 2) Light Data (EENT, % illumination, MR, MS, BMNT). 3) Discuss Enemy. <ol style="list-style-type: none"> a) Identification of enemy (If known). b) Composition/capabilities/strength/equipment location (Hot Spots highlighted on map). <p>b. Friendly Forces: Operational support provided by higher headquarters.</p> <ol style="list-style-type: none"> 1) Helicopter/Gun ships. 2) Forces assigned a Quick Reaction Forces (QRFs) mission. 3) MP/Combat Forces escort. 4) Fire Support elements. <p>c. Attachments: (from outside the organization).</p>	
<p>2. MISSION: (WHO, WHAT, WHEN, WHERE & WHY)</p>	
<p>3. EXECUTION:</p>	
<p>a. Concept of Movement</p>	
<p>b. Tasks to subordinate units (manifest):</p>	
<p>c. Coordinating Instructions:</p> <ol style="list-style-type: none"> 1) Order of March 2) Routes 3) Additional movement issues 4) Uniform 5) Actions at danger/hazard areas (SOPs or battle drills to be rehearsed) 6) Rules of Engagement 	
<p>d. Employment Tactics, Techniques and Procedures:</p> <ol style="list-style-type: none"> 1) Readiness Level of vehicle occupants 2) Scanning/Sector of Fire of Driver, TC and weapon systems 3) Target ID—communicate/signal 4) Body Positioning in order to achieve best firing position 5) ROE Concerns 6) Point of Aim 	
<p>e. Employment Tactics, Techniques and Procedures</p> <ol style="list-style-type: none"> 1) Point of aim 2) Rate of Fire 	

Table 7-2, Example Convoy Brief Format

<p>3) Magazine Awareness</p>
<p>4. SERVICE SUPPORT:</p> <ul style="list-style-type: none"> a. <i>Ration/Water Plan</i> b. <i>Ammunition</i> c. <i>Medical</i> d. <i>Petrol, Oil and Lubricants</i> e. <i>Maintenance/Recovery</i> f. <i>Remain Over Night (RON) Facilities</i>
<p>5. COMMAND AND SIGNAL:</p> <ul style="list-style-type: none"> a. <i>Commander(s)/Positioning</i> b. <i>Communications</i> c. <i>Signals</i> d. <i>Reports</i>
<p>6. SAFETY/RISK MANAGEMENT:</p> <p>7. REVIEW TIMELINE:</p> <p>8. GIVE TIME HACK:</p> <p>9. ASK FOR QUESTIONS:</p>

SECTION VI – TYPES OF COMBAT LOGISTICS PATROL SECURITY

ROUTE SECURITY

7-159. Route security operations are a specialized kind of area security operations conducted to protect lines of communication and friendly forces moving along them. Enemy attempts to interdict LOCs may have little immediate impact on ongoing decisive and shaping operations because of unit basic loads and previously positioned caches. However, the security of those routes over which the echelon’s sustaining operations flow is critical to sustained land operations, regardless of whether the commander is attempting to exploit success or recoup from failure.

7-160. The security of routes and LOCs, whether rail, pipeline, highway, or waterway, presents one of the greatest security problems in an echelon's rear area. Route security operations are defensive in nature and are terrain-oriented. A route security force prevents an enemy force from impeding, harassing, or destroying traffic along the route or portions of the route itself. Having a base permits the concentration of security resources. LOC security requires dedicated resources at almost infinite points or reaction forces to counter possible enemy action. Units performing missions that require the habitual use of LOCs, such as MP, transportation, supply, and service units, can perform route security operations in conjunction with their primary activities. The echelon rear area or non-contiguous area commander can employ the following techniques to provide route security:

- Passive security.
- Route reconnaissance.
- Cordon security.
- Combat security.

7-161. While the scope of these operations depends on the factors of METT-TC, route security operations tend to require significant resources. A combination of passive and route reconnaissance is commonly used over secured routes such as a LOC.

PASSIVE SECURITY

7-162. The passive security technique for provide route security includes measures initiated to achieve security without a significant expenditure of manpower or resources. It includes—

- Camouflage.
- Formation and march control of combat logistics patrols so they present the least lucrative target possible under prevailing conditions.
- Proper selection of routes.
- Capitalizing on security offered by other activities not related to the route's security requirements.
- These activities include aircraft traversing the route, maintenance activities taking place along the route, training exercises or troop movements adjacent to or along the route, military and host nation police traffic control activities, and the activities of the civilian population.
- Defensive information operations.

7-163. The commander uses passive security for all conditions or situations and as an adjunct to any other technique of route security employed. They are the products of a long-term and continually improved program for an integrated security system.

ROUTE RECONNAISSANCE

7-164. Route reconnaissance addresses not only the route itself, but also all terrain along the route from which the enemy could influence a friendly force's movement. Route reconnaissance takes place at irregular intervals to avoid developing a regular pattern that an enemy could exploit. However maintaining a continual, irregular presence inhibits the ability for the enemy to establish ambushes and set up IEDs and VIEDs.

CORDON SECURITY

7-165. It is normally not feasible to secure all points on a route by physically allocating resources to each point. Cordon security is the security provided between two combat outposts positioned to provide mutual support. A commander can assign air assault, mechanized, or motorized units to combat outposts established at critical locations along the route. He locates these combat outposts within supporting distance of each other whenever

possible. Units assigned to these combat outposts provide response forces in the event of enemy activity along the route within their assigned AO. Forces based at these combat outposts conduct reconnaissance patrols and offensive operations to counter enemy activities between these two points on a frequent but irregular schedule. Cordon security requires considerable manpower and other resources. The commander uses it only when a clear and evident requirement exists.

7-166. Normally, each combat outpost contains at least a platoon-size element equipped with automatic weapons, communications, and sensors and supported by those fire support assets available to the rear area or non-contiguous area commander. The outpost commander rotates his Soldiers between duty at the combat outpost and duty on patrol. The higher commander contacts each of his deployed combat outposts frequently to check its status.

7-167. The establishment of cordon security will do little to eliminate the rear area or non-contiguous area threats that require its adoption. A commander directing the establishment of cordon security should also direct a series of parallel corrective actions, to include—

- Searching for a new route.
- Conducting vigorous search and attack operations to destroy the enemy within the echelon rear area or non-continuous areas.
- Rigorously enforcing circulation control measures in coordination with the host nation over the civilian population.
- Removing cover from areas offering concealment to an enemy.
- Constructing new routes to bypass dangerous areas.
- Repositioning supply activities to permit better route selection.
- Mass evacuation of the civilian population from towns and villages along the route. (This is not a usual measure and requires consultation with host nation authorities and adherence to the laws of land warfare.)

7-168. The commander must recognize the loss of complete control over any given route early. The continued investment of resources into a lost route merely serves the enemy. Those resources and energy should be diverted to security measures elsewhere whenever feasible.

ROUTE COMBAT SECURITY

7-169. The combat security technique for providing route security includes all measures taken by combat arms units to seize and secure the terrain necessary to permit use of the route in question. Units conduct combat security along a route to prevent enemy ground forces from moving into direct fire range of the protected route. The route and its adjoining terrain compose the AO. A route security force operates on and to the flanks of a designated route.

7-170. Combat security is the most costly technique for providing route security and draws on the strength of the maneuver force. For example, because of the distances involved, a commander usually assigns at least one battalion-size unit, if not more, to secure one route through a UEx-size AO with two HBCTs. The maneuver force establishes a perimeter around the route or cordons sections of it to search suspected enemy locations while establishing roadblocks and checkpoints along the main route and lateral routes to stop and search vehicles and people as they enter or leave the route. Special considerations include coordinating with segments manned by rear area security forces and the echelon rear or non-continuous command posts integrating the maneuver force's operations with other rear area and base defense activities, and clarifying of C2 arrangements.

COMBAT LOGISTICS PATROL SECURITY

7-171. Combat logistics patrol security operations are specialized area security operations conducted to protect replenishment operations. Units conduct combat logistics patrol security operations anytime there are not enough friendly forces to continuously secure LOCs in an AO and there is a significant danger of enemy ground action directed against the combat logistics patrol. The commander may also conduct them in conjunction with route security operations. A combat logistics patrol security force operates to the front, flanks, and rear of a combat logistics patrol element moving along a designated route. Combat logistics patrol security operations are offensive in nature and orient on the force being protected.

7-172. To protect a combat logistics patrol, the combat logistics patrol escort element must accomplish the following critical tasks:

- Reconnoiter the combat logistics patrol route.
- Clear the route of obstacles or positions from which the enemy could affect movement along the route.
- Provide early warning of enemy presence along the route.
- Prevent the enemy from attacking the combat logistics patrol.

ORGANIZATION OF A COMBAT LOGISTICS PATROL ESCORT

7-173. The size of the escort needed to conduct combat logistics patrol security operations is METT-TC dependent. However, as a general rule, an average-size combat logistics patrol of 50 vehicles normally requires approximately a maneuver company and an MP company depending upon the threat. Without such an escort, the logistics unit will have to provide security using its organic assets. This results in the reduction of cargo-hauling capabilities of each transportation unit to the degree that it must convert cargo vehicles into ad hoc gun trucks and leave other trucks in a motor pool because of their drivers being diverted to provide the necessary degree of security. This situation is expected to occur, so logistics units commanders must plan and prepare to execute this mission. Unit SOPs should be structured to support this requirement and training to unit standards for the mission must occur. There must be an offensive frame of mind when conducting this type of operation, whether integrating maneuver elements or providing security forces from the logistics unit.

7-174. Armored and mechanized infantry units, and MP elements equipped with tracked or wheeled armored vehicles are well suited to protect a combat logistics patrol because of their organic reconnaissance capabilities and combat power. The commander may reinforce the combat logistics patrol security force with engineers, dedicated air defense, and other assets as required. Usually the combat logistics patrol's trail party also provides sustainment support to the combat logistics patrol escort, such as vehicle recovery and medical evacuation. If the combat logistics patrol's trail element cannot provide that support, then the combat logistics patrol escort provides its own logistical support. Other METT-TC considerations, such as restrictive terrain and limited time, dictate how to use aviation assets as part of the coordinated effort.

7-175. The combat logistics patrol security force organizes into several elements to accomplish its tasks. The advance guard performs a route reconnaissance forward of the combat logistics patrol. The security element provides early warning and security to the combat logistics patrol's flanks and rear. This element can also perform the duties of the escort element. The escort element provides close-in protection to the combat logistics patrol. It may also provide an immediate response force to assist in repelling or destroying enemy forces if they engage the combat logistics patrol. The rear guard prevents an enemy from overrunning the combat logistics patrol from the rear. It can also act as an immediate response force to enemy contact made on either flank of the combat logistics patrol. Finally, a reaction force is available to respond to emergencies. Since the reaction force is a

committed force, and not a reserve, it is task organized to include available fire support assets and other combat multipliers. It provides firepower and support to all combat logistics patrol elements to help develop the situation, conduct a hasty attack, or prevent the combat logistics patrol's destruction. The headquarters directing the combat logistics patrol, rather than the combat logistics patrol commander, controls the reaction force. It monitors the progress of the combat logistics patrol and responds if the combat logistics patrol encounters an enemy unit the escort element cannot defeat or repel. It must be able to respond within the METT-TC conditions of the enemy's template for attacking; it is possible that use of a reaction force might not be practicable due to the enemy's inclination to initiate the ambush and immediately depart the area. The reaction force always anticipates an ambush when moving to the relief of a combat logistics patrol under enemy attack.

7-176. When a lack of resources prevents establishing all five elements, the commander normally first resources his forward reconnaissance or advance guard. He then resources his escort, flank screening, and rear guard elements in that order. It is the responsibility of the headquarters directing the combat logistics patrol to designate the response element.

7-177. If available, armed aviation assets can participate in the combat logistics patrol security operation by screening the combat logistics patrol's movement as it moves along the route of march. Alternatively, they can assist in clearing the route ahead of the combat logistics patrol as it moves along the route of march, or clearing the route in conjunction with the route reconnaissance element. Air assets can also assist by requesting indirect-fire support and coordinating with forward air controllers from other services for close air support. The supporting aviation unit must know the maneuver intentions of the ground element if contact with the enemy occurs. If combat forces are not available for use as a combat logistics patrol escort, the commander can use his own forces to augment the self-defense capabilities of his unit. The bottom-line is that the logistics commander is responsible for the force protection of his unit and therefore if augmentation is not available, he must implement the appropriate force protection measures for his unit. The other option is to discuss what he perceives as unacceptable risk, that is associated in the mission, with his higher level commander.

SECTION VII – PLANNING COMBAT LOGISTICS PATROLS

7-178. Because of the inherent dangers of combat logistics patrol operations, the commander emphasizes security measures during the planning process. Thinking in the offensive to achieve the momentum in a fight is the desired orientation. The best security measure is to avoid being ambushed. These security measures include—

- Bottom line up front: Seek-out the enemy and take the fight to him.
- Secrecy when planning and disseminating orders.
- Strict noise and light discipline during movement.
- Varying routes and schedules.
- Avoiding routes with known danger areas.
- Conducting route reconnaissance using aerial and ground systems.
- Using current intelligence information concerning the condition of the route and any enemy or other forces that may impact on the combat logistics patrol's use of that route.
- Coordinating with supporting air liaison officers to ensure the scheduling of close air support to assist the movement if the combat logistics patrol warrants committing these assets.
- Fire support elements to provide close and continuous fire support for the movement.

- Training in immediate actions drills, including actions at danger areas and in case of a near ambush, a far ambush, booby traps, encounters with enemy tactical combat vehicles, sniper contact, aerial attack, and indirect fire. Many times learning reactions to enemy contact is a Lessons Learned process during the mission once deployed. The enemy reacts to friendly counter-measures, therefore requiring the unit to implement new measures to counteract the enemy's new methods of attack.
- Communications and coordination with supporting units and other units along the route, adjacent host nation forces, and higher headquarters, including airborne radio relay.
- Varying locations for leaders, communications, medical support, and weapon systems within the movement formation.
- Questions asked of local civilians along the movement route for intelligence information, including possible enemy ambush sites.

7-179. The combat logistics patrol commander must consider the unique requirements of combat logistics patrol security when formulating his plan. He briefs his subordinates on the latest information regarding the enemy situation and the area through which the combat logistics patrol will pass. He formulates his plan and issues his order, which includes the movement formation, intervals between echelons and vehicles, rate of travel, and a detailed plan of action if the combat logistics patrol encounters an enemy force. Since there is seldom time to issue complicated orders during an ambush, subordinate commanders must plan the actions of the escort element and reaction force in the event of an ambush. Units should rehearse these actions before movement and execute them as drills if enemy contact takes place.

7-180. The commander's fire support plan covers the entire combat logistics patrol route, paying special attention to known danger areas and potential choke points. Combat logistics patrol security elements may have mortars organic to the escort element or indirect fires provided by fire support elements positioned to range all or portions of the route. Coordinating with fire direction centers before the combat logistics patrol's departure enables fire support teams in the combat logistics patrol security element to enter the appropriate fire control nets, calling for and adjusting fires as necessary.

7-181. The combat logistics patrol security commander must carefully plan for the appropriate logistics to support the operation. He should include fuel, maintenance, and recovery elements in the combat logistics patrol or pre-position them in secure areas along the route. He also plans for casualty evacuation support that covers the entire route.

7-182. Combat logistics patrol security operations in an urban environment or built-up area require different emphasis and techniques than those in rural areas. The population density and characteristics of the area may require using non-lethal weapons and carefully employing lethal weapons. When applying minimum-essential force to minimize loss of life and destruction of property, the HBCT's subordinate commanders must conduct detailed planning, coordination, and control. Whenever possible, combat logistics patrols should move through populated areas, when they are the least congested and, therefore, less dangerous to the security of the combat logistics patrol. Combat logistics patrol operations may require assistance from foreign military or local police and other local governmental agencies (if trust has been developed between them and your unit) to secure the route before the combat logistics patrol enters a built-up area.

7-183. As stated earlier it is important to vary when, where and how the movement is conducted. The intent is to vary unit movement patterns; so that the enemy can not develop actionable intelligence to use against replenishment operations i.e. do not establish patterns.

PREPARING COMBAT LOGISTICS PATROL SECURITY OPERATIONS

7-184. The combat logistics patrol commander must rehearse maintaining march intervals and actions on contact for a variety of scenarios, including air attack, artillery or indirect fire, snipers, and ambush. Since the purpose of a combat logistics patrol is to reach its destination—not to destroy the enemy in a movement to contact—the goal of these responses should be to free the combat logistics patrol from enemy contact so it can continue its mission. However, the destruction of the enemy and his equipment is not something that should be avoided and depending upon the situation is a very much desired endstate. All Soldiers and vehicles traveling in the combat logistics patrol should undergo precombat inspections to ensure they know and adhere to unit SOP, and that vehicles have a reasonable expectation of completing the combat logistics patrol without mechanical failure. During this stage, drivers act to harden their vehicles if not already in an up-armored vehicle, such as adding sandbags and Kevlar blankets and cover loads to prevent an enemy from identifying the cargo. The combat logistics patrol commander spaces prime targets throughout the combat logistics patrol and cross-loads his trucks as much as feasible to avoid losing all of one type of supply, such as all artillery fuses, if a single vehicle is destroyed.

7-185. If possible, the combat logistics patrol commander and his key subordinates perform a route reconnaissance. Shortly before the combat logistics patrol's departure, MPs or scouts or personnel assigned with those functions should perform another route reconnaissance to determine current conditions. This last route reconnaissance is intended to remove or neutralize individual mines emplaced by the enemy or locate possible ambush sites that endanger the combat logistics patrol.

EXECUTING COMBAT LOGISTICS PATROL SECURITY OPERATIONS

Artillery or Indirect Fire

7-186. An enemy may use his fire support systems in an attempt to destroy combat logistics patrols or to harass and interdict the movement of supplies and personnel. Artillery fires are either preplanned fires or fires called in and adjusted on a target of opportunity by a forward observer. The adjusted fires present the most complex problem, as the enemy can adjust the effects of his artillery fires to follow the actions of the combat logistics patrol. The two active measures that a combat logistics patrol can take against enemy artillery fires are using direct or indirect fires against the enemy forward observer, if his location can be identified and calling for counterfire if the direction and approximate distance to the enemy artillery system can be estimated. This is quite challenging when an enemy can shoot and move prior to the return of fire by supporting friendly mortars or artillery.

7-187. The combat logistics patrol commander has three passive options when the combat logistics patrol comes under enemy artillery fire:

- Halt in place.
- Continue to march.
- Disperse quickly to concealed positions.

7-188. Regardless of the option selected, the unit SOP should cover the action taken and the signal directing the action. The primary consideration is the immediate departure from the impact area. The combat logistics patrol only halts when the artillery concentration is ahead of the combat logistics patrol. The combat logistics patrol commander looks for an alternate route around the impact area and the combat logistics patrol should remain prepared to move out quickly. The mission or the terrain may require the combat logistics patrol to continue through the beaten area. In this case, the combat logistics patrol increases its speed of movement and spreads out to the maximum extent allowed by the terrain.

Sniper Fire

7-189. The combat logistics patrol commander takes caution when receiving sniper fire to ensure that any return fire does not harm friendly troops or civilians in the area. The best individual reactive measures against sniper attack by a combat logistics patrol are passive. Ensure all Soldiers wear helmets and available body armor. Vehicles move through the area without stopping. In accordance with the combat logistics patrol commander's instruction or unit SOP, the appropriate combat logistics patrol personnel take action to locate, suppress, and kill snipers in accordance with the ROE.

Ambush

7-190. The very nature of an ambush—a surprise attack from a concealed position—places an ambushed combat logistics patrol at a disadvantage. No single defensive measure, or combination of measures, prevents or effectively counters all ambushes. The training of the combat logistics patrol elements directly relates to the effectiveness of counter-ambush measures. Immediate reaction and aggressive leadership are essential to limit casualties and damage to vehicles, cargo, and personnel.

7-191. Small enemy forces are seldom able to contain an entire combat logistics patrol in a single kill zone. This is due to the extensive road space occupied by even platoon-size combat logistics patrols and because of the presence of security elements escorting the combat logistics patrol. More often, an enemy is able to ambush only a part of a combat logistics patrol—either the head, trail, or a section of the main body. Fire in the kill zone may be from only one side of the road, with a small holding force on the opposite side. An enemy frequently places mines and booby traps on the holding force side to contain the combat logistics patrol in the kill zone. The part of the combat logistics patrol that is in the kill zone and receiving fire must exit as quickly as possible if the road ahead is open. Meanwhile, the unit SOP should direct the crew-served weapons mounted on combat logistics patrol vehicles and the individual weapons of non-driving personnel to suppress the ambush force while the combat logistics patrol's vehicles move out of the kill zone. The security escort takes care in assaulting the main ambush forces because an enemy will commonly use mines and booby traps to protect his flanks.

7-192. The combat logistics patrol leaves disabled vehicles behind or, if they are blocking the road, pushes them out of the way with following vehicles. Combat vehicles providing escort to the combat logistics patrol must not block combat logistics patrol vehicles by halting in the traveled portion of the road to return fire. If the main body splits into two or more elements because of the ambush, those elements forward of the ambush site move to a secure location. Vehicles that have not entered the kill zone must not attempt to do so. One method is to stop, their personnel dismount, take up a good defensive position and put fire on the enemy and maneuver against the enemy in accordance with orders from the on the ground leader. Since escort vehicles may have left the road to attempt to overrun a hostile position, elements of the combat logistics patrol should not fire on suspected enemy positions without coordinating with the escort forces. Another method is to by-pass the area and continue the mission leaving the enemy to other forces as designated by unit SOP or the responsible dedicated commander.

7-193. Other actions that the combat logistics patrol commander can take to neutralize the ambushing enemy force include—

- Calling for artillery fire on enemy positions.
- Calling for attack helicopters to engage the enemy positions.
- Calling for the response force.

7-194. If forced to dismount, personnel dismount their vehicles away from the direction of enemy fire. They will support, IAW their leader's direction, the escorting security forces that

have passed through the kill zone or have not yet entered the kill zone to maneuver to destroy the ambushing element. The combat logistics patrol commander calls for the response force as soon as the ambush occurs. Hence, knowing the frequencies for the response forces as the unit moves through multiple AOs is very important.

7-195. The combat logistics patrol clears the route and movement resumes as soon as possible after the ambushing enemy force is defeated or withdraws. Wounded Soldiers are evacuated using the fastest possible mode; knowing the MEDEVAC procedures and frequency is an important part of preparation of the combat logistics patrol. When the combat logistics patrol cannot tow disabled vehicles, it should distribute their cargo among other vehicles if time permits. The combat logistics patrol destroys vehicles and cargo on order of the combat logistics patrol commander if it is not feasible to evacuate them. The combat logistics patrol recovers combat net radios and other critical items before it destroys the vehicles. These items should not fall into enemy hands.

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Chapter 8

BSA Security Operations

The BSB commander's plan of action must achieve adequate protection to ensure accomplishment of missions by BSA elements with as small a force as necessary, since any drain of time and personnel from operational activities will adversely affect the accomplishment of their missions. However, survival of his unit is most important for the continuing success of the HBCT's ability to sustain itself.

This chapter provides basic guidance for commanders and staff officers on the organization of forces, control measures, and planning, preparing, and executing BSA security operations. The tactics and techniques expressed in this chapter are applicable across the full spectrum of operations (offense, defense, stability, and support). However, commanders must interpret them in accordance with the enemy's capabilities. For example, the physical layout of a BSA will be vastly different if the enemy has a significant air capability than if the enemy has no air capability. The purpose of BSA security operations is to prevent the interruption of current and future operations. Rear area, noncontiguous area and base security operations (BSA included) constitute one of the five elements that constitute sustaining operations. (See FM 3-0 for a discussion of sustaining operations as part of the battlefield framework.)

The security planning military decision-making process (MDMP) starts with the HBCT's first WARNO during the HBCT's MDMP. Whereas the sustainment concept of support plan that the BSB will execute is developed during the HBCT's MDMP (see Chapter 5: sustainment planning), the security operations planning for the BSB and the units within the BSA is conducted by the brigade support battalion like all other subordinate battalions of the HBCT.

SECTION I – OVERVIEW OF SECURITY PLANNING

8-1. The BSB commander is responsible for BSA security. As such, he has control of all elements in the BSA for defense and positioning. Normally, the BSA is in a perimeter defense with the BSB commander as the overall commander. All elements, normally company and platoon level, in the BSA assist with forming the perimeter normally in a contiguous perimeter. It is possible due to METT-TC conditions that the perimeter is broken into battle positions of individual perimeter defense that are independent but interlocking for defense. The senior individual in each battle position is the commander for the perimeter defense. The BSB standard operating procedures (SOP) will cover as many defense procedures as possible.

8-2. Tactical logistics organizations are normally the units least capable of self-defense against a combat force. Given the COE, they are also often the targets of enemy action.

However, BSA capabilities for self-defense are often times greater than many other units when they incorporate their .50 caliber MGs and the MK-19s. Combat commanders need to realize that time and effort are used to defend logistics units and therefore degrades their ability to perform their primary support mission. (See Chapter 2's Figure 2-2. As Threat Increases, Sustainment Operational Capability Decreases). There needs to be a dialogue between the HBCT commander and the brigade support battalion (BSB) commander regarding the ability of the brigade support area (BSA) to conduct sustainment operations and its force protection requirements. There is a continuum of balancing requirements as the risk of an enemy threat increases the ability to conduct sustainment operations decreases. The HBCT commander and the BSB commander must have this discussion as to what is a reasonable amount of risk to accept and then plan accordingly with as much risk mitigation as possible. In this contemporary operational environment, maneuver brigade and battalion commanders cannot take risk without thinking through the consequences of their actions. Logisticians must be competent in their warfighting skills in order to present their views of what is appropriate risk for their unit to their battalion or brigade commander within the HBCT.

8-3. The brigade commander's goal is to retain overall freedom of action for fighting military operations. This means the MSR's are clear, unobstructed and secure; units can move quickly and in an orderly fashion throughout the brigade area; logistical resupply and reconstitution continue unimpeded; and all CS and logistics units are secure. The brigade commander's goal is often unlikely in the contemporary operational environment, so the use of pulse logistics is the doctrinal method of sustainment operations. Lines of Communication (LOCs) can no longer be viewed as secured for all movements all the time. In addition, read Chapter 7 regarding combat logistics patrols. To accomplish the goal of logistics unit security, there must first be an understanding of the different levels of threat and the expectations of force levels to respond to them.

8-4. Threats to logistics units in the rear area or in a noncontiguous battlespace are categorized by the three levels of defense required to counter them. Any or all levels may exist simultaneously in the rear area or noncontiguous battlespace. Emphasis on specific unit defense and security measures may depend on the anticipated threat level.

- A Level I threat is a small enemy force that can be defeated by the BSB's perimeter defenses established within the BSA or the FSC's perimeter defenses within the maneuver unit support area. A Level I threat for a typical BSA consists of a squad-size unit or smaller groups of enemy soldiers, agents, or terrorists. Typical objectives for a Level I threat include supplying themselves from friendly supply stocks; disrupting friendly C2, sustainment operations, and facilities; and interdicting friendly lines of communication (LOC).
- A Level II threat is enemy activities that can be defeated by the BSA or FSC's support area, when augmented by a response force. A typical response force is a MP platoon; however, it can be a combat arms maneuver element. Level II threats consist of enemy special operations teams, long-range reconnaissance units, mounted or dismounted combat reconnaissance teams, and partially attrited small combat units. Typical objectives for a Level II threat include the destruction, as well as the disruption, of friendly C2 and logistics and commercial facilities, and the interdiction of friendly LOCs.
- A Level III threat is beyond the defensive capability of the BSA and any local reserve or response force. It normally consists of a mobile enemy force. The friendly response to a Level III threat is a tactical combat force (TCF). Possible objectives for a Level III threat against the HBCT's logistics units include destroying friendly logistics assets, supply points, command posts, arming and refueling points, and interdicting LOCs and major supply routes.

8-5. . All units must be able to defend against Level I activities (sniper, agents, saboteurs, or terrorist activities). They should be able to impede Level II attacks until assistance arrives. BSB units must defend themselves against attempts to disrupt their operations. They must be able to minimize destruction and to reinforce their units. BSB units must also be able to gain time until response forces arrive.

8-6. Each unit must form a defensive perimeter to defend against the threat. If enemy forces exceed the unit's defense capabilities, response forces are used. These forces will provide the initial force to close with and to destroy the enemy. If an enemy incursion exceeds the capability of response forces, tactical combat forces (TCF) must be committed to neutralize the threat. Assistance may come from a MP unit as a response force or a tactical combat force (TCF) under the control of the BTB commander. No logistics unit can sustain a defense against a determined Level II attack or a Level III attack, but it should plan and train to protect itself until a response force or a TCF arrives to repel the enemy attack with assistance from the BSA. The BSB must be able to synchronize self-defense with BSA assets, MPs, attached/OPCON maneuver units and the TCF, when it arrives.

8-7. Responsiveness is a key to defeating enemy incursions in the BSB area of operation. Responsiveness requires the immediate reaction and rapid deployment of sufficient combat power and area damage control resources. These two forces destroy the enemy and ensure minimal damage to the area. Responsiveness is achieved through:

- Effective command relationships and supervision.
- Reliable communications.
- Accurate intelligence.
- Centralized planning and decentralized execution.
- Organic mobility and fire power of response force.
- Training and rehearsals.
- Prior assessment of the capabilities of the battle positions and facilities to withstand enemy attack.

8-8. This assessment is based on a unit's degree of exposure and that unit's importance to the HBCT's ability to sustain operations. This mission-essential vulnerability analysis assists the BSB commander. With this analysis, the commander is able to allocate resources to protect personnel, supplies, and facilities in consonance with their importance to the mission.

8-9. Operations in the BSB area of operation will include efforts to secure the force, neutralize or defeat enemy operations in the BSB area of operation, and secure freedom of action in the deep and close battles. The brigade commander is responsible for plans and operations throughout the brigade area of operations. He assigns tasks to subordinate and supporting commanders to accomplish all brigade missions. The brigade S3 includes detailed planning for the BSB area of operation area as part of operational planning for offensive operations, defensive operations, stability operations and support operations.

8-10. When the brigade support battalion (BSB) commander plans in coordination with (ICW) the HBCT S3 and the brigade troops battalion (BTB) commander for the defense of the BSB's area of operation, he needs to have complete knowledge of what elements are in his sector of responsibility. What assets does each unit have that will allow it to defend itself and identify what elements can defend against a large enemy threat? Most supporting type BOS units (signal, engineer, ADMO, logistics) in the BSB's area of operation area are located in the BSA. Sometimes due to mission, enemy, terrain and weather, troops and support available, time available, and civil considerations (METT-TC) many small elements form battle positions with the entire group of battle positions making up a BSA, which in itself is as perimeter defense. The BSA perimeter defense is under the command and control (C2) of the BSB commander. The BSB commander is responsible for the defense of the BSA.

8-11. The planning considerations for BSB area of operation (AO) operations include:

- Securing and protecting the BSA, facilities, and mission essential assets.
- Preventing or minimizing enemy interference with command, control, communications, computers, intelligence, surveillance, and reconnaissance.
- Preventing or minimizing disruption of signal, engineer, or logistics to forward units.
- Providing unimpeded movement of friendly units throughout the BSB area of operation area. This will involve control of dislocated civilians, which is coordinated with the UE G5 through the HBCT headquarters and executed by military police elements and reaction forces on the ground.
- Finding, fixing, and destroying enemy incursions in the BSB area of operation area.
- Providing area damage control after an attack.
- ICW the BTB commander and the HBCT S3, identifying combat units, ground, and aviation (if available) that will have the on-order mission to defeat the enemy in the BSB's area of operation area and has C2 responsibilities.
- Designate key support elements from the BSB to evacuate the BSA to allow minimum support to the maneuver brigade should the enemy confront the BSA in sufficient strength to impact upon the ability to defend the BSA. The BSB should develop a displacement plan to support this requirement

8-12. The BSB battle staff must coordinate with the brigade troops commander (BTB) commander and the brigade S3 to ensure the BSA security plan for the BSB area of operation is integrated into the overall brigade concept of maneuver.

8-13. In addition, all ground units entering the brigade area must report to the brigade S4 movements section in the HBCT CP sustainment cell and the BSB tactical operations center (TOC) to coordinate routes, terrain, communications, and sustainment. The BSB TOC will contact the HBCT command post to confirm the operational aspects of the coordination.

8-14. The S2/S3 section of the BSB TOC fights the perimeter defense. An alternate BSB TOC should be designated. Possibilities include the BSB maintenance company CP or the BSB distribution company CP. In urban terrain, the BSB S2/S3 may have to establish subordinate battle positions (perimeter defenses or forward operating bases (FOBs)) and TOCs. One of these may be designated the alternate TOC.

8-15. Based on their TSOP, each company size unit or elements attached or OPCON to the BSA may send a representative to the TOC battle staff meetings or shift change briefings. In addition, the TOC will issue a situation report on a regular basis, twice daily if possible. The report will provide intelligence updates, reporting requirements, and impending BSA movement orders. The information on "impending BSA movement orders" is in addition to the WARNOs during the MDMP process. The S2 is responsible for developing the intelligence preparation of the battlefield (IPS), which is one of the primary tools for building the BSA defense.

SECTION II – GENERAL PLANNING CONSIDERATIONS FOR THE DEFENSE

8-16. The commander first able to see the battlefield, understand the common operational picture's implications, and take effective action that will defeat his opponent's forces, shatter his cohesion, degrade his strength and ability to concentrate, and destroy his exposed forces. The defending forces in the BSA do not have to kill every enemy soldier, squad, or combat system to be successful. The BSA's perimeter defense operations only have to destroy the enemy's ability to continue the attack or his will to fight such that he is defeated in his objectives against the BSA.

8-17. Synchronized prior planning and preparation bolster the commander's combat power, increasing the effectiveness of the defense. A defense is most effective when there is adequate time to thoroughly plan and prepare defensive positions. Lack of preparation time may cause the commander to maintain a larger-than-normal BSA response force with a quick reaction force (QRF) mission, use of the HBCT commander's response forces or accept greater risks than usual. All units must be capable of mounting a defense with minimal preparation, but a strong defense takes time to organize and prepare. The BSB commander should use the additional time to improve his unit's defensive positions; defense preparations are a continuous process. He can increase the effectiveness of the security area, establish additional alternate and supplementary positions, refine the defensive plan to include branches and sequels, conduct defensive rehearsals, maintain vehicles and personnel for the BSA and conduct sustainment operations for the HBCT.

INTELLIGENCE

8-18. During the planning process, the BSB commander uses intelligence products to identify probable enemy objectives to attack within the BSA and various approaches to the BSA. He studies enemy operations to determine their patterns and how to best defeat or destroy the enemy.

8-19. The commander uses the HBCT's products from intelligence, surveillance, and reconnaissance (ISR), and engineer assets to study the terrain associated with the BSAs area of operations (AO). By studying the terrain, the commander tries to determine the principal enemy avenues of approach. He wants to determine the most advantageous area for the enemy's attack, as well as other factors of observation and fields of fire, avenues of approach, key terrain, obstacles, and cover and concealment (OAKOC). (See FM 6-0 for a detailed discussion of OAKOC.)

8-20. The HBCT commander approves an integrated ISR plan that provides early identification of as many of the following requirements as possible:

- Locations, composition, equipment, strengths, and weaknesses of the enemy force.
- Enemy reconnaissance objectives or goals.
- Locations of possible enemy assembly areas.
- Location of enemy indirect fire weapon systems and units.
- Location of areas for enemy helicopter and parachute assaults.
- Location of artillery and missile units.
- Location, numbers, and intentions of civilian populations.
- Effects of weather and terrain on current and projected operations.
- Numbers, routes, and direction of movement of dislocated civilians.
- Anticipated timetable for the enemy's most likely COA.
- Locations of enemy command posts and the frequencies they are using.
- Pattern analysis of enemy activities.

8-21. The BSB commander's ability to see the enemy is critical to the conduct of all defensive operations. He will augment the HBCT's ISR plan in conjunction with the brigade troops battalion (BTB) ISR plan for the rear area or noncontiguous battlespace, by posting listening posts/observation posts (LPs/OPs), conducting mounted and dismounted patrols, debriefing convoy leaders and analyzing SPOT reports from units manning the perimeter.

MANEUVER

8-22. If the enemy succeeds in penetrating the BSA perimeter, the BSA's response force counterattacks. If needed based upon the BSB commander's decision to request assistance, the HBCT's response force or TCF counterattacks to overwhelm the enemy before he can

exploit his success. The BSB commander must remain cognizant of the possibility of dislocated civilians attempting to move through or around the BSA in an effort to escape approaching enemy forces.

Exploit the Advantages of Terrain

8-23. The BSB commander exploits the defending BSA's advantages of occupying the terrain where the fight will occur. The defending force engages the attacker from locations that give the defending force an advantage over the attacking enemy. These locations include defiles, rivers, thick woods, swamps, cliffs, canals, built-up areas, and reverse slopes. The BSA should make use of existing and reinforcing obstacles.

8-24. The defending BSB commander plans how to use key terrain to impede the enemy's movement. He seeks out terrain that allows him to mass the effects of his fires but forces the enemy to commit his force piecemeal into friendly EAs. This exposes portions of the enemy force for destruction without giving up the advantages of fighting from protected positions. Examples of key terrain include terrain that permits the defending force to cover a major obstacle system by fire, and important road junctions and choke points that impact enemy troop movements.

8-25. The BSB commander determines how to array his forces within the BSA along the most likely avenues of approach for mounted or dismounted given the nature of the threat. The terrain impacts how fast the enemy can close on his positions and how much time is available to employ combat multipliers e.g. indirect fires. Once the commander decides upon the forces necessary—or the degree of risk he must take is clear—he allocates his available forces and begins planning his engagement areas (EA). Engagement area development is found in FM 3-90.1.

8-26. On each enemy avenue of approach (AA), the commander determines where he wants to destroy the enemy i.e. focus on the effects to be achieved with the available firepower. He arrays forces allocated to that AA around this point to establish an EA. He uses obstacles and fires to canalize enemy forces into this EA. The commander takes actions to increase the kill probabilities of his various weapon systems at different ranges. This includes establishing range markers for direct fire weapons or confirming the zero on his weapons.

8-27. Generally, defending forces have the advantage of preparing the terrain by reinforcing natural obstacles, fortifying positions, and rehearsing operations.

8-28. Defending forces prepare the ground to force the enemy to fight where he does not want to fight, such as in open areas dominated by terrain that offers adequate cover and concealment for the occupying friendly forces. The defending force channels the enemy into prepared EAs. Units employ and continuously strengthen obstacles and fortifications to improve the natural defensive strength of the position, which has a direct bearing on the distribution of forces, frontages, and depth of the defense.

8-29. Terrain features that favor defensive operations include—

- A series of parallel ridges across the line of hostile advance.
- Unfordable streams, swamps, lakes, and other obstacles on the front and flanks.
- High ground with good observation and long-range fields of fire.
- Concealed movement routes immediately behind defensive positions.
- Limited road network in front of the line of contact to confine the enemy to predictable avenues of approach.
- Good road network behind the line of contact that allows the commander to reposition his forces as the battle progresses.

8-30. The opposite of the terrain conditions listed above degrades a force's ability to conduct defensive operations. For example, terrain with a limited road net that canalizes the defending force allows the enemy to predict its movement and take steps to interdict that movement.

MAINTAIN SECURITY

8-31. Security operations seek to confuse the enemy about the location of the BSB commander's key weapon systems, prevent enemy observation of preparations and positions, and keep the enemy from delivering observed fire on the positions.

8-32. They also try to force the attacking enemy to deploy prematurely. They can offset the attacker's inherent advantage of initiative regarding the time, place, plan, direction, strength, and composition of his attack by forcing him to attack blind into prepared defenses. The commander must not permit enemy reconnaissance and surveillance assets to determine the precise location and strength of defensive positions, obstacles, EAs, and response forces. First, the defending force conducts reconnaissance to seek-out the enemy. Second, each unit normally establishes a security area forward of its BSA perimeter using listening posts/observations posts (LP/OP) which is often a tasking from the BSB S2/3, conducting patrols and setting-up ambush sites as appropriate. All units conduct aggressive security operations within their AO, to seek out and repel or kill enemy reconnaissance and other forces. Units implement operations security (OPSEC) measures and other defensive information operations to deny the enemy information about friendly dispositions.

Disrupt the Enemy Attack at Every Opportunity

8-33. The defending BSA force conducts operations throughout the depth of the enemy's formation in time and space to destroy his key units and assets. It conducts spoiling attacks to disrupt the enemy's troop concentrations and attack preparations. The defending force counterattacks enemy successes rapidly with its response force e.g. QRF, the forces at hand, or the HBCT's response force before the enemy can exploit success. The HBCT conducts offensive information operations to assist this process.

Mass the Effects of Combat Power

8-34. The defending force must mass the effects of its combat power to overwhelm the enemy and regain the initiative. The commander uses economy of force measures in areas that do not involve his decisive operation to mass the effects of his forces in the area where a decision is sought. This decisive point can be a geographical objective or an enemy force. In an area defense, defending units use EAs to concentrate the effects of overwhelming combat power from mutually supporting positions. Another way he can generate the effects of mass is through committing his reserve (QRF).

Ensure Mutual Support

8-35. Mutual support exists when positions and units support each other by direct, indirect, lethal, and nonlethal fire, thus preventing the enemy from attacking one position without being subjected to fire from one or more adjacent positions. Mutual support increases the strength of all defensive positions, prevents defeat in detail, and helps prevent infiltration between positions. Tactical positions achieve the maximum degree of mutual support between them when they are located to observe or monitor the ground between them or conduct patrols to prevent any enemy infiltration. At night or during periods of limited visibility, the commander may position small tactical units closer together to retain the advantages of mutual support. This might mean the collapsing of the BSA perimeter to ensure better mutual support during limited visibility. Unit leaders must coordinate the nature and extent of their mutual support.

FIRE SUPPORT

8-36. In the defense, the commander uses fire support systems to neutralize, suppress, or destroy enemy forces; to delay or disrupt the enemy's ability to execute a given COA; and to enhance the effects of massed direct fires. Fire support is planned, prepared for and executed with the BTB commander ICW with the HBCT staff.

8-37. As the commander develops his defensive plans, he must visualize how to synchronize, coordinate, and distribute the effects of indirect and direct fire at the decisive time and place. Indirect fires have the greatest impact on the enemy when they are synchronized with direct fires and the use of obstacles, defensive positions, and counterattack plans. The commander must integrate the defensive fire and obstacle plans from the beginning. Indirect fires complement the effects of obstacles and can disrupt enemy attempts to breach or bypass these obstacles.

AIR AND MISSILE DEFENSE OPERATIONS

8-38. Freedom of movement is essential to successful defensive operations. In a hostile air environment, the HBCT commander must establish air and missile defense in depth around critical points, areas, units, and activities. The dedicated air and missile defense artillery resources probably cannot provide adequate cover completely throughout the AO against all possible threats; therefore, the HBCT commander in coordination with the UEx commander must establish priorities for coverage and assume risk.

Active Air Defense

8-39. The BSA, main supply routes (MSRs), and other logistics sites are also relatively fixed and easily identified from the air. Passive air defense measures help prevent detection. However, once the enemy detects them, he will attempt to attack them. Therefore, route and point security missions require air and missile defense units to locate along the MSR and in positions to protect fixed locations. If provided the HBCT commander allocates his air and missile defense assets to protect the BSA and other critical logistics sites e.g. ATHP in accordance with the factors of METT-TC.

Passive Air Defense

8-40. The commander also uses passive air defense measures to protect his force. Passive air defense measures are all measures other than active defense taken to minimize the effects of the hostile air action (FM 44-8). Passive defense measures are of two types: attack avoidance and damage-limiting measures. Both include the use of cover, concealment and camouflage, and deception.

8-41. **Attack Avoidance.** Attack avoidance means taking steps to avoid being seen by the enemy. If the force cannot be seen, the probability of it being hit diminishes to near zero.

8-42. **Damage-Limiting Measures.** The other type of passive air defense, damage limiting, is also used for survival. These measures attempt to limit damage if the enemy detects the position. If the enemy is to destroy any equipment, he is forced to do it one piece at a time. Enemy forces should never be able to put a unit out of action with just a single attack. Units can use the following measures to limit damage to their forces:

- Dispersion.
- Protective construction.
- Cover.

SURVIVABILITY

8-43. Since the attacking enemy force usually has the initiative in terms of where and when it will attack, the BSB commander must take a wide range of actions to protect his force from losses due to enemy actions. These steps include ensuring all-around defense, NBC defense, and using smoke.

8-44. The survivability effort for the defense must enable units to concentrate firepower from fixed positions. To provide flexibility, units within the BSA may use primary, alternate, and supplementary positions for their defensive weapon systems. The BSA enhances its survivability through concealment, deception, dispersion, and field fortifications.

8-45. Survivability tasks include using engineer equipment to assist in preparing and constructing trenches, command post shelters, and artillery firing, radar, and combat vehicle fighting positions. The commander provides guidance on the level of protection—such as bunker systems for fuel tankers or overhead cover, system priorities, and early use of specialized engineer systems that can construct survivability positions. He should protect supply stocks against blast, shrapnel, incendiaries, and CBRN contamination. Supplies loaded on tactical vehicles can be protected against almost anything but a direct hit by constructing berms large enough to accommodate the vehicles and deep enough to keep supplies below ground level. The HBC's senior engineer officer can advise the BSB commander about site selection that reduces the requirements for engineer survivability support without reducing the degree of protection provided. FMs 3-34.1 and 3-34.112 provide additional information concerning the construction and maintenance of survivability positions.

ALL-AROUND DEFENSE

8-46. In defensive planning, the commander has to be prepared to defend against enemy attack from any direction. His plans are sufficiently flexible, and he positions his reserve to permit reaction to any threat. The commander commits maneuver elements and available supporting weapons to detect, engage, and destroy the attacking enemy force. He assigns all personnel within the perimeter positions and sectors of fire.

CBRN DEFENSE

8-47. Because the BSA is in a fixed position, it increases their vulnerability to weapons of mass destruction. The commander specifies the degree of risk he is willing to accept and establishes priorities for his CBRN assets. He positions forces and installations to avoid congestion, but he must not disperse to the extent that he risks defeat by an enemy employing conventional munitions.

8-48. The commander determines the mission oriented protective posture (MOPP) level assumed by his force if the MOPP level has not already been established by a higher headquarters. Environmental factors determine where he places his NBC detection devices. He ensures that his unit can conduct hasty and deliberate decontamination of its soldiers and equipment. He drills his unit on measures taken in response to the enemy's use of weapons of mass destruction.

SMOKE AND OBSCURATION

8-49. The commander uses smoke to deny his use of target acquisition optics, visual navigation aids, air avenues of approach, LZs, and drop zones (DZs). Bispectral obscuration can blind attackers who lack thermal viewers or other enhanced optical systems. It prevents overwatching enemy elements from observing and engaging the BSA, whereas defending forces with advanced optical systems can acquire and engage the enemy within the smoke.

8-50. Terrain management is a critical consideration in the BSA's AO. The HBCT commander seeks to position the BSB where it can best fulfill its support tasks while using minimal resources to maintain security in conjunction with other units located in the rear area or noncontiguous battlespace. In contiguous operations, the commander positions his logistics facilities farther to the rear in a defense than in the offense to avoid interfering with the movement of units between battle positions or the forward movement of counterattack forces. It also should be located far enough behind friendly lines that likely enemy advances will not compel the relocation of critical sustainment at inopportune times. At the same time, logistics assets must be close enough to provide responsive support. In noncontiguous operations, the commander generally positions his logistics assets within the perimeters of his combat units to provide security and avoid interrupting sustainment operations.

COMMAND AND CONTROL

8-51. A defensive mission generally imposes few restrictions on the defending commander. It allows freedom of maneuver within assigned boundaries, but requires him to prevent enemy penetration of the perimeter. Defending the BSA's AO is a typical mission for the BSB. This mission allows the commander to distribute forces to suit the terrain and plan an engagement that integrates direct and indirect fires. The BSB commander must ensure that subordinate unit defensive plans are compatible and that control measures, such as assigned sectors or contact points are sufficient for flank coordination when assigning AOs.

SECTION III – PERIMETER DEFENSE PLANNING CONSIDERATIONS

8-52. A perimeter defense is oriented in all directions. Aggressive patrolling and security operations outside the perimeter are prerequisites for a successful perimeter defense. These activities can be undertaken by the unit within the perimeter or by another force, such as the territorial defense forces of a host nation. The unit can organize a perimeter defense to accomplish a specific mission, such as protecting the BSA or providing immediate self-protection, such as during resupply operations when all-around security is required. The commander establishes a perimeter when it must defend itself in areas where the defense is not tied in with adjacent units.

8-53. A major characteristic of a perimeter defense is a secure inner area with most of the combat power located on the perimeter. Another characteristic is the ease of access for sustainment operations. The commander coordinates direct and indirect fire plans to prevent accidentally engaging neighboring friendly units and noncombatants. Normally, the response force centrally locates to react to a penetration of the perimeter at any point.

8-54. BSA perimeters vary in shape depending on the terrain and situation and HBCT sustainment operations. If the BSB commander determines the most probable direction of enemy attack, he may weight that part of the BSA perimeter to cover that approach. The perimeter shape conforms to the terrain features that best use friendly observation and fields of fire. The commander can increase the effectiveness of the perimeter by tying it into a natural obstacle, such as a river, which allows him to concentrate his combat power in more threatened sectors.

8-55. The defending BSB commander positions his forces and plans fire and movement so he can respond to the widest possible range of enemy actions. He prepares plans, including counterattack plans. He rehearses, evaluates, and revises these plans as needed. The availability of LZs and DZs protected from enemy observation and fire is a major consideration when selecting and organizing the perimeter defense. The commander must emphasize supply economy and protect existing supply stocks since aerial resupply is vulnerable to weather and enemy fires. The commander considers the following fundamentals when planning a perimeter defense.

Organization of Forces

8-56. The commander may employ all of his forces forward along the perimeter. The commander employs patrols, raids, ambushes, air attacks, and supporting fires to harass and destroy enemy forces before they make contact with the perimeter, thus providing defense in depth with both techniques.

8-57. He divides the perimeter into subordinate unit AOs with boundaries and coordinating points. This reduces the possibility of fratricide within the perimeter and maximizes combat power on the perimeter.

8-58. The commander normally employs reconnaissance assets outside the perimeter to provide early warning. He may augment security with squad-size or smaller observation posts that are provided and controlled by units on the perimeter. He positions these security elements to observe avenues of approach. Patrols cover areas that cannot be observed by stationary elements. Any security forces operating outside the perimeter must coordinate their passage of lines into and out of the perimeter with the appropriate perimeter units.

8-59. The response force or QRF may be a designated unit or a provisional force organized from available personnel and equipment. The QRF forms a second line of defense behind the perimeter forces. Ideally, the response force is mobile to react to enemy action along any part of the perimeter. The commander positions the response force to block the most dangerous AA and assigns on-order positions on other critical avenues. The commander may task mission ready for firing and communication combat vehicles and weapon systems to occupy firing positions on the perimeter with the mission of reinforcing the perimeter or the response force.

Control Measures

8-60. The BSB commander in the BSA's perimeter defense designates the trace of the perimeter, battle positions, coordinating points, and lateral and forward boundaries. He can use EAs, target reference points, final protective fires, and principal direction of fire as fire control measures. The commander designates checkpoints, contact points, passage points, and passage routes for use by local reconnaissance, surveillance, and security elements operating outside the boundary of the perimeter.

Use of Terrain

8-61. Proper evaluation and organization of the area are essential to maximize the effectiveness of a force conducting perimeter defense. Factors considered are—

- Using natural defensive characteristics of the terrain.
- Using artificial obstacles to enhance the natural defensive characteristics of the terrain.
- Using existing roads, railways, and waterways used for military LOCs and civilian commerce.
- Controlling land areas surrounding the perimeter to a range beyond that of enemy mortars and rockets and also controlling water approaches.

Security

8-62. Early warnings of pending enemy actions ensure the commander time to react to any threat. Combat outposts, patrols, sensors, target acquisition radars, and aerial surveillance provide early warning. Civilian informants and actions of indigenous personnel near the position are excellent indicators of pending enemy actions. Security measures vary with the enemy threat, forces available, and the other factors of METT-TC; however, all-round security is essential.

Mutual Support

8-63. The commander positions his defending forces to ensure mutual employment of defensive resources, such as crew-served weapons, observation, and maneuver elements. Mutual support between defensive elements requires careful planning, positioning, and coordination because of the circular aspects of the perimeter defense. He uses surveillance, obstacles, prearranged indirect fires, and the provision for maneuver elements to exploit or reinforce fires to control any gaps in the perimeter. Defensive plans provide for using all available support, including field artillery systems firing danger close, attack helicopters, and close air support.

Defense in Depth

8-64. Alternate and supplementary positions and combat outposts, forward of the perimeter extend the depth. The commander plans fires throughout the defensive area up to the maximum range of available weapons. He may place portable obstacles around critical locations within the perimeter during periods of reduced visibility to disrupt the enemy's plan based on visual reconnaissance and add depth to the defense.

Responsiveness

8-65. Attacks against a perimeter may range from long-range sniper, mortar, or artillery and rocket fire to attacks by demolition teams or major forces. The enemy has the advantage of deciding when, where, and with what force he will attack. The commander prepares plans, to include counterattack plans, and rehearses, assesses, and revises them as necessary. The defensive plan contains procedures for timely response by the HBCT's Tactical Combat Force.

Maximum Use of Offensive Action

8-66. Since the objective of the perimeter defense is to maintain a secure position, the commander uses offensive actions to engage enemy forces outside the BSA. On initial occupation of the perimeter, friendly forces take offensive actions to destroy enemy forces in the immediate area. The commander employs patrols, raids, ambushes, aerial attacks, and supporting fires to harass and destroy enemy forces to prevent their capability to threaten the perimeter. The commander maintains constant communications with his subordinates within the perimeter and provides them the information necessary to maintain a common operational picture among all units located within the perimeter. He directs them to conduct appropriate actions to remove threats located within their AOs and sectors of fire.

SECTION IV – TACTICAL OPERATION CENTER (TOC) SECURITY PLANNING

8-67. The BSB commander is responsible for integrating perimeter defense plans into an overall perimeter defense plan.

8-68. As part of the terrain management function, the BSB S2/S3 assigns a defensive position and a sector to each unit in the BSA. The size of the sector is a METT-TC decision. The medical unit will often have a smaller sector due to Geneva Convention strictures and requirements for 24 hour/7 days a week patient care. The S2/S3 ensures each unit's sector of fire mutually supports the adjacent unit's sector when feasible. He does this by personally coordinating with unit commanders, and confirming that tenant units have coordinated with each other with respect to their boundaries and/or sectors of fire. The S2/S3 section must synchronize direct and indirect fires, obstacles, patrols, OPs and sensors to mitigate Level I, II and III threats' use of avenues of approach and infiltration lanes. The BSB S2/S3 must carefully coordinate this planning with each unit to ensure mutual understanding of direct and indirect fire control measures and to prevent fratricide.

8-69. The BSA defense plan must be integrated into the plan for the entire brigade area of operation. This requires the TOC to coordinate with the BTB commander and the brigade S3 for the overall plan. It must also coordinate directly with other TOCs in the brigade's area of operation to plan mutually supporting fires and to prevent firing upon each other.

8-70. The S2/S3 keeps a sketch of the defensive plan. It shows unit sectors of fire, locations of mines and obstacles, planned indirect fire coverage, OP patrol routes, and positions of automatic and anti-armor weapons. These weapons will include those in the BSA for repair. If the firing system is operable, these weapons should be included in the BSA defensive scheme, and mechanics should work on them in their fighting positions. Whenever possible, units should occupy the same location within the BSA relative to the other units every time the BSA moves. They should build a habitual relationship with the units on all sides of them. This will expedite coordination of sectors of fire. Since night vision devices are not always available in requisite numbers due to sustainment mission requirements, illumination plans must also be included in the overall BSA security plan.

8-71. In addition, the TOC must plan for a response force with a quick reaction force (QRF) mission from assets in the BSB. QRF is a non-doctrinal term that has been historically used to describe this requirement for the BSA's defensive operations. The QRF will be called upon when a unit's defenses cannot defeat the threat and MPs and combat forces from the brigade are not immediately available. As a minimum, the reaction force should include personnel equipped with machine guns, grenade launchers, rifles, FM radios, and vehicles under the control of a qualified and designated leader 24 hours a day. The BSB S2/S3 must carefully equip the reaction force based upon the anticipated threat. Removal of assets such as machine guns from the defensive perimeter when the reaction force is assembled must be considered and integrated into the defense plan. During periods of increased readiness, the response force should be assembled for immediate action. It must be well rehearsed and able to react precisely and immediately. Rally points, battle positions, and detailed procedures must be planned and practiced in advance.

8-72. The TOC must ensure that all unit commanders understand the different threat levels and the associated actions. The HBCT commander must also be aware that the BSB is neither staffed nor equipped to continue support operations at normal levels while responding to increased levels of threat. Support will be degraded. How much it is degraded will depend on the level of the threat.

8-73. Initially, the BSB commander and battle staff will often not know the size of the attacking enemy force. Identifying the level of threat is critical in determining the appropriate level of response. Level I threats are those which can be defeated by perimeter defense or multiple battle positions self-defense measures. They normally involve the activities of snipers, agents, saboteurs, and terrorists. Typical actions the TOC will require in such situations include manning OPs fully, increasing guards and spot-checking vehicles, tightening unit security, alerting defensive perimeter personnel, and increasing protection of key facilities. The degradation of support will depend on the actions directed by the individual TOC in specific conditions. However, as a general planning guide, the BSB can estimate that the 75 percent of available assets will be engaged in support operations, while 25 percent defend. This could rapidly change based upon METT-TC such as stability operations and support operations or a high threat. The TOC would likely require strict controlled access to all areas, reinforced perimeter defense, LPs/OPs prepared to withdraw, and the response force alerted.

8-74. Level II threats are those beyond perimeter defense or multiple battle positions self-defense capabilities to be destroyed and need the assistance of a response force. As a general planning guide, the BSB can estimate that the 25 percent of available assets will be engaged in support operations, while 75 percent defend during a Level II attack and up to 100% in defense (minus medical care of wounded) if it is a sustained Level II attack. The Level II

attack can be destroyed by response forces e.g. MPs or combat units with supporting lethal fires. Actions taken by the BSA: the LPs/OPs will be withdrawn, QRF forces committed, the HBCT S3 notified, and support operations ceased.

8-75. A tactical combat force provided by the HBCT commander is required to defeat a Level III threat. The BSA would be at 100% manning of defensive positions (minus medical care of the wounded) in order to delay as best they can during a Level III threat that has not allowed the BSA to displace prior to contact with the enemy. Actions taken by the BSA: the LPs/OPs will be withdrawn, QRF forces committed, the HBCT S3 notified, and support operations ceased. Artillery or air strikes normally precede such a threat.

8-76. The TOC determines the level of threat and issues an area of operation alerts to all units. The TOC also determines the probability of an air attack and issues air defense warnings.

8-77. The TOC should also have planned in advance emergency displacement procedures. If the BSB is under imminent danger from a Level II or III threat, the TOC will call for an emergency displacement of key BSA assets. Key elements should be identified in advance and prepared to move to a predesignated site with minimum notice. The commander designates key BSB elements as required. These will likely include C2, ATHP, Class III, emergency medical treatment, and maintenance elements. Emergency destruction of equipment and supplies (excluding Class VIII) is performed to avoid enemy capture. Priority items for destruction will probably include communications security (COMSEC) items, fuel, ammunition, vehicles, communications equipment, and weapons.

8-78. Other duties of the TOC are to identify primary and secondary entry points into the BSA and designating preplanned landing zones for brigade reaction forces to use when required. Based on TSOP, the TOC will also conduct regular (preferably daily) meetings or shift change briefings with base representatives to update the defensive plan.

8-79. BSB commanders have sufficient staff to conduct the planning process, but they must coordinate with the BTB commander and the HBCT S3 for the BOS elements that are not resident in the BSA e.g. fires, reconnaissance or engineer. Company commanders will use the troop leading methodology (as discussed in Chapter 7: Movements) to help them focus at their level, because the battalion level planning is a MDMP. Regardless of the level of planning and type of planning processes used, success depends on the following:

- Clearly defining standards for the desired products.
- Assigning individuals to be responsible for the products.
- Developing an understanding of what to expect in an OPORD within compressed timelines.
- Conducting orders processes with and without time constraints with all BOS elements.

SECTION IV – PLANNING PROCESSES FOR BUILDING THE BSA DEFENSE

8-80. The MDMP is part of the Operations Process where the BSB commander receives a mission, plans, prepares for and executes the perimeter defense and then assesses the results. The following paragraphs discuss how the BSB commander and his staff will use the MDMP to establish the BSA's perimeter defense. See Figure 8-1 for an example of the Military Decision-Making Process. The company commander therefore can use the following discussion of the MDMP for his own use, but should recognize that he will not be able to achieve the level of expertise in all areas as he does not have a battlestaff with functional expertise to support him.

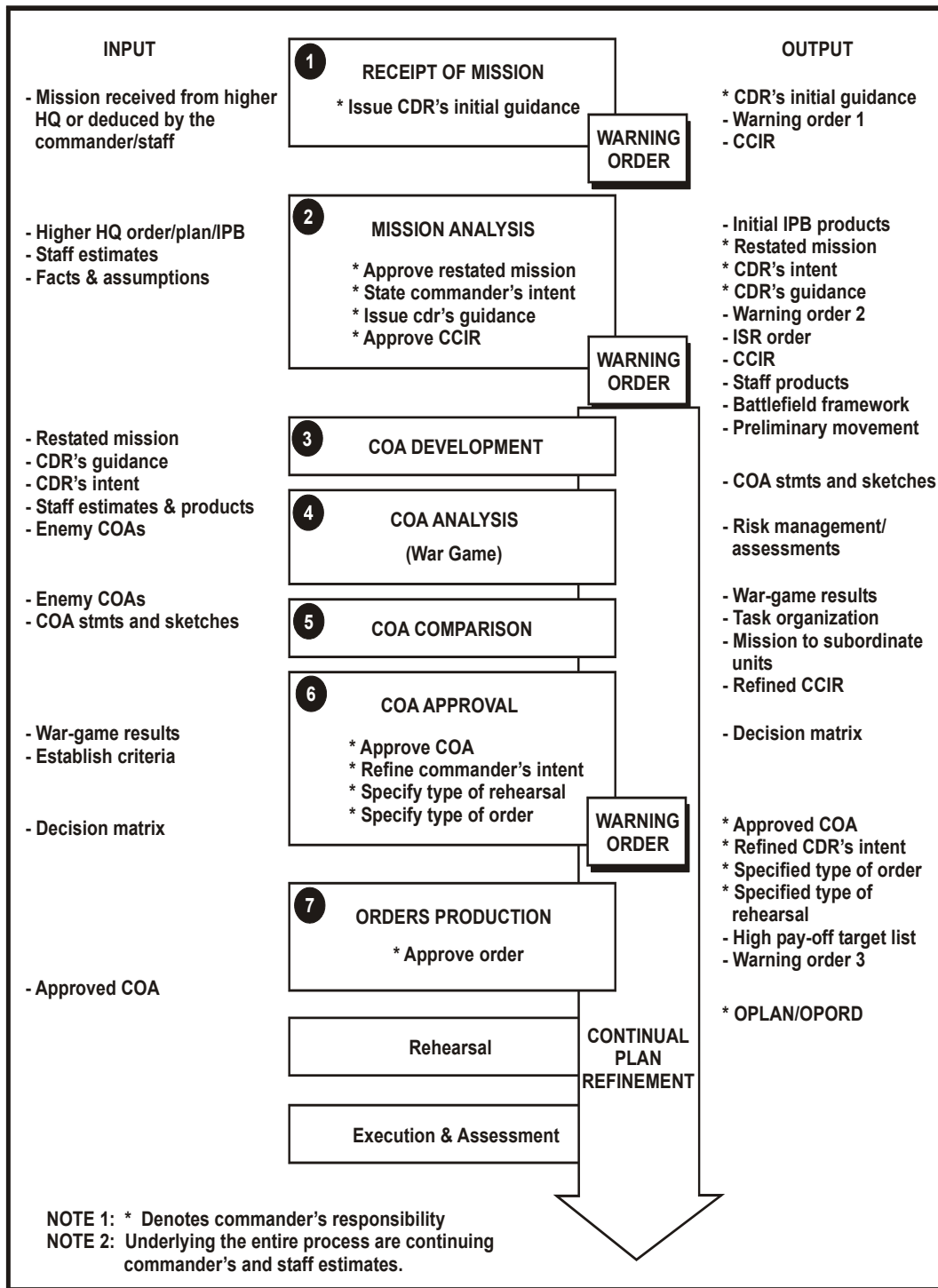


Figure 8-1, Military Decision-Making Process

MILITARY DECISION-MAKING PROCESS FOR BSA DEFENSE

Step 1: Receipt of Mission

8-81. This first step of the MDMP begins upon receipt of the initial mission from the HBCT. This mission could be in the form of a warning order (WARNO), operations order (OPORD), or briefing of an expected change in operation. The commander should use the information available to establish a time schedule by identifying the actions that the unit must accomplish to plan and prepare for the conduct the operation (initial analysis of time should help to establish a timeline for the planning and preparation phases only). This timeline is developed by starting at mission time and working backwards (backwards planning). The commander must take advantage of this time by focusing his energy on the terrain, weather and enemy's doctrine that could impact upon replenishment operations, force protection or movement. This information is readily available and will form the basis of the unit's plan. Do not wait for the HBCT to publish its order. Seek out the information as it becomes available. Up to 24 hours or more may elapse between the HBCT's warning order and when the order is issued; in a high operations tempo (OPTEMPO) battlefield the BSB commander cannot afford to waste this time! This up-front effort will pay the BSB dividends by giving the commander more time to prepare for the mission. Upon receipt of the HBCT's warning order, the BSB commander and his staff should immediately develop and issue an initial warning order. This initial warning order will allow subordinate companies to begin conducting pre-combat checks (PCCs), pre-combat inspections (PCIs) rehearsals and, if required, preparations for movement. This initial warning order should include all available information so subordinate leaders can start developing their own plans. Table 8-1 shows the minimum requirements for the initial warning order.

Table 8-1, Initial Warning Order Requirements

Enemy Situation	This should include as much information as available. Relate the information to the unit's level of operation.
Friendly Situation	Include the type of operation, higher mission statement, Bde task organization. This will allow the unit's leaders to begin planning the appropriate rehearsals.
Movement Instructions	Include locations and movement times. Cover reconnaissance members and times.
Coordinating Instructions	Issue any specified instructions, (i.e., PCI times).
Time & Location of Company OPORD	Where & when will the commander hold the operations order and who will attend?

Step 2: Mission Analysis

8-82. After issuing this initial warning order, the BSB commander and his staff should start working the BSB's mission analysis. This process begins upon receipt of the HBCT warning order and continues throughout the course of the operation.

8-83. IPB is not just conducted by the Battalion S2; it is conducted by the unit commander, and commanders at all levels to facilitate in focusing the planning process. There are three times during the MDMP process where the BSB commander and his staff will directly apply this product:

- During the mission analysis
- During course-of-action development
- During the wargaming process.

8-84. Intelligence preparation of the battlefield is a systematic, continuous process of analyzing the threat and environment in a specific geographic area. It is designed to support staff estimates and military decision-making. By applying the IPB process, the commander can selectively apply and maximize his combat power at critical points in time and space on the battlefield.

- Determining the threat's likely COA.
- Describing the environment your unit is operating within and the effects of the environment on your unit.

8-85. The IPB process begins prior to and continues during the commander's initial planning for an operation and is continuously updated during the operation. Intelligence preparation of the battlefield consists of four steps:

- Define the battlefield environment.
- Describe the battlefield's effects.
- Evaluate the threat.
- Determine threat COAs.

8-86. The enemy COA should answer the questions in Table 8-2.

Table 8-2, Enemy Course of Action

What	This is the type of operation.
When	The time the action will begin.
Where	The avenues of approach and objectives that make up the course of action.
How	The method the enemy will employ its assets, such as dispositions, location of main effort, the scheme of maneuver, and how it will be supported.
Why	The objectives or end state the enemy wishes to accomplish.

8-87. The determination of the enemy's COA will complete the IPB process and allow the commander and staff to begin the analysis of the unit's mission. Keep the products developed on-hand to assist in mission analysis. These products will help the BSB commander to better visualize how the terrain, the enemy, and the friendly COA interrelate.

8-88. Part of mission analysis will consist of an analysis of the higher mission and intent, an analysis of the unit's mission, and finish with a restated mission for the unit. To understand how one's mission interrelates and supports the unit, the commander and staff must understand their higher commander's mission and intent. Table 8-3 provides a list of questions the staff should be able to answer after their analysis of the higher mission and intent.

Table 8-3, Higher Commander's Intent

Purpose of the Operation	The most critical item the commander must gain from higher is the purpose of the operation both one and two levels up.
Intent	Analyze the commander's intent and concept of the operation one and two levels up to gain an appreciation for how each commander intends to use his forces to achieve the overall purpose. Where is the decisive point or time for the Brigade & Battalion? Draw a sketch depicting the battalion scheme of maneuver i.e. sustainment operations or movement of the BSA. Study how each battalion's task and purpose relates to the HBCT main effort.
End State	Identify, through the commander's intent and concept of the operation, how and where the BSB commander intends to have his unit postured at the end of the HBCT's mission
Risk	Determine where or when to accept risk and the effect this risk may have on the accomplishment of the BSB's mission.

8-89. Once the BSB commander has a clear understanding of the overall operation, they will begin the analysis of their own mission. Before developing their own restated mission statement, they must review the operations order and answer the questions in Table 8-4.

Table 8-4, Questions to Ask

Purpose	What is the purpose given to their unit and how does it relate to the purposes of the other companies?
Specified Tasks	What additional tasks does the OPORD specify for their unit to accomplish? Are any of these tasks essential to overall success of the operation?
Implied Tasks	What tasks, not specified in the OPORD, must their unit execute to successfully accomplish their essential and specified tasks?
Essential Tasks	What essential tasks, unit's unique contribution to sustain the fight, did the HBCT commander designate for their unit? What is the doctrinal definition of this task? Does this task imply other tasks or place limitations on the unit's freedom of action? What specific results must their unit attain in terms of the terrain, the enemy, or friendly force?
Limitations	What limitations does the OPORD place on unit's freedom of action? Limitations are restrictions placed on a commander specifying things that he cannot do or that he must do. If these are limitations, why has the higher commander limited the BSB's possible courses of action?
Assets Available	Analyze the combat readiness of unit's troops and equipment. Have the XO, SPO and CSM brief the commander on the state of the unit. Better yet, the commander should also check himself. Commander visibility is important for unit morale and cohesion.
Time Analysis	Identify specific and implied times which actions must occur throughout the planning, preparation, and the execution of the operation. Analyze the timing of the execution in terms of terrain, the enemy and friendly forces. Update previous timeline with all of the events that affect the unit.

8-90. The final steps in mission analysis are developing the unit's restated mission statement, issuance of initial commander's intent, planning guidance and initial CCIR (discussed in Chapter 5: Sustainment Operations Planning)

8-91. The unit's restated mission should include WHO, WHAT, WHEN, WHERE, and WHY. The element of WHAT is their essential tasks. If the unit must accomplish two or three essential tasks, list them in the order in which they must occur. WHY is the unit's purpose, the accomplishment of which defines mission success.

- The commander's intent focuses planning and gives the commander a means of indirect control of subordinate elements during execution. It must be understood and remembered by subordinates two echelons down. In the absence of orders, the

commander's intent, coupled with the mission statement, directs subordinates toward mission accomplishment.

- Commanders develop planning guidance from their visualization. Planning guidance may be broad or detailed, as circumstances require. However, it must convey to the staff the essence of the commander's visualization.
- The CCIR identify information needed by the commander to support his commander's visualization and to make critical decisions, especially to determine or validate courses of action. They help the commander filter information available by defining what is important to mission accomplishment. They also help focus the efforts for his subordinates and staff, assist in the allocation of resources, and assist staff officers in making recommendations.

8-92. The outcome of Step 2: Mission analysis is the issuing of a detailed warning order that includes the restated mission statement and all information compiled thus far. It is important to the BSB's subordinates' TLP that the BSB staff issue the best warning order possible and update as needed with additional warning orders. Do not wait for more information or withhold any known information. The warning order allows subordinate units to continue the planning and preparation that started with the initial warning order.

8-93. The warning order should address those items not covered in the unit's SOP that the unit must conduct to accomplish the mission. Table 8-5 shows the minimum requirements for the warning order.

Table 8-5. Warning Order Requirements

Situation	Enemy - Define for unit's subordinates the area of operation, area of interest and a brief layout of the terrain using the five military aspects of terrain OAKOC. Brief the threat evaluation. Friendly - State the commander's intent and mission statement one and two levels up. Brief the higher concept of the operation and allow the subordinates to copy all of the graphics.
Mission	Give your restated unit mission statement.
Coordinating Instructions	Give subordinates all of the limitations identified up to this point and any other instructions that allow for proactive planning and preparation, including priorities of work. Timeline - Update your earlier timeline. Outline all known beginning and ending times, to include those for the next higher unit. This includes time and location for commander's operations order. Rehearsals - Specify what types of mission-specific rehearsals or drills commander expects subordinate units to conduct within the framework of their timelines. Security - Brief the security plan.
Service Support	Address any changes to the support requirements.

Step 3: COA Development

8-94. Once they have issued the second, but more detailed BSB WARNO, the BSB staff begin COA development. For units at company level and below using TLP, they combine the MDMP steps 2 through 6: Mission Analysis, COA Development, COA Analysis, COA Comparison, and COA Approval. Often, small unit leaders perform them mentally. They may include their principal subordinates—especially during COA Development, Analysis, and Comparison. However, the BSB commanders, not their subordinates, select the COA on which to base the tentative plan.

8-95. The majority of the BSB commander's planning at this point is conducted based on a map reconnaissance. The commander will need to confirm, deny or adjust the initial plan later after conducting actual reconnaissance.

8-96. The first step in developing a tentative plan is the development of COAs. The purpose of COA development is simply to determine possible ways for the companies to accomplish their mission. The COA is as detailed as necessary to clearly describe how you plan to use your forces to achieve the task and purpose. If time permits, the staff should develop at least two COAs. Do not attempt to war-game the COA or to begin the integration of BOS elements in the BSA or supporting forces at this point; this will occur during course of action analysis in step 4.. The result of COA development is a statement and a sketch for each course of action that describes WHAT, WHEN, WHERE, and WHY.

8-97. In developing the COAs, the staff should identify the unit's main and supporting efforts. This will help focus their attention and efforts on those essential tasks required to accomplish the unit's mission. This effort might be in relation to the enemy's most likely avenue of approach into the BSA or the greatest threat to the BSA; i.e., enemy reconnaissance elements that are calling for artillery against the BSA. The key is knowing the enemy threat to the BSA.

8-98. Determine the task and purpose of the main effort first (for the BSB is this is the area with the most likely enemy AA or the requirement to protect high value targets (HVTs), since the main effort is the unit that contributes the most to the achievement of the BSA's sustainment purpose. With the situation template (SITEMP) and battalion graphics posted in front of the staff they should, ask themselves: why and where they will employ their main effort. Identify a potential location (the main effort's decisive point) for this task and purpose to occur, given the friendly and threat array of forces. See Figure 8-2 for determining Why and Where.

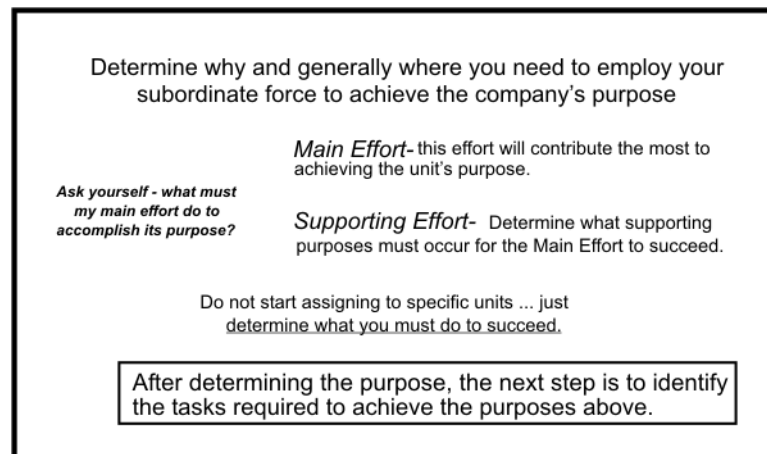


Figure 8-2, Determining Why and Where

8-99. Determine what supporting tasks and purposes must occur for the main effort to succeed (e.g. the force protection requirements to conduct a refuel operation for the HBCT's main maneuver effort). Continue to determine why they need to employ forces to ensure success, until they account for all of the threat that can affect their course of action.

8-100. Mark where these tasks and purposes will potentially occur on the unit's maps, as this will assist in the development of control measures later.

8-101. The purpose is merely the WHY the unit can use a force, not WHAT or WHO. The staff may also be able to combine two or more purposes under one depending on the amount of force and the task required to accomplish them. See Table 8-6, Determination of Tasks and Purposes.

Table 8-6, Determination of Tasks and Purposes

Decisive Point or Time	The leader identifies where and when the unit can mass overwhelming combat power to achieve specific results with respect to terrain, enemy or time, that can accomplish the mission. This assists the leader to determine the amount of combat power applied at the decisive point and what are the required tasks, (FM 5-0). The decisive point is the focus for the development of all courses of action.
Purposes	Determine WHY (purpose) and generally where you need to employ your subordinate forces to achieve the unit's purpose. Define each subordinate's purpose clearly and relate it to the battalion's purpose.
Tasks	Determine the essential tasks required to achieve the purposes identified above. A task is a clearly defined and measurable activity accomplished by individuals and units. When assigning tasks, use doctrinal terms such as those defined in FM 1-02:
Task-Organize	Next, determine the specific number and type of weapons systems necessary to accomplish each task. t. Because the unit may not have enough resources to accomplish all of the tasks and purposes identified in the course of action, resource the most critical tasks and purposes first.
Establish Control Measures	Develop the maneuver control measures necessary to clarify the task and purpose of the main and supporting efforts and to convey their intent. Maneuver control measures, such as routes, TRPs, check points, battle positions, etc., enhance the understanding of the scheme of maneuver. Also direct and indirect fire control measures must be established.
Complete COA Sketch	Complete a COA sketch for each of the unit's courses of action. This sketch can be used later to visualize the concept of the operation during warning orders and leading up to the OPORD. Technique: Create an overlay with Battalion and Company maneuver graphics, which drops over the terrain sketch and blown-up SITEMP developed during the IPB process.

COURSE OF ACTION BRIEFING

8-102. After developing COAs, the staff briefs them to the commander. A collaborative session may facilitate subordinate planning. The COA briefing includes—

- An updated IPB.
- Possible enemy COAs (event templates).
- The unit mission statement.
- The commander's and higher commanders' intent.
- COA statements and sketches.
- The rationale for each COA, including—
 - Considerations that might affect enemy COAs.
 - Critical events for each COA.
 - Deductions resulting from the relative combat power analysis.
 - The reason units are arrayed as shown on the sketch.
 - The reason the staff used the selected control measures.
 - Updated facts and assumptions.
- Recommended evaluation criteria.

8-103. After the briefing, the commander gives additional guidance. If all COAs are rejected, the staff begins again. If one or more of the COAs are accepted, staff members begin COA analysis. The commander may create a new COA by incorporating elements of one or more COAs.

Step 4: Course of Action Analysis (War Gaming)

8-104. COA analysis allows the staff to synchronize the BOS for each COA and identify the COA that best accomplishes the mission. It helps the commander and staff to—

- Determine how to maximize the effects of combat power while protecting friendly forces and minimizing collateral damage.
- Further develop a visualization of the battle.
- Anticipate battlefield events.
- Determine conditions and resources required for success.
- Determine when and where to apply force capabilities.
- Focus IPB on enemy strengths and weaknesses, and the desired end state.
- Identify coordination needed to produce synchronized results.
- Determine the most flexible COA.

8-105. COA analysis (war gaming) is a disciplined process. It includes rules and steps that help commanders and staffs visualize the flow of a battle. The process considers friendly dispositions, strengths, and weaknesses; enemy assets and probable COAs; and characteristics of the AO. It relies heavily on an understanding of doctrine, tactical judgment, and experience. War-gaming focuses the staff's attention on each phase of the operation in a logical sequence. It is an iterative process of action, reaction, and counteraction.

8-106. War-gaming stimulates ideas, highlights critical tasks, and provides insights that might not otherwise be discovered. It is a critical step in the MDMP and should be allocated more time than any other step. The BSB commander or executive officer determines how much time is available for war gaming and ensures this time line is followed.

8-107. During the war game, the staff takes each COA and begins to develop a detailed plan, while determining its strengths or weaknesses. War-gaming tests and improves COAs. The commander and staff (and subordinate commanders and staffs if the war game is conducted collaboratively) may change an existing COA or develop a new COA after identifying unforeseen events, tasks, requirements, or problems.

8-108. The commander must conduct an analysis or wargame of the course of action. This forces you to fight your course of action against the enemy's most probable course of action to determine if the plan is viable. By war-gaming the plan, the commander and staff can better visualize how the fight will occur, determine when and where the commander will need to make decisions, and identify when and where he will require the use of BOS assets. The advantages and disadvantages of each course of action will become apparent as you mentally fight the COA. See Table 8-7, wargame's end result.

Table 8-7, Wargame's End Result

<p><i>The end result of the wargame is a detailed direct fire plan, a synchronized indirect fire plan, and refined obstacle and ADMO plan.</i></p>

8-109. There are two basic techniques used to wargame by the BSB are:

- The box.
- The avenue of approach.

Note that "avenue in depth" is another possibility per FM 5-0 but it is unlikely to be used by the BSB for BSA security operations and therefore is not listed.

8-110. The staff may use either one or a combination of these techniques. The key is to fight the plan and to gain a clear understanding of how the fight will occur.

8-111. The best method for conducting the wargame is to gather the battalion staff together and ensure that they thoroughly understand the friendly and enemy COA, one and two levels up. The staff must replicate the reactions of the enemy as accurately as possible. Technique: Use the battalion S2 or the XO as the enemy commander, thus providing an uncooperative opponent. This also allows the unit to gain a thorough understanding of the plan.

Step 5: COA Comparison

8-112. The COA comparison starts with all staff members analyzing and evaluating the advantages and disadvantages of each COA from their perspectives. Staff members each present their findings for the others' consideration. Using the evaluation criteria developed before the war game, the staff outlines each COA, highlighting its advantages and disadvantages. Comparing the strengths and weaknesses of the COAs identifies their advantages and disadvantages with respect to each other.

8-113. The staff compares feasible COAs to identify the one with the highest probability of success against the most likely enemy COA and the most dangerous enemy COA. The selected COA should also—

- Pose the minimum risk to the force and mission accomplishment.
- Place the force in the best posture for future operations.
- Provide maximum latitude for initiative by subordinates.

8-114. When the commander and staff complete wargaming of each course of action, the commander then compares the COAs. He will then select the one that is most likely to accomplish the assigned mission.

Step 6: COA Approval

8-115. COA Approval has three components:

- The staff recommends a COA, usually in a decision briefing.
- The commander decides which COA to approve.
- The commander issues the final planning guidance.

COURSE OF ACTION DECISION BRIEFING

8-116. After completing its analysis and comparison, the staff identifies its preferred COA and makes a recommendation. If the staff cannot reach a decision, the executive officer decides which COA to recommend.

8-117. The staff then delivers a decision briefing to the commander. The executive officer highlights any changes to each COA resulting from the war game. The decision briefing includes—

- The intent of the higher and next higher commanders.
- The status of the force and its components.
- The current IPB.
- The COAs considered, including—
 - Assumptions used.
 - Results of staff estimates.
 - Summary of war-game for each COA to include critical events, modifications to any COA, and war game results.

- Advantages and disadvantages (including risk) of each COA. These may be discussed in terms of a numerical analysis
- The recommended COA.

Commander's Decision

8-118. After the decision briefing, the commander selects the COA he believes will best accomplish the mission. If the commander rejects all COAs, the staff starts COA development again. If the commander modifies a proposed COA or gives the staff an entirely different one, the staff war-games it and presents the results to the commander with a recommendation.

Final Planning Guidance

8-119. After selecting a COA, the commander issues the final planning guidance. The final planning guidance includes a refined commander's intent (if necessary) and new CCIR to support execution. It also includes any additional guidance on priorities for BOS activities, orders preparation, rehearsal, and preparation. This guidance includes priorities for resources needed to preserve freedom of action and assure continuous sustainment operations.

8-120. Commanders include risk they are willing to accept in the final planning guidance. If there is time, commanders discuss acceptable risk with adjacent, subordinate, and senior commanders, often by VTC. However, a commander must obtain the higher commander's approval to accept any risk that might imperil accomplishing the higher commander's mission.

8-121. Based on the commander's decision and final planning guidance, the staff issues a WARNO to subordinate headquarters. This WARNO contains the information subordinate units need to refine their plans. It confirms guidance issued in person or by VTC and expands on details not covered by the commander personally. The WARNO issued after COA approval normally contains:

- Mission.
- Commander's intent.
- Updated CCIR and EEFI.
- Concept of operations.
- AO.
- Principal tasks assigned to subordinate units.
- Preparation and rehearsal instructions not included in standing operating procedures (SOP).
- Final timeline for the operations.

Step 7: Orders Production

8-122. The staff prepares the order or plan by turning the selected COA into a clear, concise concept of operations and required supporting information. The concept of operations for the approved COA becomes the concept of operations for the plan. The COA sketch becomes the basis for the operation overlay. Orders and plans provide all information subordinates need for execution. Mission orders avoid unnecessary constraints that inhibit subordinate initiative. The staff assists subordinate staffs with their planning and coordination.

8-123. During orders production, the staff implements risk controls by coordinating and integrating them into the appropriate paragraphs and graphics of the order. The order communicates how to put controls into effect, which implements them, and how they fit into the overall operation.

8-124. The unit's OPORD should provide the battalion with visualization and an articulation of your approved COA, refined commander's intent and guidance with refined CCIR and enough information to ensure that all subordinate units work toward the desired end. Commanders review and approve orders before the staff reproduces and disseminates them unless they have delegated that authority. Traditionally, the executive officer or operations officer receives it.

8-125. Select a location for the OPORD that overlooks the unit's area of operation if possible. Ensure that the location is secure and facilitates an increased understanding of the order.

8-126. Avoid issuing the order during hours of darkness. If the commander must issue it at night, it is preferable to do it in a location, which allows the unit's subordinates to see the terrain board and map.

8-127. Often at the battalion and company levels, let alone the platoon level, there is not enough time to write out every single detail necessary for a thorough five-paragraph OPORD. In addition, the unit's subordinates will find it difficult to copy it all down and still listen to the commander during the OPORD. Therefore, it is practical to give the unit's subordinates a document that contains the necessary information, be it a matrix, OPORD outline, or just overlays with graphics and the critical tasks. This way the unit's subordinates can listen to the commander as he explains the details during the order instead of trying to write every word down. If time is short, the commander should spend time talking through the plan—not focusing on the written product. A single, well-visualized commander's intent with a concept of maneuver and support is more important for the unit's subordinates.

8-128. At the conclusion of the OPORD briefing, answer any questions and conduct a confirmation brief using the terrain model. Confirmation briefings can be done collaboratively with several commanders at the same time, or with single commanders. They may be performed face to face or by VTC.

8-129. The terrain model should include an accurate representation of the terrain, the enemy, and the friendly graphics. Focus this confirmation brief on WHAT and WHY the company will execute. The purpose of this confirmation brief is to further clarify the commander's concept of support and the defensive operation that the BSA executes.

8-130. The unit's subordinates should walk away from the commander's OPORD with a clear mental picture of what the commander expects their unit to do to achieve that end.

Troop Leading Procedures as described in Chapter 7

8-131. The planning process described during the MDMP for battalion level planning is also applicable to the BSB's subordinate commanders and the FSC commander as he sets-up his unit's support area using troop leading procedures (TLP). TLP extends the MDMP to small unit level. The MDMP and TLP are similar but not identical. Commanders with a coordinating staff use the MDMP as their primary planning process. Company-level and smaller units do not have formal staffs and use TLP to plan and prepare for operations. This places the responsibility for planning primarily on the commander or small unit leader.

8-132. The planning as well as all aspects of the operations process (plan, prepare for, execute and assess) and the use of TLP should be instinctive and a routine way of thinking for any commander. It is imperative that the unit produces a timely order that is adequate and flexible to allow preparation for combat to occur. The use of TLP is a time saver that the company commander should conduct in the order that most effectively uses the time available.

8-133. Many logistics leaders say they do not have the time to conduct Troop-Leading Procedures for defensive planning. That thought process is no longer acceptable for our leaders. See Table 8-8, Why?

Table 8-8, Why?

WHY? Leaders will find themselves faced with limited time, resources, and a relentless, resourceful and committed enemy.

8-134. All leaders should use Troop-Leading Procedures to ensure any type of operation is planned for success, thereby helping success during mission execution. These are required skills if logisticians are to balance the scales between force protection and mission support. Logisticians must understand the effectiveness of properly executed Troop-Leading Procedures and conduct the training required to develop these skills. One of the aspects that should be covered by the small unit leader is the positioning of his forces as discussed in Figure 8-3, Positioning.

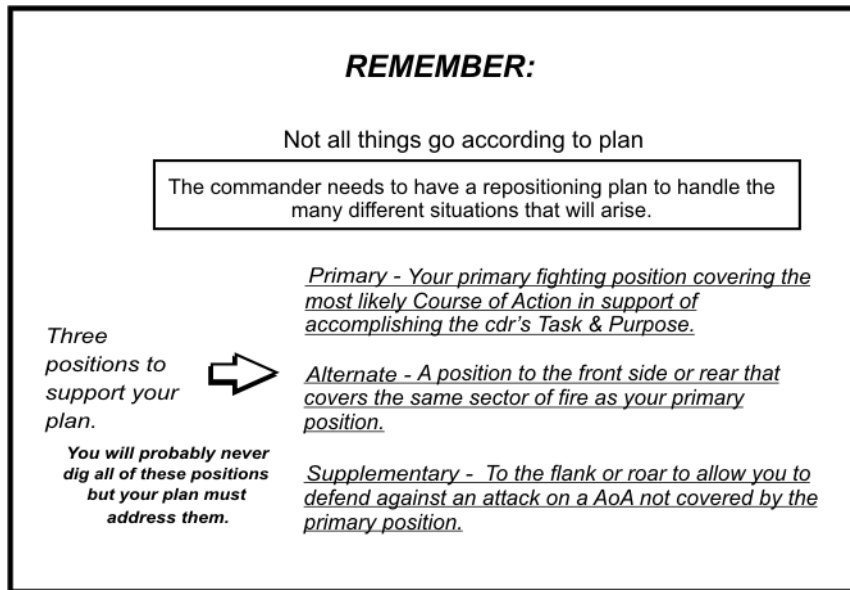


Figure 8-3, Positioning

SECTION V – PREPARING A BSA DEFENSE

8-135. The best plan may fail if it is not managed correctly. Once the commander has issued the order, he must continue to refine the plan, continue coordination with adjacent units, and supervise combat preparation and execution. All these are essential to successful mission accomplishment:

- Confirmation briefs.
- Backbriefs.
- Rehearsals.
- Inspection.
- Continuous coordination.

8-136. Confirmation briefs, backbriefs, and rehearsals are not the same thing; each one may occur during a different phase of the operation, from planning to execution.

8-137. Confirmation briefs are conducted immediately after the commander issued the order to his subordinates. This ensures they understood the tasks and purposes he assigned them. The best way to conduct this is to have them recite back what they think they heard the commander tell them. This immediate feedback and spot-check will save many wasted hours of planning if the commander's intent was not clearly understood.

8-138. Backbriefs occur after the commander's subordinates have had time to digest what they were told and developed their plan for the operation. He should designate a time for all of his leaders to come together and brief on how they plan to execute their portion of the plan. Technique: Have subordinate leaders conduct the backbriefs on the same terrain model on which the commander gave his operations order. This briefing will ensure his subordinates have created a plan that will successfully accomplish their task and purpose. It is also essential to ensure coordination between adjacent elements and to integrate and synchronize the plan.

8-139. Rehearsals are essential to ensure that everybody understands what the other unit is going to do and ensures full integration and synchronization of assets. The commander must establish the priority for rehearsals based on time available. The rehearsals should include all phases of the operation. Include backbriefs of individual tasks and a walk-through of the execution on sand tables. Follow this with a walk-through and then full speed exercise (Crawl, Walk, Run). See Table 8-9, Rehearsal.

Table 8-9, Rehearsal

<p>The key to success . . . REHEARSALS Enhances execution Prevents fratricide Identifies shortcomings Synchronizes the operation</p> <p>Tactics, Techniques & Procedures Rehearse response force actions Rehearse actions on contact Rehearse calling for CASEVAC Rehearse MASCAL Rehearse checkpoint operations Rehearse passage of lines Rehearse in MOPP4 Rehearse at night, in the dust Rehearse shifts of fires Rehearse breaking contact Rehearse calling for fire, calling for CAS Rehearse SPOT report Rehearse casualty reporting Rehearse moving to supplementary positions</p>

8-140. Take time to look at the AO. Reconnaissance allows the commander to confirm, deny, or refine his course of action. Although the brigade commander and staff may have taken him on a leader's reconnaissance at some point during the MDMP, the BSB commander should conduct a leader's reconnaissance with his own subordinates. This will allow his leaders to see as much of the terrain and enemy as possible and it should help them to visualize the commander's course of action more clearly. Select a vantage point that provides the best view of the decisive point. From the commander's vantage point:

- Explain to his subordinates the brigade's and BSA's area of operation.
- Describe where he expects the enemy (mounted or dismounted) to enter the BSA.
- Walk through the enemy likely course of action.
- Put out the BSA's task and purpose and the task and purpose for each company.

- Brief the tentative plan.

8-141. If time and situation permits, the unit should walk or drive through the engagement areas from the enemy's point of view. The steps for engagement area development are discussed in FM 3-90.1, page 3-16. See Figure 8-4, for the goal of an engagement area.

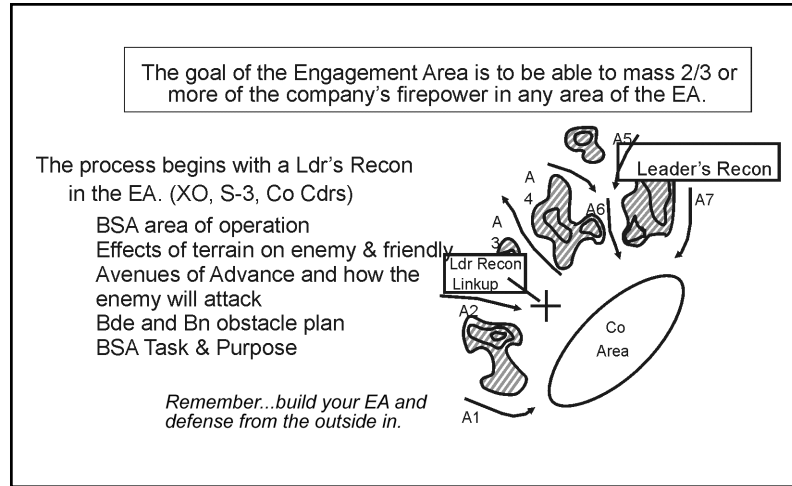


Figure 8-4, Goal of the Engagement Area

8-142. Reconnaissance operations that involve only US forces may not be effective if language problems prevent communication with the local population. In these instances, interpreters—US Army or host nation—should accompany forces conducting reconnaissance. When possible, host nation authorities, such as the civil police, should also accompany the reconnaissance force. Distributing leaflets and handbills before or during an area reconnaissance and using loudspeaker teams during the reconnaissance can aid the reconnaissance effort by informing civilians of what information the US reconnaissance force is seeking and how they can report that information to US forces.

8-143. The BSB commander directs units within his AO to establish battle positions even while this initial area reconnaissance is ongoing. The BSA provides security to units located within them and can provide perimeter security around critical locations. Perimeters vary in shape depending on the factors of METT-TC. The perimeter shape conforms to the terrain features that offer the best use of observation and field of fire.

8-144. When the units constituting the BSA arrive, they immediately start organizing the defense of the BSA. Many tasks occur simultaneously, but some may require priority. The BSA commander specifies the sequence for preparing the defense system. The unit can accomplish many defensive tasks simultaneously; the factors of METT-TC are the deciding consideration in establishing priorities of work. Those priorities may be—

- Establishing local security and deploying a security force.
- Positioning antiarmor weapons, machine guns, and assign sectors of fire.
- Positioning other defensive assets available (weapon systems for repair).
- Identifying EAs where the commander wants to engage and destroy the enemy.
- Planning fire control measures, such as target reference points (TRPs), trigger lines, and final protective fires to support the EAs.
- Positioning key weapon systems to engage into the EAs and TRPs and develop range cards and sector sketches.
- Positioning observers who can see both targets and trigger lines.

- Siting obstacle groups to support weapon systems.
- Designating and clearing fields of fire.
- Preparing primary fighting positions based on the anticipated fighting conditions, such as the time of day and weather conditions; include overhead cover.
- Emplacing obstacles and surveying indirect fire targets to support these obstacles.
- Providing concealment and camouflage for fighting and survivability positions as they are constructed.
- Positioning any available critical friendly zones over friendly positions by establishing sensor coverage and quickfire links between the sensor and shooter.
- Installing night and limited-visibility aids, such as thermal hot spots and chemical lights on TRPs during daylight.
- Updating range cards and sector sketches as required.
- Preparing alternate fighting positions.
- Designating and preparing supplementary positions.
- Designating hide positions and rehearsing movements to and from fighting positions. (Units may place their combat and tactical vehicles in hide positions at any time while preparing the defensive position.)
- Positioning the reserve.
- Establishing contact points with any adjacent units so that the defensive efforts of both units can be tied together.
- Establish CP and emplace wire for communications.
- Improving mobility on counterattack routes.
- Prestocking ammunition in revetments or bunkers where it can survive the enemy's preparatory fires.
- Rehearsing movements under daylight and limited-visibility conditions.
- Rehearsing engagements, disengagements, and any reaction force plans.
- Coordinating with adjacent units and units to the left, right, forward, and to the BSB's area of operation.
- Preparing alternate positions, then supplementary positions.
- Establishing a sleep and rest plan.
- Reconnoitering potential enemy infiltration routes, and friendly patrol routes.
- Continuing to improve the defense.

8-145. Elements in the BSA are organized into perimeter defenses for self-defense. Normally, each BSB company each field train (e.g., FSCs), in the BSA will constitute a battle position. Miscellaneous small teams will be assigned to a battle position by the TOC. The unit commander is responsible for preparing the unit defense plan and coordinating with the TOC. Each unit must be capable of defending itself and supporting other battle positions against a Level I threat and delaying a Level II threat until the response force arrives. Unit commanders are responsible for the establishing the following priorities of work:

- Coordinate with the battle position on each side to plan mutually supporting fires and to avoid troops engaging each other. If a problem exists in that area, the unit commander will notify the TOC.
- Assign each individual a fighting position. Positions should provide overhead cover. Positions must also allow for interlocking sectors of fire.
- Ensure proper individual fighting positions are prepared.
- Ensure Soldiers use all available cover. Positions should provide frontal protection from direct fire while allowing fire to the front and oblique.

- Deploy crew-served weapons in fighting positions with primary and secondary sectors of fire. They cover the most likely enemy avenues of approach. The unit commander must ensure each weapon has an adequate range card. Identify target reference points to be able to direct fire against approaching ground or air enemy forces. The commander must also ensure that dead space is covered with grenade launchers or mines.
- Deploy all weapon-carrying vehicles on the unit's perimeter. As discussed previously, this includes combat vehicles in the BSA for repair.
- Ensure vehicles are properly positioned. Natural cover and concealment are used as much as possible. Hull defilade positions or hide positions may be used with vehicles on the perimeter whenever possible.
- Setup observation posts and listening posts. The BSB cannot constantly occupy a full perimeter and perform its mission. Early warning is imperative. Therefore, OPs are critical. The OPs must provide a good view of the sector, which ideally overlaps with the adjacent OP sectors. Both the OPs and routes to them must provide cover and concealment. They should not be in positions that attract attention (such as isolated groups of trees) or on the very peaks of hills where positions would be silhouetted. Further guidance on OPs may be found in FM 3-19.4, Military Police Battlefield Circulation: Control, Area Security, and Enemy Prisoner of War Operations and FM 3-20.98, Scout Platoon.
- Establish patrols when required.
- Enforce noise and light discipline.
- Ensure camouflage is used properly.
- Plan and establish hasty obstacles.
- Create a quick reaction force to respond immediately against a threat within the BSA. Ensure the force has covered and concealed routes to each sector on the perimeter.
- Ensure Soldiers know alert signals and proper responses to artillery and air attacks. Since Soldiers are not continuously occupying the perimeter, they must be trained to quickly respond to early warnings.
- Include major terrain features, weapon positions and sectors of fire, dead space, OP positions, obstacles and mine fields, critical pieces of equipment, supplies, or facilities, and target reference points in sketches.
- Consider development of engagement areas, establishing security, counter-recon plan, friendly LZs (and possible enemy LZs), access points and planning the use of indirect fires.
- The BSB TOC has the responsibility to synchronize all BOS in the MDMP.
- Prepare sector sketches and provide to the TOC. These will be updated at regular TOC meetings or shift change briefings.

8-146. Below is a checklist of those items needed in a sector sketch preparation:

- Draw your unit sector of engagement area.
- Draw main terrain features in sector(s) and range to each.
- Draw subunit positions.
- Draw subunit primary and secondary sectors of fire.
- Draw weapon positions with primary sectors of fire for each.
- Draw machinegun final protective lines or principal direction of fire.
- Draw locations of CP and OPs.
- Draw TRPs and RPs in sector.

- Draw mines/obstacles.
- Draw indirect fire target/final protective fire locations.
- Draw and label dead space.
- Draw patrol routes.
- Draw locations, sector of fire of other weapons in your sector.
- Place your unit ID, distance to go (DTG) prepared, and magnetic north arrow on sketch.

DEFENSE OF SUPPLY POINTS

8-147. Whenever engineer assets are available, berms or deep-cut protective positions must be dug to protect fuel tankers and drums. Natural terrain concealment and camouflage nets are also used. Class I, II, and IV items are protected in deep-cut trenches if time allows, but construction of trenches for those items is a low priority. Traffic control must include measures to conceal movement at, to, and from supply points. At water points, control of spills and drainage is required to avoid standing pools of water, which reflect light. Proper fighting positions for individual and crew served weapons must be dug and integrated into the BSA defense. These include fighting positions for vehicles with mounted crew served weapons or combat systems in the BSA for repair that are able to shoot.

DEFENSE OF MAINTENANCE OPERATIONS

8-148. In the company areas, individual positions are prepared near billeting areas and on the periphery of workstations. Proper fighting positions, bunkers, or other shelters are constructed next to key shop operations for quick protection from artillery and air attacks. Use engineer assets when available to speed this process. These include fighting positions for vehicles with mounted crew served weapons or broken armored vehicles capable of firing their primary weapons systems. Ammunition should be acquired for these weapons systems and cached near the fighting positions.

HBCT LEVEL II MEDICAL TREATMENT FACILITY

8-149. The BSB commander must carefully consider the role of the BSMC. Here are three possibilities:

- First, the Level II MTF may be located near the center of the BSA to be protected by surrounding battle positions. This increases the size of the BSA without adding any defenders to man the perimeter. This also increases traffic movement in the middle of the BSA.
- A second option is to assign a sector of the BSA perimeter to the BSMC. Medical personnel can carry individual small arms for their own defense and the defense of the wounded and sick in their charge against those not acting in accordance with the law of land warfare. Also, it must be considered that the BSMC can only defend itself when attacked, and does not have the right to fire unless fired upon. However, the duty of medical personnel is to care for the sick, wounded, and injured. In addition, to questions on conformance with the Geneva Convention accord, the commander must realize the perimeter sector assigned to the medical company would have no crew served weapons.
- The final option is to locate the Level II MTF away from the rest of the BSB. It is then essentially protected by the enemy's compliance with the Geneva Convention. In view of the BSMC's mission to provide area support to units in the BSA and the constant coordination required with BSA elements, this option may not be feasible under most circumstances, especially given our contemporary operational environment and the threat faced by logistics units.

RECONNAISSANCE AND SURVEILLANCE (R&S) PLANNING

8-150. Given the HBCT's R&S plan that is implement by the BTB commander for the rear area or unassigned area, the BSB commander supplements the higher and controlling headquarters R&S plan. The BSB sets out LPs/Ops, establishes mounted and dismounted patrols, debriefs convoy leaders and analyzes SPOT reports from units on the BSA perimeter.

8-151. Reconnaissance is an active mission concerned with enemy, terrain, and/or weather. It seeks out enemy positions, obstacles, and routes. Reconnaissance missions include:

- Zone recon is conducted within a specific zone. The zone is defined by boundaries. Area recon is conducted to obtain information concerning a specific location and the area immediately around it. Route recon is conducted to obtain information on the route and terrain from which the enemy could influence movement along that route.
- Surveillance is passive. It implies observing a specified area or areas from a fixed concealed position. Observation points (OPs) can provide 24-hour surveillance and must be covered by indirect/direct fire.

8-152. A R&S tasking matrix is a product used to display taskings, requests and coordination's necessary to answer the commander's priority information requirements (PIR). The matrix has:

- **Named area of interest (NAI).** Geographical area where information that will satisfy a specific information requirement can be collected.
- **Location.** Grid coordinates or terrain features that identify the NAI.
- **Start/Stop.** Beginning and end times for the R&S mission.
- **Specific information requirement.** The exact information required during the R&S mission. Derived by the S2 from the commander's PIR. Issued in the form of a question. (Example: Is the bridge intact?)
- **Unit or asset.** Each unit or asset capable of collecting the necessary information will be marked with an X. Each unit tasked to collect at a specific NAI will be marked with a circled X.
- **Report requirement.** Describes specific reporting requirements.

SOURCES OF INTELLIGENCE INFORMATION ON THE BATTLEFIELD

8-153. The BSB responsibility for BSA security makes it imperative that the BSB TOC and brigade staff maintains a close relationship. Intelligence information possessed by the brigade with implications for BSA security must be available to the BSB S2/S3.

8-154. In addition, he receives information from HBCT S2 channels. However, intelligence gathering should not be restricted to these sources. Local authorities, dislocated civilians, and local civilians are valuable intelligence sources. Information may also be obtained from unit commanders within the BSA (e.g. FSC elements, UEx/UEy convoys that overnight in the BSA, customers, and any other elements moving into the area). In addition, information should flow laterally as well as vertically. For instance, while BSMC personnel must pass information like combat battalion casualty estimates to the BSB S2/S3, they should also notify other BSB companies simultaneously whenever possible.

BSA LAYOUT

8-155. The location of the BSA and the support battalion is contingent on the tactical situation, terrain in the AO, and security considerations. Location of the UEx logistics units and the combat battalions' support areas must also be evaluated to ensure that there will be no interruption of UEx throughput. The BSA location should most often be situated close to

the MSR. The brigade commander approves the location of the BSA with advice from the BSB commander and the brigade S4.

8-156. The elements located in the BSA vary. In addition to the FSC field trains, the BSA may include a number of UEx elements, such as UEx maintenance teams, the field trains for a UEx fires battalion, air or ground medical evacuation elements, detachment of the finance support unit, or UEx engineer units. Information on these may also be available on the UEx and brigade OPODs. The BSB commander and staff will coordinate with the brigade S4 to determine who will be in the BSA.

8-157. Some of the BSA tenants can be expected to always locate in the BSA, for example the BSB companies and the BSB TOC. Others may move in and out of the BSA depending on METT-TC (e.g. Forward Support Companies).

8-158. In all cases, the composition of BSA elements will not remain static. The BSB must be able to track and control changes. To accomplish this, all ground units entering the brigade area must send a representative to report to the BSB TOC.

8-159. They will coordinate movement routes, positioning for units locating in the BSA, communications, support requirements and procedures, and security responsibilities and arrangements. Guards at points of entry into the BSA will direct representatives of entering units to the TOC S3. Also, unit commanders will notify the TOC of all configured loads arrivals and departures. Movement of displaced civilians and local civilians must also be controlled.

8-160. Not only are changes in the elements located in the BSA occurring, but also changes are constantly taking place within the elements. Medical evacuation elements constantly move in and out of the BSA. Supply elements are involved in resupply efforts.

8-161. Personnel available for defense actions may be extremely limited within certain units. Unit commanders must keep the TOC S3 informed of their situations. The BSB commander will designate one of the TOCs as the alternate TOC for the BSA.

8-162. Locations of elements within the BSA will vary depending on METT-TC. Though the BSB commander and S2/S3 must use their best judgment in positioning units, some general guidelines to be considered include:

- Position the BSB TOC near the center of the BSA perimeter for C2 and security reasons.
- Ensure units such as the FSCs, the BSB DC and the BSB FMC locate their CPs near the BSB's area of operation, closer to the TOC to enhance communications and protection of C2 facilities. Balance the advantages of dispersion (reduced destruction from a single enemy strike) with the disadvantages (C2 constraints and extended perimeter).
- Make supply points accessible to both customers and resupply vehicles and helicopters.
- Keep Class III points away from other supplies to prevent contamination. They should also be located at least 100 feet from water sources.
- Position mortuary affairs and salvage points near the MSR possibly near the ATHP to maximize backhaul missions of vehicles used for ammunition supply.
- Locate the Class I point near the water point whenever water sources allow.
- Locate the Level II MTF away from likely target areas (ATHP, Class III point, bridges, and road junctions) but near evacuation routes and an open area for landing air ambulances.
- Locate maintenance sites to be accessible to customers, including recovery/evacuation vehicles.

- Ensure maintenance shops, along with parking and equipment holding sites are on firm ground.
- Position the ATHP near the BSB's AO of the BSA and near, but off the MSR, so that the large numbers of UEx trailers bringing ammunition into the area do not clog up the MSR within the BSA. The ATHP requires sufficient area to perform transload operations without interfering with BSA traffic.
- Locate the ATHP at least 180 meters from other supplies and 620 meters from the nearest inhabited tent; due to its size the ATHP will often be outside the BSA. This creates a security issue for the BSB commander that will often require forces from outside the BSB to provide protection i.e the HBCT commander will have to decide to allocate the appropriate forces to ensure the ATHP's survivability.
- Position units with heaviest firepower, such as one of the FSCs (if in the BSA) or the maintenance company along the most threatening AA.

INTERNAL SECURITY

8-163. An effective perimeter defense system must accomplish the following four tasks:

- **Security of the perimeter.** The unit perimeter defense commanders must establish the necessary defensive measures to ensure the security of their units. Each commander must apply METT-TC analysis to determine requirements.
- **Detection.** Detection is the early warning of enemy infiltration attempts. Detection devices include day and night observation devices as well as communications, intelligence, radar, and sensor equipment. Chemical and radiological monitoring must also be used. Warning systems and procedures must be established and understood by all personnel. If an attack is unlikely, few people are involved in defensive operations. However, personnel will always man OPs and access points. If a threat is probable, defensive requirements will disrupt support operations. Alarms should be used to notify all personnel of alert postures. Apprising UEx/UEy logistics C2 elements and convoys, and direct communication to the combat battalions' support areas of threat warnings and the defensive posture within the brigade BSB area of operation area is critical. Warning devices include sirens, pyrotechnic and horns. The MPs or attached combat units may provide the BSA commander a link for detection, early warning, and deployment against enemy attacks in the BSB's area of operation. Information gathered by MP or other elements dispersed throughout the BSB AO helps apprise commanders of enemy activity near the BSA.
- **Delay.** The defense system must be able to hinder the threat's progress to permit defense forces to react; this is especially true for Level I and II threats. Obstacles covered by direct or indirect fires slow or canalize movement. The TOC must ensure a proposed minefield is coordinated with adjacent, higher, and subordinate units and IAW current agreements the National Command Authority is obligated to honor. It must also ensure limitations to friendly maneuver units are minimized and all requirements for reporting, marking, and recording are met.
- **Destruction.** The BSA's units should place machine guns and lightweight antiarmor weapons to cover obstacles and avenues of approaches. The BSB S3 must have a clear understanding of the defensive capability and key weapons that each tenant unit possesses as he prepares the BSA layout and security plan during the MDMP. Grenade launchers mounted on vehicles are effective fire suppression systems that can be quickly dispatched to threatened areas. Weapons systems evacuated for repair should be used to prevent a breach of the perimeter. Weapon systems to be repaired should be integrated into the defense plan.

8-164. Internal security of the BSA involves all Soldiers. The ability to identify the threat and timely reporting to the BSB TOC is the key to survivability in the BSA. Hence, coordination with the BTB for rear area operations in linear warfare and the unassigned area during non-contiguous warfare is paramount. Working as team to coordinate force protection activities throughout the entire HBCT will allow all BOS elements to achieve their mission.

COMMUNICATIONS

8-165. Communications for BSA security will be conducted by FBCB2, wire, radio, signals, and personal contact. The primary means will be FBCB2. Each unit will be required to establish a linkup to the TOC. Other elements located in the BSA are responsible for laying wire from their CPs to the TOC. The alternate method for communications will be wire.

8-166. Ideally, the BSB would also operate a separate BSB area of operation operations radio net. If FBCB2, wire or TOC FM communications are lost, units will monitor the BSB command net that will serve as the TOC radio net. If communications by these means are lost, the tenant activities are responsible for sending a messenger to the TOC to provide coordination.

8-167. In addition, units in the BSA cannot rely on FBCB2, wire and FM communications to relay alert status. Too much time would pass before every Soldier received the message. The BSB should establish readily recognizable signals that are easy to initiate. For example, the warning for a CBRN attack could be a pyrotechnic signal, voice, siren, hand and arm, or horn signals. Similar signals should be specified in the SOP for air and ground attacks or to change frequencies. Detailed information and instructions would follow by radio, wire, or messenger. The all-clear signal would only be passed via command channels.

RESPONSE FORCE (QUICK REACTION FORCE) MISSION

8-168. The BSB must ensure that the response force assigned the quick reaction force (QRF) mission that it is identified, trained and equipped to perform their mission of reaction to threats against the BSA. The S2/3 will have to continuously tailor the size and composition of the QRF based upon threat analysis. These ready reaction forces must be well rehearsed in:

- Unit assembly.
- Friendly and enemy force recognition.
- Actions on enemy contact.
- Delaying operations.
- Call for fire (artillery, and rotary and fixed wing CAS).
- Reconnaissance and surveillance/patrolling operations.
- Small unit tactics in-conjunction with the MPs and a tactical combat force.
- Individual and crew served weapons, anti-tank weapons, mines, pyrotechnics, armored vehicle weapons systems and operations, night vision device, global positioning system, familiarization and operations.
- Conduct of rehearsals.
- Anti-fratricide measures.
- Passage of lines.
- Challenge and password.
- Running password.
- Hand and light signals.
- Troop leading procedures.
- Time distance factors (enemy avenues of approach).

- Enemy prisoner of war procedures.
- Night operations.

8-169. The ready reaction forces must possess:

- Friendly barrier plan.
- Friendly sector sketch.
- Pre-planned fires-field artillery / mortar / attack helicopter/CAS.
- Medical evacuation procedures.

8-170. The ready reaction forces must be briefed on:

- Specifics of mission.
- Communication procedures.
- Special requirements/ROE.
- Completion of mission.
- Quick recovery & reports.
- Debriefing.

RESPONSE FORCE WITH QRF MISSION COMPOSITION

8-171. The response force provides the commander with the capability to repel a Level I attack and assist with delaying a determined Level II attack. The BSA commander determines the best use of the QRF as he monitors the battle. The QRF Soldiers are not integrated into the perimeter and have no conflicting defensive requirements.

8-172. The QRF mission checklist is listed below. Example of team (platoon sized) composition (METT-TC driven):

- OIC (senior and most experienced lieutenant available).
- NCOIC.
- Squad leaders.
- Combat lifesavers per squad.
- Radio/communications operator.
- Crew-served weapon operators (2 ea).
- 2 x anti-armor weapons and operators.
- 2 x grenades.
- Hardened vehicle(s) for mobility.
- Communication capabilities for mounted and dismounted operations.

8-173. Force protection enhancement:

- Up armored HMMWVs or Hardened gun trucks with machine gun mounts.
- FLAK vests.
- 2 x Basic load of Class V (for vehicle and Soldiers).
- Night vision devices.
- Communications equipment for each vehicle and for dismount operations.

HBCT RESPONSE FORCE

8-174. The existence of a common operational picture and the commander's situational understanding are the keys to knowing how and when a response force will be needed. Separate unit defenses establish continuous communications with the HBCT command post to allow timely response and information dissemination.

8-175. The HBCT commander may delegate the authority to commit the response force to the BTB commander. The response force should have a copy of the BSA defense plan so that

the response force leader can effect necessary coordination between the BSA and the response force once they are activated for the response mission. This coordination occurs through the BSB TOC. The response force commander coordinates with the BSA to ensure that he understands the BSA defense plan, to include—

- Method of contacting the BSB TOC, including call signs and frequencies.
- BSA defense plans and layouts to include—
 - Positions of critical internal assets, external coordination points, and no-fire areas.
 - Locations of any obstacles or mines near the BSA.
 - Locations and direction of fire of crew-served weapons.
 - Locations of target reference points and preplanned fires.
 - Locations of OPs and friendly patrols if employed by the BSA.
 - Signal for final protective fires.
- How to obtain available fire support.

8-176. The response force commander designated for the BSA must have the capability to mass the effect of supporting fires and support TCF operations. He must know which fire support targets are approved for engagement and the locations of the nearest medical treatment facility, CBRN decontamination site, and ammunition transfer/holding point. He must be able to communicate with—

- Any supporting artillery and Army aviation units tasked to respond.
- The TCF, brigade troops battalion TOC and the BSB command post.

MOBILITY/COUNTERMOBILITY/SURVIVABILITY FOR THE BSA

8-177. When engineer assets are available to the BSA, they will be made assigned to the TOC for survivability and countermobility operations. Therefore, the BSB S2/S3 must be prepared to take advantage of assets as they become available. Along with an engineer designated by the brigade engineer, he will plan barriers and minefield according to guidelines and principles presented in FM 3-34, *Engineer Operations*.

8-178. Mobility operations in the defense focus on the ability to reposition forces, including unit displacement and the commitment of reserve forces. Priorities set by the maneuver brigade may specify some routes for improvement in support of such operations. Normally, however, all or most of the engineer battalion assets will be allocated to the mobility and/or countermobility effort. The BSB S2/3 plans and coordinates all mobility requirements of the BSA with the brigade engineer and brigade S3.

8-179. Survivability positions are prepared in the BSA to protect CL III (B) vehicles, major weapon systems, critical assets of service, supply and transportation as the BSB commander dictates.

8-180. Positions can be dug in and reinforced with overhead cover to provide crew-served weapons with protection against shrapnel from air bursts. Combat vehicles in the BSA for maintenance other armored vehicles in the BSA should have vehicle-fighting positions constructed with both hull-defilade firing positions and turret defilade observation positions. In addition, the BSB may use blade assets to dig in the ATHP ammunition at alternate, supplementary, or successive storage sites and in individual vehicle fighting positions.

8-181. The process of digging in a BSA requires many blade hours and assets may be limited. The BSB S2/3 with guidance from the commander must develop a plan for digging in the BSA.

8-182. The S2/3 NCOIC prepares the BSA for the arrival of the blades by marking vehicle positions and designating guides for the engineer vehicles. The BSB commander must prioritize the survivability effort; for example, he may only have time to dig in positions that have the least amount of natural cover and concealment. Soil composition should also be a consideration in BP selection; sites to be avoided include those where the soil is overly soft, hard, wet, or rocky.

8-183. Planning countermobility in the defense, the BSB/FSC commander may integrate individual obstacles into both direct and indirect fire plans, taking into account the intent of each obstacle group. At the battalion level, obstacle intent consists of the target of the obstacle group, the desired effect on the target, and the relative location of the group. In addition, like artillery and mortar employment, obstacle emplacement must have a clear task and purpose. The purpose will influence many aspects of the operation, from selection and design of obstacle sites to actual conduct of the defense. Normally, the maneuver will designate the purpose of an obstacle group. For example, the BSB commander might specify this purpose: "We must deny the enemy access to our perimeter along the northern river bank next to our Class III (bulk) assets by turning the enemy's guerrilla squad into our engagement area, allowing maintenance company and the Fires FSC to mass their fires to destroy it." Refer to FM 90-7, *Combined Arms Obstacle Integration* for additional information on obstacle planning, siting, and turnover.

8-184. Tactical and protective obstacles are constructed primarily at company level and below. Small unit commanders ensure that observation and fires cover all obstacles to hinder breaching. Deliberate protective obstacles are common around fixed sites. Protective obstacles are a key component of survivability operations. They are tied in with final protective fires (FPFs) and provide the friendly force with close in protection. Commanders at all echelons track defensive preparations.

8-185. Construction of personnel shelters throughout the billeting, administrative, and maintenance areas provides individual protection against standoff attacks. These shelters may vary in construction. Shipping containers, dugouts, and double-walled plywood shelters with sand or gravel fill, all with sandbag reinforcement and overhead cover, provide acceptable protection.

8-186. These shelters are close to the billets and work areas to permit rapid access.

8-187. Units may construct fighting positions or prefabricate and move them into position for assembly. These bunkers are constructed to withstand a direct hit by a medium antitank missile on the front and sides and a direct hit by a mortar on the top. Installing chain link fences around these positions can prematurely detonate shaped-charge warheads.

8-188. Constructing revetments for critical resources provides protection against mortar or rocket fragmentation. These revetments may be sand filled, double-walled construction with either plywood or steel plate sides. Units within the BSA provide overhead cover for critical facilities and functions when possible. The BSA commander's preventive measures to avoid or minimize effects of enemy attacks also contribute to his area damage control (ADC) efforts by providing units, soldiers, facilities, and supplies on the BSA protection from major accidents and natural disasters as well.

Protective Obstacles

8-189. Companies within the BSA are responsible for coordinating and employing their own protective obstacles to protect their battle positions. To be most effective, these should be tied into existing obstacles. The BSB companies may use mines and wire from its basic load or pick up additional assets from the engineer Class IV/V supply point. The BSB companies may also be responsible for any other required coordination, for recovery of the obstacle, or for its destruction.

8-190. The commander uses tactical wire barriers within the perimeter to limit and canalize penetrations by enemy groups or individuals. These interior barriers can be as simple as a single roll of concertina wire. Generally, the commander should place them to prevent a direct approach to vital facilities within the BSA. He should make provisions to cover these barriers by automatic weapons. The BSA should construct inconspicuous barriers and periodically relocate them to prevent counterplanning by the enemy. Further, the barriers should not be so intensive as to preclude freedom of movement by the reaction or reserve force. These forces, as well as all soldiers, should be familiarized with the location of all barriers through daylight and night drills.

8-191. After planning for protective obstacles, where the commander evaluated the potential threat to the BSA's position and then employed the appropriate system to counter that threat. For example, use of an antitank system is best used on mounted avenues of approach, although it does have some antipersonnel applications; on the other hand, wire obstacles may be most effective when employed on dismounted avenues. FM 90-7 provides detailed planning guidance for protective obstacle emplacement.

Obstacle Lanes

8-192. All logistics assets may be responsible for actions related to lanes through obstacles. These duties may include marking lanes in an obstacle, reporting locations of the start and end points of each lane, manning contact points, providing guides for elements passing through the obstacle, and closing the lane.

8-193. FM [3-34.15-102](#) provides additional information about obstacles and obstacle integration, such as planning factors relating to emplacing obstacles and obstacle function versus lethality. It also describes the methods and essential principles for planning protective obstacles.

Training as Preparation

8-194. BSA defense training is an essential element of preparing to conduct a BSA defense. BSA defense requires integrating all defensive forces and the emergency augmentation by all units in the BSA. Because they rarely function together, the commander can form an efficient fighting entity only through proper training. The BSB commander carefully coordinates the training of BSA units for BSA defense operations with the support operations of the BSA. All individuals receive training to allow them to participate, at least to a limited degree, in the BSA's defense. All units receive training to provide at least limited local security for the facilities they operate. Conducting rehearsals that test the BSA defense plan is an essential part of BSA defense training. Some equipment deemed necessary for BSA defense or for training purposes may not be available. The BSB commander must use his initiative to overcome these shortfalls.

8-195. General Franks stated, "Actual battle is the great auditor of how well-prepared the battle commander really is. That arena is no place for amateurs." But how do we separate the untrained from the properly trained? The answer is training competence in tactical force protection. Most of the training required to support BSA defense operations is currently a part of individual and unit training programs. Soldiers designated to take any part in BSA defense operations will probably require additional training in the following areas as applicable to their roles in the BSA defense effort:

- Ambush techniques and defensive measures against enemy ambushes.
- Use of hearing, sight, and smell as detection means.
- Police-type patrolling and operating roadblocks and checkpoints.

- Limited-visibility operations to include using night vision devices, sensors, and techniques for using sign and countersign procedures.
- Marksmanship, especially night firing.
- Observation post operations with emphasis on security, sound and light discipline, and reporting procedures.
- Operation and operator maintenance of BSA defense equipment, such as sensors, night observation devices, radios, and computer systems.
- Cross-training on all communications equipment available within the BSA and communication techniques.
- Barrier construction and, if authorized, using mines and boobytraps.
- Patrolling.
- Small-unit attacks, such as the employing movement formations, rushes, and a BSA of fire..
- Fire control and fire distribution of available weapons.
- Knowing the technical capabilities and limits of the organization (functional and tactical).
- Understanding the tactics, techniques and procedures (TTP) necessary to defend the support area.
- Understanding how to
 - See yourself logistically.
 - See your enemy.
- Read the terrain for logistics and security operations considerations.
- Appreciate the difference between a risk and a gamble and knowing when it is appropriate to use either.
- Demonstrate considerable thinking and communication skills under increased battle tempo.
- Understand the art of command.
- Rapidly synthesizing pieces of information into a coherent picture.
- Possess a feel (intuition) when to decide.
- Demonstrate a willingness to act.

8-196. Developing these capabilities begins at the training institutions. It continues with teaching and mentoring by leaders in the field.

- Officers tactical decision making process (TDMP), operations order (OPORD), troop-leading procedures, confirmation briefs, back briefs and rehearsals.
- Platoon leaders must know how to set up a platoon defense.
- NCOs must know the CTT task of setting up a squad defense.

8-197. Training should be standards-based and progressive. It should begin in the classroom and progress to field sites. Figure 8-10 provides a model applicable to both the school environment and in the field such as lane training.

Table 8-10, Standards Application Model

<ul style="list-style-type: none"> * DEFINE THE STANDARD * COMMUNICATE THE STANDARD * TRAIN THE STANDARD * ENFORCE THE STANDARD

8-198. Information regarding live fire exercises to prepare logistics units for tactical operations is at the Combined Arms Support Command's (CASCOM) website: <https://www.cascom.army.mil/private/TD/Multifunctional/Live-Fire/index.htm> This information is designed to provide a logistics unit commander and his subordinate leaders a document to assist them in designing, developing, coordinating, and executing live fire exercises.

SECTION VI – EXECUTING A BSA DEFENSE

8-199. The preferred way to conduct a BSA defense is as an offensive operation designed to clear the area of enemy forces. Forces engaged solely in BSA defense operations conduct aggressive patrols, develop and occupy defensive positions within their assigned AOs, and provide security forces to counter enemy attacks. These actions may be multiservice or multinational depending on the composition of the BSA.

8-200. The BSB commander requests ground maneuver forces to use when the net effect of enemy activities in the echelon's rear area is beyond the limited defensive capabilities of his resources. If a threat exceeds the BSA's ability to defend itself, the BSA commander requests response force support.

8-201. The conduct of BSA defensive operations against a ground attack is the same as for conducting a perimeter defense. The paragraphs below discuss those execution considerations unique to BSA defense.

Patrols

8-202. BSA defense operations to counter small enemy forces include aggressive, frequent patrolling by squad- and platoon-size forces to detect and capture or destroy small enemy bands. Host nation personnel are well suited to assist BSA patrols. Their knowledge of the terrain, inherent ability to operate effectively in the environment, language skills, and familiarity with local customs increases the effectiveness of these patrols.

8-203. Small, highly mobile units conduct patrols by moving on foot or by land, water, or air vehicles during daylight and darkness. They search populated areas contiguous to the BSA and establish surprise checkpoints along known or suspected routes used by enemy forces.

8-204. The BSA's units man dug-in or concealed night ambush sites located outside of the BSA's external barrier system on a random basis. Host nation security personnel should accompany patrols traveling through populated areas. The BSA develops fire support targets to support the ambush in accordance with their availability and the ROE. If the area adjacent to the BSA perimeter is a free fire area, it is seldom necessary to occupy ambush sites there. When local restrictions preclude establishing a free-fire area, ambush sites are manned forward of the perimeter and the elements providing defense of the BSA are prepared to assist those elements conducting the ambush as necessary.

8-205. Patrols can install sensors in locations enemy forces threatening the BSA would cross to provide early warning of enemy movements. Such patrols also observe and report enemy activities, such as assembling personnel; moving weapons, ammunition, or other supplies; and preparing firing positions for indirect-fire weapons. In addition to the acquisition of specific targets, patrols may confirm or deny the presence of enemy activity in named areas of interest located near to BSA.

8-206. During BSA security operations, the BSA commander monitors the location of friendly troops and their relationship to friendly fires. The BSA commander must be constantly aware of the relative location of enemy, friendly, and neutral personnel. Subordinate elements, such as patrols, must understand the importance of accurately reporting their positions. Automation and navigation aids, such as the global positioning

system (GPS) tied to combat net radios, assist in maintaining a common operational picture. When employing artillery, mortars, and air support, the commander must exercise positive control, whereby an observer must be able to see the target area. Unit SOP at all levels must address specific procedures for clearing indirect fires directed against identified targets located within the rear area.

Static Positions

8-207. The static positions of the BSA defense consist primarily of the bunkers and METT_TC dependent towers forming the BSA's defensive positions. Positioning bunkers and towers correctly affords maximum observation and mutually supporting fires over the area forward of the perimeter to include the perimeter barrier and sensor system.

8-208. The BSA commander establishes communications between the TOC, the command posts of the units occupying the BSA, and the BSA's bunkers, towers, and reserve. In addition, each node must be able to communicate laterally with adjacent units and defensive positions.

8-209. **Bunkers.** Although full-time observation and all-around defense of the BSA are essential, the BSB commander may reduce the number of soldiers conducting static defense mission by designating key bunkers around the perimeter to be manned at all times, with the remainder to be fully manned during periods of reduced visibility and increased enemy threat. The BSA prepares individual fighting positions near the bunkers to provide supporting fires. Night vision devices, binoculars, automatic weapons, grenade launchers, and hand grenades are commonly available within the bunker positions, and antitank systems cover possible ground vehicle approaches.

8-210. **Towers.** Towers provide increased visibility, which may be desired in specific situations. Elevated platforms enhance the capability of detecting perimeter infiltration when coupled with night vision devices, binoculars, and spotter scopes. They may enhance the BSA's ability to determine the firing positions of enemy indirect weapon systems. Towers can be constructed according to standard military design using standard construction materiel or constructed from local materiel. Multistory buildings, such as grain silos, can also serve as towers. Installing sandbags or steel plating around the observation platform provides protection against automatic weapons and smallarms fire. Constructing a ground-level bunker near the BSA of the tower provides additional protection when the enemy directs fires against the tower.

8-211. The BSA commander's decision to use towers is a result of his analysis of the factors of METT-TC. For example, he must decide if the additional security they provide is worth the effort to construct them in a fluid situation or the risk that they will attract additional enemy attention to the BSA.

Reaction Operations

8-212. Reaction operations are operations conducted by the response force under the control of the BSB TOC, operating from the BSA or from positions outside the BSA, for the purpose of countering local enemy activities. They are offensive in nature and conducted as either spoiling attacks or counterattacks.

8-213. Reaction operations are simple, planned, and rehearsed because the majority of actions are often required at night. Designating primary and alternate checkpoints within the BSA facilitates response to multiple contingencies. Within security limitations, the force uses actual checkpoints during rehearsals to promote familiarity with the area and the reaction plan.

HBCT Response Force and TCF Operations

8-214. Response force operations are offensive operations conducted by the response force to countering Level II attacks. The response force moves quickly to counter the enemy before he can extensively damage the BSA. The BSA commander lifts or shifts BSA defense fires to support the maneuver of the response force. The response force attempts to delay and disrupt the threat until the HBCT response force or TCF arrives if it cannot destroy or deter the enemy. The BSA commander notifies the HBCT TOC, if the BSA defense and its response forces engage an enemy they cannot defeat. They maintain contact with the enemy force until the HBCT response force or if a Level III attack until the TCF arrives. The TCF commander has operational control (OPCON) of all BSA and response forces within his designated AO on commitment of the TCF.

Host Nation and Third Country Forces

8-215. The HBCT commander or higher level commander decides when to integrate available host nation and third country forces into the overall BSA defense effort. Particular emphasis is placed on integrating host country forces in patrol and population control activities. Both host nation and third country forces provide local security for their own units. However, to ensure maximum benefit, all such local plans should be coordinated with and integrated in the BSA defense plan. The actual degree of host nation and third country force participation in BSA defense depends on the orders and guidance of their respective governments and the personal relationship their commanders have with the BSA commander.

Defense Against an Enemy Conducting an Attack-by-Fire

8-216. An enemy may conduct an attack by fire against a BSA when he knows that he is unable to penetrate the BSA perimeter. He wants to place a large volume of fire on the BSA to inflict casualties and destroy resources. Such an attack is normally of short duration, from 10 to 20 minutes. He may also direct harassing fires toward the BSA to accomplish the same purpose. The weapon systems delivering these attacks normally displace after completing their mission to prevent their destruction by friendly maneuver, and direct fires, and counterfires.

8-217. The BSA develops an aggressive reconnaissance and surveillance plan to detect the infiltration of enemy mortars, artillery, rockets, and antitank systems and to locate firing positions. The BSB or subordinate unit commanders in the BSA considers likely firing positions and routes to them, intelligence reports, and available resources when formulating this plan. He plans offensive operations to locate and destroy the enemy force prior to, during, and after such attacks and passive defensive actions to reduce friendly casualties and damage associated with them.

8-218. Primary active measures employed against these types of attack are airborne observers, establishing a critical friendly zone (CFZ) over the BSA, and using response forces. An unmanned aerial vehicle (UAV) or attack helicopter may provide the airborne observer. The airborne observer orbits the BSA area, checking likely or suspected positions and noticeable changes in the terrain.

8-219. The BSA acts against an enemy weapon system on its discovery by employing friendly fire support systems or maneuver forces against it. A CFZ over the BSA allows friendly counterfires against the enemy weapon system as soon as it attacks the BSA. In the absence of radar coverage, the BSA may use visual observation of the muzzle blast from two or more points to provide an intersection. This requires these observation posts to have properly oriented azimuth boards so the direction of sightings can be rapidly determined and reported to the BSB TOC. Using a reaction force deployed by helicopter or tactical vehicle to

engage and destroy the enemy weapon system is a primary consideration. The response force must be careful to prevent establishing a pattern, such as always using the same route or landing zone. If the enemy is aware of the pattern, he can set up an ambush to destroy the reaction force.

Sniper Teams

8-220. Sniper teams are useful when forces come under harassing small-arms fire by a small enemy element firing from, among, or near areas where civilians or cultural monuments protect it from the return fires of more nondiscriminating weapons. These teams allow the BSB commander to fix the enemy and move other BSA security elements into positions where they can engage the enemy without endangering civilian lives or causing excessive collateral damage. The commander can employ smoke and, if authorized, riot-control agents to aid in this maneuver. If the force cannot engage the enemy without endangering civilian life or property, the BSB commander can try to disengage his forces and move them to positions that block the enemy's escape routes. However, the BSB commander must use all available means to protect his forces in the BSA, even when it may place civilians at risk.

8-221. Sniper teams may be provided from infantry units. Alternatively, this capability may be provided by giving special training to selected BSB soldiers to maximize the capabilities of their assigned individual weapons or specialized equipment provided to them.

Passive Defensive Measures

8-222. Passive defense measures are always practiced within the confines of the BSA. In addition, the commander employs civil affairs (CA) and psychological operations (PSYOP) programs to ensure the cooperation of the local civilian population. The BSB TOC evaluates all patrol, guard, and intelligence reports indicating an attack. Preparation of firing or assault positions, movement of weapons or ammunition, unusual actions or movement of the civilian population, and reports by host nation personnel may be indications of an attack.

Area Damage Control (ADC)

8-223. When an attack occurs, the objective is to resume operations, including the maintaining or restoring of control, evacuating casualties, isolating danger areas, and reducing personnel and materiel losses. The BSA commander conducts an immediate survey of the damage and reports his assessment to the HBCT CP. Simultaneously, he initiates actions to isolate the danger areas and prevent extension or continuation of the damage, such as fighting fires and minimizing flooding.

8-224. Casualties receive self-aid, buddy-aid, and first aid care. If possible, medical personnel and vehicles evacuate casualties. However, timely transportation of casualties is important. The situation may require using nonmedical vehicles for mass casualties. If possible, medical personnel accompany those patients being transported in nonmedical vehicles to provide en route patient care.

8-225. The BSA establishes traffic control using MP or other elements to ensure fire-fighting equipment gains access to the area and ambulances and evacuation vehicles clear the area. The BSB TOC notifies the BTB TOC and the HBCT CP of blocked routes and necessary traffic diversions. The element conducting traffic control can also temporarily provide for controlling displaced civilians and stragglers and provide a degree of local security for the damaged area.

8-226. The BSB TOC coordinates for engineer support to restore critical facilities and any specialized fire fighting capabilities required. Engineer support is normally needed to clear debris and rubble to support the BSA damage control mission and extinguish extensive fires.

The BSB TOC also coordinates for any necessary explosive ordnance disposal (EOD) and decontamination support.

8-227. The BSA commander takes precautions by maintaining local security and interior guard posts when receiving ADC support from host nation resources to ensure the security of the BSA. He cannot afford confusion surrounding the BSA's damage control efforts to provide an opportunity for saboteurs and other hostile personnel to penetrate the BSA perimeter.

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Chapter 9

Command and Control of the BSB

Brigade support battalions use echeloned command and control to plan and direct operations. Battle command is tailored to meet the requirements of each operation. The battalion command group normally operates within the HBCT's battlespace as appropriate to meet the logistics and force protection requirements. It consists of the commander and those selected to assist in controlling the operational and sustaining elements of the support battalion. The commander determines the composition, nature, and tasks of the command group based on METT-TC analysis. As a minimum, the command group:

- Integrates support battalion and attached logistical assets in support of sustainment operations.
- Controls sustainment operations and force protection operations.
- Maintains a tactical and logistics common operating picture (COP).
- Maintains situational understanding for logistics and force protection.
- When not at the Command Post (CP), provides close situation information to the CP of observations achieved by proximity to the activity.

The commander, SPO and S3 monitor the battle, develop the situation, analyze courses of action, and control the companies. The next section will address the BSB commander's command and control (C2) structure for logistics and force protection and the systems that assist the commander in seeing the battlefield and leading the battalion as it conducts its requisite operations.

SECTION I – BSB COMMANDER'S C2 STRUCTURE

9-1. The BSB commander's C2 structure for logistics centers on three entities—the BSB commander's location, his command group and the BSB TOC. The logistician's headquarters enables the commander to maximize command, control, and information management for logistics and tactical operations. The TOC will employ the current battle command systems required to command and control the BSB's organic and supporting BOS and units. The BSB commander's C2 systems will also enhance the logistics staff's ability to provide the commander with timely information; maintain an accurate COP/LCOP; efficiently process, analyze, and disseminate battlefield information; and provide updated mission orders rapidly. The commander will operate independently, establishing a command group as necessary, or operate from the BSB TOC based on the situation and phase of the operation. See Appendix A for a more fully developed discussion on Logistics Automation Architecture.

9-2. Battle command, as discussed in Chapter 4, is the art and science of applying leadership and decision-making to achieve mission success enabled by technology while synchronizing command and control with maneuver and information. Heavy BCT support battalion command and control consists of the key personnel, equipment and the command post from which the battalion commander, assisted by the battlestaff, directs operations and

sustains the force. METT-TC will dictate the organization of command and control personnel, facilities and location of the command group.

Commander's Location on Battlefield

9-3. Commanders consider their position in relation to the units they command and the mission. Their location can have important consequences for executing sustainment operations. Modern information systems (INFOSYS) can help commanders command throughout their area of operation (AO) without losing access to the information and analysis of their TOCs. Should commanders require a larger facility to exercise C2 temporarily, they can use one of their subordinate TOCs and establish communications linking them to their TOC.

9-4. At the lowest levels, commanders lead by personal example, acquire much information themselves, decide personally, and communicate face-to face with those they direct. Typically, they should position themselves at the critical event to directly influence the decisive sustainment operation. However, even at these levels, commanders cannot always command their entire unit directly. Therefore, they consider the factors below in deciding where to exercise command presence.

9-5. At battalion level for logistics, the TOC is normally the focus of information flow and planning. Yet the logistics commander cannot always visualize the battlefield and direct and synchronize operations from there. He must sometimes assess the situation on the ground—face-to-face with subordinate commanders and their soldiers. Commanders design their C2 systems so they can position themselves wherever they can best command without losing the situational understanding that lets them anticipate situations and respond to opportunities and changing circumstances.

9-6. When the need to command personally overrides all other factors, commanders position themselves to do just that. Under other circumstances, they consider how their command presence might affect their ability to exercise C2 throughout the AO. Commanders who are too close mentally or emotionally to the mission risk becoming so engaged that their ability to visualize the overall operation becomes obscured. This situation undermines the efforts of both commanders and subordinates. More important, commanders weigh the cost to the command and the operation of their being killed or wounded. They consider several factors:

- Potential loss of ability to support the maintenance of momentum with their sustainment operations or the HBCT commander's intent.
- Benefits to decision-making.
- Opportunities to inspire and increase morale.
- Ability to support maneuver commanders that recognize and seize opportunities with anticipated sustainment.

9-7. Commanders realize that they might not always be where the critical action is, but at a place that has become relatively unimportant at the time. This possibility reinforces the necessity of training subordinates to operate under mission command. Commanders can then rely on subordinates to restore or exploit the situation without their presence (e.g. the BSB commander is ensuring the success of future operations by observing a SRO). An AXP supporting the main effort in a breaching operation that was started earlier than planned is destroyed or its capability is degraded. The BSB SPO, who is on the ground overwatching the breaching operation, directs the shifting of medical assets to replace lost assets for the main effort.

9-8. Commanders add the leadership element of combat power to the decisive operation by their personal attention and presence. In addition to exercising leadership, they can observe events more directly. Commanders gain firsthand appreciation for the situation that can rarely be gained any other way. Equally important, they can avoid the delays and distortions

that occur as information travels down and up the chain of command. Finally, by their presence, commanders direct emphasis to critical spots and focus efforts on them. The following factors influence the decision on the commander's location. They are common to all levels of command:

- Need to see and experience firsthand.
- Need to motivate and lead.
- Access to information to make timely decisions.
- Ability to judge the condition and morale of forces.
- Communicate to subordinate, adjacent, and higher forces.
- Decision-making capability.
- Security, including physical protection.
- Time and location of critical events.

9-9. At the BSB level, commanders command more indirectly through their subordinates. They may want to have personal contact or intervene to lead or to make decisions at the location or with the command executing the decisive operation. Similarly, when commanders lose their feel for the situation, they need to reestablish a clear situational understanding and commander's visualization.

9-10. Commanders also position themselves to gather information. The location of the commander varies with the type of information needed. Commanders who want information about the immediate situation go where the critical action or situation is developing. This may be at or near a RSO site or with a subordinate commander or subordinate TOC, at a critical point along a route of march, or in an overwatch position observing medical evacuation at the critical breach point. Commanders who want an overview of the situation gather various reports from separated sources at their TOCs. However, senior commanders who want to exchange information should move to their subordinates' TOCs rather than requiring subordinate commanders to travel to the higher headquarters.

9-11. When a maneuver commander needs to see the situation from the enemy's standpoint, especially if the enemy has made a bold and unexpected move that shattered the commander's situational understanding, the best location may be one apart from distractions and interruptions. BSB commanders are no different; when faced with an uncertain situation, it may be best to reflect in a quiet moment away from TOC operations: What is happening, what is not happening and what can they do to influence the situation?

9-12. At all echelons, the best place for logistics commanders is where they can best influence the operation's progress with their assigned sustainment operation or force protection mission. They convey importance and focus the efforts of the command by their physical presence. When commanders choose to command away from the TOC, they not only gain a feel for the actual conditions of sustainment and force protection operations, but also show their soldiers that they share their danger. They may also inspire them by their physical presence.

BSB COMMAND GROUP ON THE MOVE

9-13. During sustainment and force protection operations, the BSB commander may command from his vehicle, assisted by a battle captain, and other members of his staff, based on the METT-TC situation. The logistics commander requires C2 systems that provide him and his team with the ability to maintain the COP/LCOP and to communicate with the BSB TOC, other members of the staff and command group, subordinate commanders, adjacent or supporting units as well as key personnel of the higher headquarters.

9-14. The BSB commander will have the freedom to exercise command, undeterred from his TOC. Operating in a command group that is based upon METT-TC, the commander may

operate on the move, placing himself and members of the command group at a critical point(s) for the sustainment and force protection mission(s). Figure 9-1 outlines the significant aspects of a logistics command group that is developed for a high intensity offensive operation that has the BSB moving forward quickly and requires the BSB commander to operate independently from the TOC. This is only an example and is not expected in all types of sustainment and force protection operations.

METT-TC dependent: BSB Command Group

3SB commander is not tied to the BSB TOC. He locates where needed, independently or with the BSB TOC i.e. not a fixed TOC; location based on METT-TC.

3SB commander, S2/3 and SPO operate from their HMMWVs with radios and FBCB2.
3SB commander and SPO HMMWVs are configured with BCS3, if on-hand assets allow.

The BSB commander will often move with a security force or a personnel security detachment (PSD) with the appropriate combat power for the given threat.

Figure 9-1, BSB Command Group Overview

9-15. The BSB commander has a command group organization capable of going forward and exercising leadership on the battlefield. While the composition of the command group lies with the choices made by the commander, it usually contains staff officers or NCOs from the BSB's SPO and S2/3 sections. The commander's and operations officers' small battle staff members have the primary task of obtaining information from the BSB's command post and from subordinate, adjacent and higher units, and then having the information ready for presentation to the commander, S-3 or SPO, as appropriate. The battle staff members can also relay orders, directives, and questions for the commander. The battle staff members are not expected to produce military decision-making process products, or serve as an alternate command post. However, they are expected to be seasoned leaders, capable of recognizing potentially valuable or time-critical information, and insisting that information either be acted upon or discarded by the commander.

Command Group Mission and Capabilities

9-16. The command group integrates sustainment as it supports maneuver by the HBCT. The actual deployment and movement of the command group is dependent on the intent of the commander. It generally deploys to the most critical logistical area of the battlefield, or where the presence of the commander is needed. The capabilities of the command group will include posting the tactical and logistical COP, controlling sustainment operations, and monitoring or directing the BSA's tactical operations.

BSB Command Sergeant Major

9-17. The BSB command sergeant major (CSM) uses his HMMWV to rapidly move when the tactical situation permits. The CSM's HMMWV includes C2 systems that provide the ability to maintain the COP/LCOP; to communicate with the BSB staff, subordinate commanders, adjacent or supporting units, key personnel of the higher headquarters; and to command. As one of the most experienced leaders in logistics, the CSM's ability to assist the commander in decision-making and effective communication within the organization cannot be over-emphasized.

BSB COMMAND POST

9-18. The BSB command post (CP) contains the BSB TOC, which is the logistics commander's principal C2 facility. The tactical operations center is an integral part of the CP and is the control, coordination, and communications center for BSB sustainment and force protection operations. The TOC consists of the S2/3 section, the SPO, representatives from other attached elements, and the command group (when this group is not located outside the TOC). The BSB XO is responsible for supervising all staff activities and functions within the BSB TOC; however the support operations officer is directly responsible to the BSB commander for support to the maneuver units.

9-19. The BSB TOC operates from a secure position in the brigade support area, and moves as required to facilitate control of the operation. The primary considerations in positioning the CP are survivability, communications, and accessibility. In linear environments, it locates in the brigade support area; a location preferably out of enemy cannon artillery range. In nonlinear noncontiguous operations, it locates where it can best support logistics operations, and is least vulnerable to potential hostile actions.

9-20. The CP includes the designated Soldiers, equipment, and facilities employed in commanding and controlling the BSB. The personnel who operate the CP must be organized to provide operations on a 24-hour basis. This requires enforcement of a sleep plan to preserve the ability of CP personnel to perform continuous operations. (See Appendix F: Continuous Operations) An internal set of SOPs must establish the organization and operation of the CP. The CP must maintain continuous communication and coordination with the companies/units in the BSA in support of the HBCT.

BSB COMMAND POST FUNCTIONS

9-21. The BSB's CP is the brigade support battalion commander's principal command and control facility. The CP moves as required to maintain control of the operation. In linear operations environments, it locates generally in the center of the BSA and out of medium artillery range. In nonlinear operations (noncontiguous areas of operations), it locates with the BSA where it can best support the HBCT's operations and where it is least vulnerable to potential hostile actions. The brigade support battalion XO is responsible for supervising all staff activities and functions within the CP. The Headquarters Company Commander is the Headquarters Commandant for the Command Post. The BSB TOC is built around three functions: sustainment operations, intelligence and maneuver/operations:

- Sustainment operations.
 - Plans and controls battalion sustainment operations in support of the HBCT.
 - Synchronizes sustainment activities in support of the overall operation plus all BOS activities in the BSA as they pertain to tenant unit responsibilities.
 - Monitors sustainment operations.
- Intelligence.
 - Provides a focal point for the development of the tactical and logistical COP and intelligence.
 - Supports situational understanding for the brigade support battalion commander and subordinates by monitoring, analyzing, and disseminating information.
 - Provides security planning for the coordination and overwatch of intelligence gathering, fighting actions in the BSA's AO and the conduct of patrolling in the BSA's AO.
- Maneuver/operations.
 - Monitors and anticipates the commander's decision points.

- Controls movements, whether administrative or tactical.
- Plans future operations.
- Coordinates with higher headquarters and adjacent units.
- Keeps higher headquarters informed.
- Serves as net control station for the BSB command radio net.
- Provides battalion terrain management ICW the BTB and the HBCT S-3.
- Provides convoy management ICW the BTB, the HBCT S-3 and the supporting UEx's sustainment brigade.
- Provides a stable, secure planning facility.
- Produces and disseminates the commander's orders.
- Plans and controls battalion ISR operations.

Unity of Command and Control

9-22. The principle of unity of command is combined with unity of effort to ensure positive, effective C2 of sustainment operations within the BSB. The BSB commander retains responsibility for the effectiveness of logistics operations and the BSB's readiness by relying on the SPO for external support and S1/S4 for internal support as primary staff planners and coordinators. Automated ABCS systems permit connectivity and visibility of assets and support for current and future operations.

Fusion of logistics and Operational Situational Understanding (SU)

9-23. Effective logistics operations by the BSB are dependent on a high level of logistics SU. Development of the logistics common operating picture (LCOP) enables the BSB and the forward support company commander and staff to maintain visibility of current and projected requirements, to synchronize movement and material management, and to maintain integrated end-to-end visibility of transportation assets and supplies. The logistics COP and tactical COP provides the overall picture to inform the commander the "what is" of logistics status and the tactical situation. Whereas the SU that the commander develops is the "what it means" to make an informed decision.

Synchronization of Battle Rhythm and Logistical Operations

9-24. Support operations are fully integrated with the sustainment battle rhythm through integrated planning and oversight of ongoing operations. Logistical and operational planning occurs simultaneously rather than sequentially. Incrementally adjusting either the maneuver or sustainment plan during its execution must be visible to all logistics elements.

SECTION II – COMMAND POST SURVIVABILITY

9-25. Command post (CP) survivability depends often on concealment and, when on a linear battlefield, the use of depth. The best way to protect a CP is to prevent the enemy from detecting it. Good camouflage and proper noise, light, and signal discipline enhance the security provided by a good location.

9-26. **Location.** The best place for CPs is in built-up areas due to the ability to use existing infrastructure that provides cover, concealment and camouflage, plus public works projects like electricity and water. In addition, a road network system is often already established that can support heavy equipment traffic. When necessary, a CP not in a built-up area should be located on a reverse slope or a depression in the ground or a wadi complex with cover and concealment: METT-TC dependent. Avoid key terrain features such as hilltops and crossroads. Locate CPs on ground that is trafficable, even in poor weather. Other considerations for positioning CPs include—

- Ensuring line-of-sight communications with higher, lower, and adjacent units; important during the battle when radio becomes the preferred use of communications.
- Masking signals from the enemy.
- Using terrain for passive security (cover and concealment).
- Collocating with tactical units for mutual support and local security or use of a perimeter defense with mutual inter-locking fires.
- Avoiding possible enemy target reference points (TRPs) for enemy artillery and close air support (CAS).
- Locating the CP near an existing road network out of sight from possible enemy observation.

9-27. **Access.** CPs should be centered in the area of operations (i.e. BSA) whenever possible. They should be near, but not next to, a high-speed avenue of approach with no more than one or two routes leading into the CP. These routes should provide cover, concealment, and access to other routes of communication. When possible, a helicopter landing zone should be nearby; the LZ is generally closest to the medical company for MEDEVAC.

9-28. **Size.** The area selected must be large enough to accommodate all CP elements. This includes liaison teams from other units; communications support; and eating, sleeping, latrine, and maintenance areas. Sufficient area must be available for positioning security and vehicle dismount points and for parking.

9-29. **Shelter.** Dryness and light are vital when working in analog conditions i.e. with maps and producing orders and overlays or with automation i.e. computers. CPs should be sheltered from weather conditions and should have lights for night work, with proper light discipline exercised. Buildings are the best choice, but if none are available, CPs operate from their organic vehicles or tents.

9-30. **Operational Security.** The following bullets outline OPSEC considerations for positioning CPs.

- There should be no signs advertising CP locations. Disperse CP vehicles, and thoroughly camouflage all vehicles and equipment. Maintain noise and light discipline.
- A security force, most often a response force with a Quick Reaction Force (QRF) mission is often required, and it must have communications with the CP. Establish security force positions as in any defensive position, with a 360-degree perimeter and if possible, located far enough out to prevent enemy fires on the CP. The security force should have antitank weapons to protect the CP from enemy armor. The response force must rehearse actions to reinforce the perimeter defense as developed from the COA decision in the battalion's MDMP.
- The battalion can rely on off-duty CP personnel for CP security, but the BSB's units are generally tasked to help secure a CP and establish the QRF and response force.
- In general, positioning CP assets off major enemy mounted avenues of approach reduces the enemy threat.
- An OP should secure any remote antennas located outside the perimeter.
- All subordinate units and elements of the CP must receive near and far recognition signals. The CP uses these signals, challenges, and passwords to control access into its perimeter, if separate from the rest of the elements of the BSB, i.e. separate battle positions using a perimeter defense.
- In case of artillery or air attack, a designated rally point and an alternate CP should be at least 5,000 meters to 10,000 meters away; quite often further. The entire BSA, most often, will be moving in this situation.

- Remote antennas away from the TOC.
- Use the signal cabling to remote the signal support van and support equipment as far from the TOC as possible; use camouflage, cover and concealment to hide this complex of equipment, yet maintain good communications signals.

DISPLACEMENT

9-31. CPs may displace as a whole or, more often, by echelon in the BSA. Displacement as a whole is normally reserved for short movements, with communications maintained by alternate means and minimal risk of degrading CP operations.

9-32. A portion of the CP, called a jump CP, moves to the new location, sets up operations, and takes over operational control of the battle from the main CP. The remaining portion of the CP, then moves to rejoin the jump CP. The jump CP consists of the necessary vehicles, personnel, and equipment to assume CP operations while the remainder moves. At battalion level, the jump CP normally comes from within the main CP. An option is to use a subordinate CP as the jump CP.

9-33. The XO, SPO or S3 selects a general location for the jump CP site (most often as directed by unit SOP, but it could be METT-TC dependent). The jump CP can be accompanied by a quartering party, which may consist of a security element and personnel and equipment for quartering the remainder of the CP. (See Chapter 7: Tactical Enabling Operations.) The signal officer, who is usually part of the quartering party, ensures communications on all nets are possible from the new site. When the jump CP becomes operational, it also becomes the net control station for the unit. The remainder of the CP then moves to rejoin the jump CP.

9-34. Another technique of displacement is to hand off control to the command group and move the CP as a whole. The command group can also split, with the commander moving with the critical sustainment element and the XO, S3 and SPO moving with the key elements as directed by the BSB commander.

SECTION III – COMMAND POST OPERATIONS

9-35. Each CP must be organized to permit continuous operations and the rapid execution of the command and control process. Command posts monitor communications nets, receive reports, and process information to satisfy commander information needs. The CP tracks multiple types of information to meet the commander's needs: status of sustainment operations, weapons status, CCIR, operational readiness (OR) rates on selected pieces of equipment, operational status of automation equipment that is part of the combat systems and reports on critical supplies and services. This information is maintained in BCS3, on maps, charts, and logs most often using automation equipment. Each staff section maintains daily journals to log messages and radio and other communications (digitized) traffic.

STANDING OPERATING PROCEDURES

9-36. SOPs for each CP should be established, known to all, and rehearsed. These SOPs should include:

- The organization and setup of each CP.
- Plans for teardown and displacement of the CP.
- Eating and sleeping plans during CP operations.
- CP shift manning and operation guidelines.
- Physical security plans for the CP.
- Priorities of work during CP operations.

- Load plans and checklists.
- Orders production.
- Techniques for monitoring sustainment and force protection operations.
- Techniques for monitoring enemy and friendly situations.
- Posting of CP map boards: Analog requirement given METT-TC.
- Posting of information via automation equipment e.g. LAN, BCS3, FBCB2 or radio net.
- Maintaining tactical and logistical COP digitally.
- Analog/Digital: Maintenance of CP journals and logs.

9-37. It will be a few years before the majority of the Army is fully digitally equipped and even then there will be elements operating within a joint or coalition environment that will not have digital equipment. The staff must recognize that integrating an analog unit into the battalion requires the retention of most of the analog control techniques. In essence, two control systems must be in operation, with particular attention paid to keeping the analog unit(s) apprised of all the relevant information that is flowing digitally. The BSB SOP should include:

- Production and distribution of hard copy orders and graphics.
- Increased graphic control measures. Digital units tend to use less graphic control measures due to increased situational understanding.
- Receiving standardized reports over FM-voice or mobile subscriber equipment (MSE) communications.
- Equipping LNO teams with digital systems to give analog units limited connectivity.

COMMUNICATIONS

9-38. Command posts monitor voice communications nets, receive analog and digital reports, and process information to satisfy commander critical information requirements (CCIR). This information is maintained on maps, charts, and logs as well as digital information systems. Each staff section maintains daily journals to log messages and radio traffic as part of the unit operational history. The unit history must be maintained for the duration of the operation and beyond to serve as a command history of what happened and actions taken to resolve operational situations. Special attention must be paid to capture digital information for the history of operations.

MAPS AS AN ANALOG REQUIREMENT

9-39. CPs maintain information as easily understood map graphics and charts, whether in analog or digital format. Status charts can be combined with situation maps to give commanders friendly and enemy situation snapshots for the planning process. This information must be updated continuously. In the digital environment, the challenge is receiving too much information that is easily standardized. It is important to determine what is important, what needs to be tracked and prioritize its need to be tracked.

9-40. For simplicity, all map boards should be the same size and scale, and overlay mounting holes should be standard on all map boards. This allows easy transfer of overlays from one board to another.

9-41. The following procedures for posting friendly and enemy information on the map will aid commanders and staff officers in following the flow of battle.

- All graphics should be posted on an overlay. Friendly and enemy unit symbols should be displayed on clear acetate placed on the operations overlay. These

symbols can be marked with regular stick cellophane tape, push pins, or with marking pen.

- The exact unit location is indicated by the lower left hand corner of the symbol.
- Units normally keep track of subordinate units two levels down. This may be difficult during the conduct of combat operations. It may be necessary to track locations of immediate subordinate units instead.

COMMUNICATIONS SECURITY

9-42. The commander must understand the capabilities, limitations, and vulnerabilities of the CP communications systems and ensure the employment of effective communications control and security as an essential function of command post operations.

9-43. **Radio Transmissions.** Non-secure radio transmissions should be brief to reduce the electronic warfare (EW) signature. Using secure operational and numerical codes (frequency hopping) reduces the chance of enemy detection. Use low-power transmissions and terrain to mask signals from enemy direction-finding equipment. Use couriers, wire, or tactical internet for lengthy messages. Units must practice the discipline of using Signal Operations Instructions (SOI), proper operational terms, and unit SOPs to protect operational information.

9-44. **Physical Security.** Physical security protects cryptographic systems (secure telephones and signal encryption equipment) and classified documents from capture or loss. Before vacating an area, inspect it for any materials that could provide friendly information to the enemy – all operational information should be classified to maintain operations security. Wire lines and fiber-optic cables need to be patrolled to prevent enemy tapping. When SOI codes or cryptographic equipment is lost or captured, report the facts promptly to the next higher command. The unit SOP must contain instructions for destruction of equipment and classified documents to prevent their capture or use by the enemy. Units must have SOP measures to destroy classified material. Everything coming out of the command post should be shredded for OPSEC purposes.

THE BATTLE CAPTAIN

9-45. The focus of the TOC staff is on collecting the critical information the commander needs to fight the battle. Information flow is a constant problem in most TOCs, especially since everyone in the TOC must maintain a common operating picture. The battle captain's role is to plan, coordinate, supervise, and maintain communication flow throughout the TOC to ensure the successful accomplishment of all assigned missions. The TOC battle captain assists the commander, XO, SPO and S2/3 by being the focal point in the TOC for communications, coordination, and information management. The battle captain is also the TOC OIC in the absence of the commander, XO, SPO and S3. Generally there is one battle captain in the TOC per shift—this is METT-TC and commander driven decision as there are other options that can be used.

9-46. The battle captain has the overall responsibility for the smooth functioning of the TOC facility and its staff elements. This range of responsibility includes—

- Maintaining continuous operations of the TOC while static and mobile.
- Battle-tracking the current situation.
- Ensuring communications are maintained with and between all stations and that all messages and reports are routed and logged per SOP.
- Assisting the XO, S3 or SPO with coordination of TOC staff functions to ensure a smooth and continuous information flow between the staff sections of the TOC.

- Processing essential data from the incoming flow of information to ensure all tactical and logistical information is gathered and provided to the TOC staff, S3, SPO and XO on a regular basis.
- Providing security for the TOC, including its physical security and maintenance of noise and light discipline.
- Ensuring mobility of the TOC, including configuration, equipment, and training to facilitate rapid movement.
- Conducting TOC battle drills and enforcing TOC SOP.

9-47. The battle captain ensures that all staff elements in the TOC understand their actions in accordance with SOP and provides coordination for message flow, staff briefings, updates to battle update briefings (BUB), and other coordinated staff actions. As a focal point in the TOC, the battle captain processes essential information from incoming data, assesses it, ensures dissemination, and makes recommendations to the commander, XO, SPO and S3.

9-48. Information management in the TOC can include processing journals, message forms, reports, FRAGOs, and requests for information. The battle captain ensures the consistency, accuracy, and timeliness of information leaving the TOC, including preparing and dispatching FRAGOs and warning orders. In addition, he monitors and enforces the updating of automation management tools that provide status of systems (supply and maintenance) and units and pertinent sustainment information that are necessary for battle management and ensures this posted information is timely, accurate, and accessible.

9-49. To function effectively, the battle captain must have a working knowledge of all elements in the TOC, understand unit SOP, and ensure the TOC staff uses them. He must know the current plan and task organization of the unit and understand the commander's intent. In addition, the battle captain must understand the limits of his decision-making and action authority.

9-50. The battle captain must be integrated into the decision-making process and know why certain key decisions were made. He must know the technical aspects of the sustainment and force protection plans and understand the time-space relationship to execute any specific support task. He must understand and enforce the battle rhythm (the standard events or actions that happen during a normal 24-hour period) and ensure the TOC staff is effective throughout the period. Battle captains use their judgment to adjust TOC activities and events to accomplish the TOC mission across different shifts, varying tactical circumstances, and changes in TOC location.

SECTION IV – COMMAND POST COMMUNICATIONS

9-51. Communication is the means through which C2 is exercised. Soldiers throughout the organization must know the chain of command and succession of command. A commander often uses radio and digital means to command and control. However, it cannot be emphasized enough that a commander should often be in his unit's areas of operation to issue orders and listen to his subordinates in person, face-to-face, and assess the readiness of his command. There must be open lines of communications up, down, and laterally. The commander should:

- Provide for redundancy in communications means by having backup at key locations.
- Make sure subordinates know what to do during interruptions in communications. Ensure SOP specifies immediate actions in case of jamming, including prearranged frequencies to switch to and code word and loss of satellite based communications for sustainment operations.
- Avoid overloading the communications systems. Use them only when necessary.

RESPONSIBILITIES

9-52. Ensure that all understand the order of responsibilities for communications is higher to lower...left to right. The responsibilities for communications are:

- Senior to subordinate.
- Supporting to supported.
- Reinforcing to reinforced.
- Passing to passed (for forward passage of lines).
- Passed to passing (for rearward passage of lines).
- Left to right.
- Rearward to forward. All units take immediate action to restore lost communications. These responsibilities apply to establishing liaison between headquarters.

COMMUNICATIONS SECURITY

9-53. The commander must understand the capabilities, limitations, and vulnerabilities of the CP communications systems and ensure the employment of effective communications control and security as an essential function of command post operations.

9-54. **Radio Transmissions.** Radio transmissions should be brief to reduce the EW signature. Using secure operational and numerical codes reduces the chance of enemy detection. Use low-power transmissions and terrain to mask signals from enemy direction-finding equipment. Use couriers or wire for lengthy messages. Units must practice using SOI, SOP, and operational terms.

9-55. **Physical Security.** Physical security protects cryptographic systems and classified documents from capture or loss. Before vacating an area, inspect it for any materials that could provide friendly information to the enemy. Patrol wire lines to prevent enemy tapping. When SOI codes or cryptographic equipment is lost or captured, report the facts promptly to the next higher command. The unit SOP must contain instructions for destruction of equipment and classified documents to prevent their capture or use by the enemy.

SECTION V – BATTALION COMMUNICATIONS SYSTEMS

9-56. Communications is the means by which the commander projects his command and control across the width and depth of the battlefield. The Army battle command system encompasses all Army communications and consists of the following subordinate systems: Army global command and control system (AGCCS) at the operational or UEx level. Communications currently available to the brigade support battalion fall under one of the following:

- Combat net radio (CNR).
- Army common user system (ACUS).
- Army data distribution system (ADDS).

COMBAT NET RADIO

9-57. The primary means of communication for the maneuver battalion is CNR. This family of push-to-talk radios includes the single-channel ground and airborne radio system (SINCGARS), improved high frequency radio (IHFR), and single-channel tactical satellite (TACSAT) radios.

9-58. **SINCGARS.** SINCGARS is the primary means of communications available to the battalion. Although primarily a voice transmitter, SINCGARS can also be used to pass limited data transmissions. The planning range for this system is a maximum of ten

kilometers dismounted and 35 kilometers mounted. The range can be extended through use of retransmission equipment or antennas such as the OE-254. SINCGARS, through CNR, can provide access into the ACUS via the KY-90 combat net radio interface (CNRI). The KY-90 is installed on the battlefield by the signal battalion. The SINCGARS radio nets typically installed by a battalion are command and control, intelligence, and administrative/logistical. The battalion also enters and monitors nets established by its higher headquarters. When establishing SINCGARS nets for CP operations, remoting the antennas limits the enemy's ability to direction-find the CP location.

9-59. High Frequency Radio (HFR). Using HFR provides a versatile capability for short- and long-range communications and provides longer range than SINCGARS. High frequency (HF) is the only tactical communications asset that may achieve long-range communications independent of terrestrial or satellite relays. HF is also useful where line of sight (LOS) cannot be achieved. HF communications may be either voice or secure data, but the distribution of this equipment is limited to one or two sets per battalion. Radio remains the most detectable means of electronic communications and is subject to both intentional and unintentional electronic interference.

9-60. Tactical Satellite (TACSAT). The use of satellite communications gives the commander the greatest range. The TACSAT radio transmits in the UHF/VHF range, requiring the antenna to have LOS with the satellite. Satellite access time must be requested in advance of use.

ARMY COMMON USER SYSTEM (ACUS)

9-61. Mobile subscriber equipment provides the ACUS at ECB. Signal battalions install the backbone node centers (NC) while small extension nodes (SEN) and radio access units (RAU) provide access for the maneuver unit. As the Army goes forward with current legacy systems and then replaces them with current and future digital systems, we will maintain a "Good Enough" communications capability to meet requirements.

9-62. Mobile Subscriber Radio Telephone. The mobile subscriber radio telephone (MSRT) is the primary mobile subscriber equipment (MSE) available to the battalion. It consists of a VHF radio and a digital secure voice telephone (DSVT). The MSRT automatically selects random channels for each call and chooses the lowest effective radio frequency transmit level. The MSRT can be installed in a vehicular configuration, remote from the vehicle, or in a stand-alone mode when used with an appropriate power supply. The MSRT must be within 15 kilometers of a RAU site to communicate. Distribution in a battalion is usually limited to two or three MSRTs. MSE will be phased out as the new system Joint Network Node (JNN) is phased in.

9-63. Digital Voice Non-secure Telephone. The digital voice non-secure telephone (DVNT) is a four-wire non-secure telephone terminal that requires collocation with a SEN to connect to the MSE network. The SEN provides connection to the tactical packet network (TPN) for the battalion computers. Using the TPN allows the battalion to connect commercial computers or Army systems (maneuver control system) to the MSE network.

THE DIGITAL BATTLEFIELD

9-64. The information battlefield will see rapid dissemination of products up and down the chain of command and to adjacent units. The Army will share a common picture of the battlespace, regardless of task organization, using ABCS.

OTHER MEANS OF COMMUNICATION

9-65. As the Army enters the 21st century, digital communications upgrades have changed the nature of operations at the battalion level. The information battlefield now provides

rapid dissemination of products up and down the chain of command and to adjacent units. However, other means of communication besides combat net radio (CNR), Army common user system (ACUS) and digital communications include wire, couriers, sound and visual signals, telephones, and radios.

9-66. **Wire.** Wire is normally used for internal communications in the CP area, assembly areas, and defensive positions. Wire takes more time to plan, install, and recover, but provides reliable communication if time and the tactical situation permit its installation.

9-67. **Courier.** Couriers are used between C2 facilities and between higher and lower headquarters. Couriers are slower and more vulnerable than other means of communications but can be used when other means cannot be used. When authorized, motorcycle messengers can be used between the CP, trains, higher headquarters, and company teams. Messengers should be instructed on destruction procedures to prevent enemy capture of messages.

9-68. **Sound and Visual.** Sound and visual signals may be included in signal operating instructions (SOI) extracts or unit SOPs. Sound signals include metal-on-metal, vehicle horns, whistles, and bells. Visual signals include lights, flags, arm-and-hand signals, and pyrotechnics.

9-69. **Telephone Lines.** Commercial telephone lines can be used with permission of higher headquarters. If used, it should be assumed the enemy can monitor all calls made using commercial telephone lines.

9-70. **Radio.** Radio should not be the primary means of communication until after the unit makes contact.

ARMY BATTLE COMMAND SYSTEM COMPONENTS

9-71. The ABCS consists of the Army Tactical Command and Control System (ATCCS) subcomponents, the FBCB2 system, and the tactical Internet (TI). The ATCCS components have traditionally been “stovepipe” systems in their development, with very limited interface capability to other digital systems. With version 6.0 software in late 1999, the systems began migration to a joint common database (JCDB) to improve interface capability and achieve functional commonality. By late 2004, version 6.4 of the software was the standard. The ATCCS components are the primary digital communication systems between command posts. FBCB2 is the primary digital system for communication and transmission of situational information data at brigade level and below. The ATCCS components discussed below have embedded battle command software that allows interface with FBCB2.

Army Tactical Command and Control System (ATCCS)

9-72. The principal ATCCS automation components of the ABCS in the upper element of the tactical internet that are found in the brigade support battalion are:

MANEUVER CONTROL SYSTEM (MCS)

9-73. **Maneuver Control System.** The MCS is the hub of the ABCS component in each command post. It is the primary system for the creation and dissemination of orders, graphics, and operations-related reports. MCS automatically receives friendly forces positioning data generated by FBCB2- or embedded battle command- (EBC) equipped platforms of subordinate units resulting in the friendly picture. EBC is a software subcomponent of MCS. It is a derivative of FBCB2 software and allows MCS to exchange reports and graphics with FBCB2 systems. At battalion level, MCS performs these primary functions:

- Receives orders and graphics from higher and adjacent units.

- Creates and disseminates orders and graphics to subordinate, higher, and adjacent units. Near-term ability to interface graphics and orders to FBCB2 and platform EBC is limited.
- Extracts information from other systems to display a picture of the battlefield that may include friendly and enemy situational information, terrain, friendly graphics, artillery range fans, ADA umbrellas, obstacles and contaminated areas, C2 nodes, and supply nodes.
- Sends and receives reports.

9-74. Two MCS systems are located in the CP. One is used primarily for generation and transmission of orders and messages; the other normally is set to display enemy and friendly situational information and friendly graphics to allow the staff to track the battle.

9-75. There are limitations in the automatic generation of friendly situational information. Obviously, forces that are not equipped with FBCB2 or are not transmitting to the TI will not automatically appear in the situational information picture and must be manually input into MCS by the operations section. Operators may also manually input friendly icons via FBCB2 or ASAS. Therefore the common relevant picture will be as good as the manual input of non-digital blue forces and all red forces reported from subordinate units.

BCS3 (Battle Command Sustainment Support System)

9-76. **Battle Command Sustainment Support System.** BCS3 provides logistics status and information in support of CSS planning and operations. The system receives subordinate unit logistical reports from FBCB2 and other BCS3 terminals, and it transmits reports and requirements to echelons-above-brigade support elements. The S1 and S4 sections in the CTCP have a BCS3 terminal with FBCB2. It uses this terminal to receive digital logistical and situation reports from units within the battalion and to input data into the BCS3 network to conduct personnel transactions and to request, coordinate, and receive supplies. See Appendix A for a more detailed discussion of BCS3 and the logistics architecture in the HBCT.

Force XXI Battle Command Brigade and Below

9-77. The FBCB2 hardware is a mix of commercial, “ruggedized”, and militarized computers installed in vehicles at brigade and below. When available, the FBCB2 can be connected to the precision lightweight GPS receiver (PLGR) and other embedded platform interfaces, such as the BCIS. FBCB2 is common to all aspects of the digitized battlefield and platforms found in platoons and companies. It is in most C2 platforms and TOCs.

9-78. FBCB2 uses the variable message format (VMF) to send and receive messages horizontally and vertically on the battlefield, irrespective of task organization. VMF improves current configurations in which the BOS automation systems do not communicate to each other. This provides communication and processing capabilities to the Warfighter, which yields significant advantages in two key areas.

- **Situational Information.** Situational information is a state of understanding gained from knowledge based on accurate and real-time information of friendly, enemy, neutral, and noncombatant locations. It consists of a common, relevant picture of the battlefield scaled to specific levels of interest and needs.
- **Command and Control.** C2 is direction by a commander over assigned forces in accomplishing a mission. A commander employs C2 functions as he plans, directs, and controls forces and operations to accomplish a mission.

9-79. FBCB2 provides each echelon with battlefield situational information two echelons up and down and one adjacent unit left and right. FBCB2 significantly improves the

effectiveness of the force by providing up-to-date combat situation information, based on echelon and location, to include:

- Friendly and enemy positions.
- Reports of logistics status.
- Air and ground unit positions.
- Maps, terrain, and elevation.

9-80. FBCB2 also provides rapid generation and dissemination of messages and acknowledgments to include—

- Orders and requests.
- Fires and alerts.
- Reports.
- Rapid generation and dissemination of overlays on the situation picture.
- Semiautomatic exchange of selected mission-critical data between the FBCB2 and the ABCS component systems.

9-81. Every time there is a task reorganization, FBCB2 hosts affected by the task reorganization must receive new initialization data. Transfer of the modified initialization data occurs through signal channels to the ultimate users.

9-82. **Blue Force Tracker (BFT).** Blue Force Tracker provides units with a limited common operational picture of locations of friendly ground forces much like FBCB2. BFT has less messaging capability, is satellite based, and has a longer latency rate for information.

9-83. **Good Enough Battle Command.** As a lesson learned from recent combat operations, new standards for minimum distribution of BFT have been established to bridge the gap between the Army Master Fielding Plan for ABCS and a fully digitized Army. Good Enough Battle Command brings horizontal proliferation of digital battle command throughout the field Army.

Tactical Internet (TI)

9-84. The TI is a collection of interconnected tactical radios and computer hardware and software providing seamless situational information and C2 data exchange between maneuver, logistics, and C2 platforms. The TI's primary function is to provide a more responsive information exchange capability to support battle command at battalion and below. What the following paragraphs describe is the original digitized system fielded in 3rd Corps and the Stryker brigade combat team. When the satellite based system used by JNN is used, different pathways for communication will be used.

9-85. The TI consists of FBCB2 computers, the SINCGARS SIP, and other supporting communications equipment. It is an automated, router-based communications network using commercial Internet standard protocols to move data vertically and horizontally through the brigade area and to higher-level echelons using the MSE TPN. Automated network management tools in the maneuver battalion provide TI planning, monitoring, and reconfiguring capabilities.

9-86. The TI is divided into sub-areas: autonomous systems (ASs) and routing areas (RAs). Typically, a battalion represents one AS. An AS is a collection of networks, under a common administration, that shares a common routing strategy. An AS can consist of one or many networks, and each network may or may not have an internal structure. An RA is a network in an AS. RAs and the AS to which they belong share the same routing strategy.

JOINT NETWORK NODE (JNN)

9-87. The JNN is the communications package that will serve as the bridge to future networks (replaces MSE) and enables the heavy maneuver battalion, BCT, UEx, and UEy headquarters to operate independently into the global information grid (GIG) or communicate directly into a joint headquarters. The JNN has the voice and data switching equipment allowing independent operations and enables both circuit switching and internet protocol (IP) based networking. The JNN will work with existing terrestrial transport (high capacity line-of-sight [HCLOS] and LOS), ground mobile forces (GMF, TSC-85/93), Secure Mobile Anti-jam Reliable Tactical Terminal (SMART-T), commercial Ku-band satellite, or Ka-band satellite (when available). The Ku-band satellite terminal uses commercial bandwidth and satellites to fill an existing military satellite capabilities gap and comes in three sizes to perform three different missions. The large terminal, a 3.7-meter dish, is used with the unit hub node (UHN). The medium terminal is used with the JNN. The small terminal is used with the battalion node or small command post node. The medium and small terminal will use a 2.4-meter dish.

Battalion Network Node (BNN)/Small Command Post Node

9-88. The BNN is fielded to the battalion-level headquarters and is highly maneuverable, simple to use, and quick to set up. The BNN consists of a support vehicle, one 2.4-meter satellite dish on a trailer and two transit cases. The BNN operates in the TDMA satellite architecture to provide Secret data and voice over IP (VOIP) phone services. This architecture allows the battalion data network to mesh into the GIG through either a UHN (unit hub node) or a JNN. See figure 9-2, BNN.

- Provides the first wideband connection to maneuver battalions
- Provides SIPR and VOIP phones
- Works in conjunction with the JNN on a TDMA satellite architecture
- Contains a file server to allow normal traffic publish and post information.
- Key Components: 2.4 m K/U satellite dish, Transit cased VPN router, TACLANE (crypto), Hubs for the TOC, VOIP phones

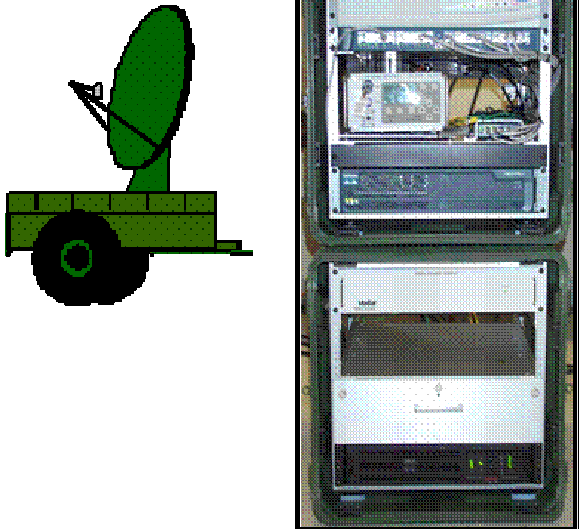


Figure 9-2, Battalion Network Node (BNN)

The BSB Battalion Signal Officer (S6) in JNN unit

9-89. The Battalion S6 has overall authority and responsibility for the communications assets and the operations within the BSB battalion AO. The S6 must work closely with higher and adjacent headquarters to ensure efficient communications employment throughout the BCT AO. Each BSB battalion will have an organic small command post node assigned to the battalion that will enable wideband beyond line-of-sight access to the Brigade network and limited DISN services (SIPRNET, VOIP Telephones, and NIPRNET with locally purchased equipment). Current MTOE Battalion S6 personnel will operate the small command post node without additional personnel.

JNN NETOPS IN THE SUPPORT BATTALION

9-90. The lowest echelon unit capable of wideband access to the GIG is the HBCT's battalions. Before JNN, battalions were limited to LOS communications systems, such as combat net radios (SINCGARS, HF, etc.), EPLRS, and narrowband satellite systems (SPITFIRE, International Maritime Satellite [INMARSAT], etc.). They also had limited access to the Mobile Subscriber Equipment (MSE) and the Tri-Service Tactical Communications (TRI-TAC) networks via the mobile subscriber radio terminal (MSRT) and combat net radio interface. These connections provided voice and very limited data connectivity to the commander. Maneuver and support battalions will gain this wideband capability via the JNN small command post node. The small command post node provides Secret data and VOIP phone service across a 4 Mbps TDMA (Time Distance Multiple Access) connection. This architecture allows the battalion data network to access the GIG through JNN at the BCT. See Figure 9-3 for the Battalion to UEx JNN Interface.

9-91. At the battalion level, basic operators (MOS 25F and 25B) are in charge of setting up the basic communications package to support data and VOIP service to their headquarters. Since the requirements are small, the packages supporting these requirements have been tailored for a limited capability that is easy to set up and manage. 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 message traffic.

9-92. The battalion S6 section has a laptop loaded with the necessary software applications to monitor and manage the battalion's Ku-band satellite connection to the WAN. The requirements inherent in the configuration, monitoring, management, and reconfiguration of the battalion LAN will be executed by the S6 using the Integrated System Control (Version) 4 (ISYSCON (V) 4). The battalion S6 is responsible for ensuring that every system within the battalion's operational control is included in the databases that support the construction of the network architecture that enables battle command (BC). The battalion S6 is responsible for coordinating with the HBCT/UEx G6 for the development of the network architecture. The network configuration databases used in the execution of the LAN management requirements will be controlled at the UEx level by the G6. When the HBCT is operating as an entity independent of a UEx, these controls will reside with the HBCT S6. There are few foreseeable instances when such control would be delegated to an S6 at battalion level.

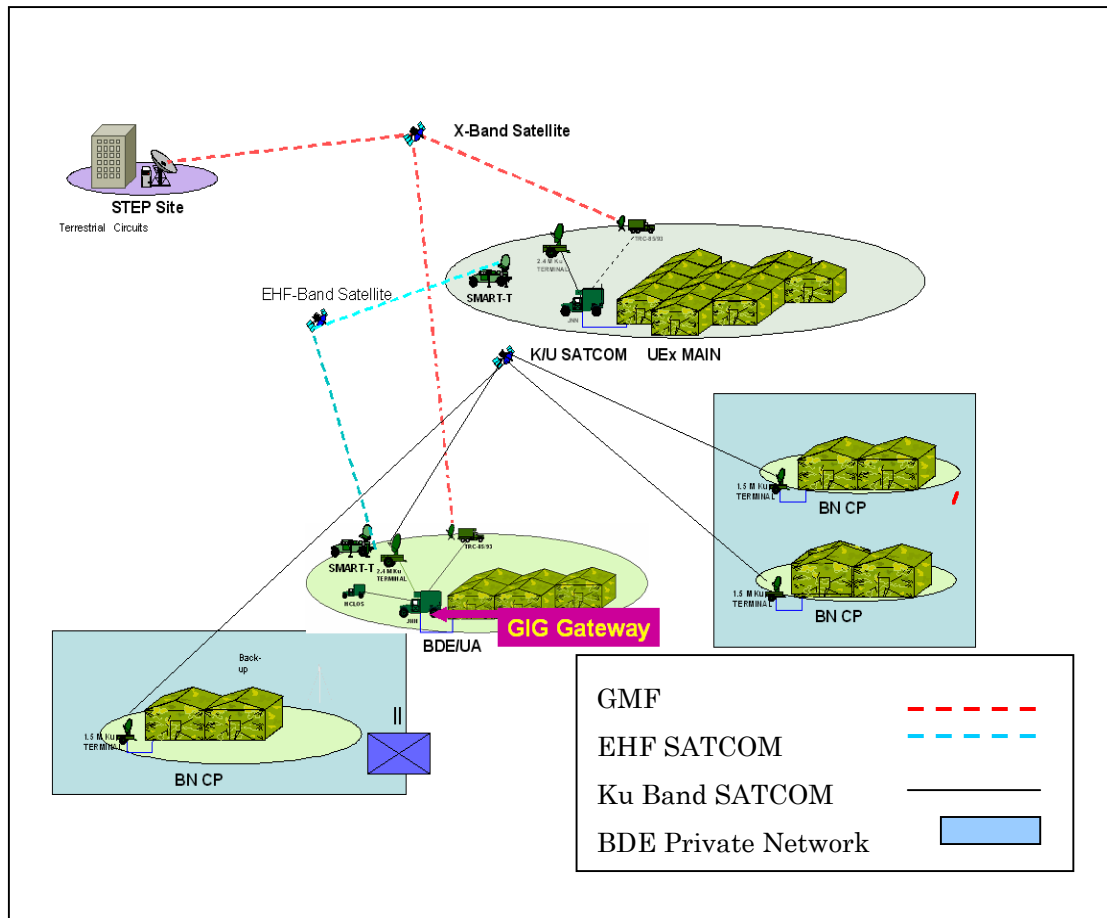


Figure 9-3, Battalion to UEx JNN Interface

9-93. Closely related to basic configuration and management is the need for IA (Information Assurance). IA comes in two categories: offensive and defensive operations. To perform a defense in depth, the battalion communications team will set up a firewall to protect the network inside of the battalion TOC. This firewall is configured with similar steps and guidance from the brigade NETOPS (network operations) cell. Although reconfiguration may be needed, this firewall is set on an existing standard, minimizing changes required. The battalion's protective measures consist of software patches on all information technology systems, solid anti-virus updates, and the monitoring for unusual data traffic or strange usage patterns.

9-94. Content staging will be conducted at the battalion level in two areas: common user services and Army Battle Command System (ABCS) setup. The file server is used to share critical information inside the TOC and with the battalion's higher headquarters. This push-pull staging system should be used for all normally occurring reports, orders, or statistics. The backup domain controller allows all members of the battalion TOC to access the brigade's information network without having to expend external bandwidth to gain access. The controller verifies usernames and passwords without leaving the site, minimizing overhead traffic.

9-95. ABCS systems will receive data from a higher echelon that collects all data from BFT and other ABCS programs. The collection/dissemination server resides at either brigade or

UEx. The battalion runs its ABCS systems via thin client replication to populate the common operational picture (COP).

DIGITAL STANDING OPERATING PROCEDURE CONSIDERATIONS

9-96. This paragraph contains information regarding digital operations that is relevant for the battalion tactical SOPs. Most of the digital operating procedures must be established at brigade level to achieve standardization and effective C2. As units have different mission requirements and technical changes occur, they should experiment with these guidelines.

9-97. **Filter Settings.** For there to be a common picture, all FBCB2 platforms must have the same situational information filter settings. This is particularly important for the enemy situational information picture so that as icons go stale, they purge at the same time on all platforms. Standard filter settings based upon the nature of the enemy's operation should be established in unit SOPs and be the same throughout the brigade. For enemy offensive operations, the filter setting times should be short; for enemy defensive operations, the setting times should be longer, reflecting the more static nature of the enemy picture.

- The standardization of friendly filter settings is of equal importance in maintaining a common situational information picture throughout the force. FBCB2 provides three methods for updating individual vehicle locations: time, distance, and manually. When the system is fully operational, it automatically updates friendly icons using time, distance traveled, or both, based on the platform's friendly situational information filter settings.
- The friendly icon refresh rate may also change as the battle is executed. This is especially true in the transition from the offense to the defense or vice versa. The standardization of friendly situational filter settings is probably most effectively done at the brigade level using the brigade tactical SOP. There are no set rules for what these settings should be; they must be established based on the unit's experience in using FBCB2 and the capacity of the tactical internet. The capability to update a vehicle's position manually should be used only when a platform's system is not fully functional and has lost the ability to maintain its position within the system.

9-98. **Reporting.** It may not be advantageous to have all platforms on the battlefield send spot reports digitally. This can lead to multiple reports of the same enemy element and contribute to an already confused and indecipherable intelligence picture. Defining who within the brigade can initiate digital spot reports can help eliminate this problem. One technique is to limit the creation of enemy icons via digital spot reports to reconnaissance elements (brigade reconnaissance squadron) and the company leadership (commander, XO, or 1SG). Others report on FM to their higher headquarters, which creates and manages the icon. At company level, the XO, 1SG, or CP personnel become the primary digital reporters. These assignments cannot be completely restrictive. Unit SOPs and command guidance must allow for and encourage Soldiers who observe the enemy and know they are the sole observer (because there is no corresponding enemy icon displayed in the situational information picture) to create a digital spot report. HBCT and battalion SOPs should define the schedule for report submissions, the message group for the reports, and the medium (digital system or verbal) to be used.

9-99. **Updates.** Establish a routine schedule of system updates. For example, the S2 section should continuously update the All Source Analysis System (ASAS) database and should transmit the latest ASAS situational information picture to the network every 30 minutes during operations if the battalion commander or S3 or SPO need it. Also, staff sections should print critical displays on an established schedule. These printed snapshots of situational information can be used for continuity of battle tracking in the event of system failures and can contribute to AARs and unit historical records.

9-100. **Orders and Overlays.** SOPs should define the technical process for creating, collating, and transmitting orders and overlays, both analog and digital.

9-101. **Filing System Naming Convention.** For interoperability and clarity, brigade SOPs should define the naming convention and filing system for all reports, orders, and message traffic. This significantly reduces time and frustration associated with lost files or changes in system operators.

9-102. **Color Standards.** As discussed previously, SOPs should define colors used in graphics down to team level.

9-103. **Databases.** As C2 systems migrate to a web-based capability, allowing information to be “databased” and then accessed by users as needed or when they are able to retrieve it. Commanders should establish standard guidelines for setting FBCB2 default addresses in their units. For example, the S2 may transmit an intelligence summary to all subordinates and inevitably some will lose the file or not receive it. The S2 can simultaneously post that same summary to his “homepage” so users can access it as required. If this technique is used, there are a couple of key things to note:

- Posting a document to a homepage does not constitute communications. The right people must be alerted that the document is there and available.
- Keep documents concise and simple. Elaborate PowerPoint slide briefings will take days to transmit, collapsing the tactical Internet. Gaudy graphics and templates are a “no-go”.
- The amount of information “databased” and who has access must be carefully controlled, both to maintain security and to keep from overloading the tactical internet.

9-104. **Training.** Maintaining readiness to conduct digital command and control requires four levels of digital training. Digital systems require extensive individual and collective training to achieve their operational potential to meet the commander’s information requirements.

- **Operator.** Soldier operators must be able to establish, maintain and to optimize the relevant digital systems in the command posts. Individual operator training is either conducted as part of system new equipment training or as part of a sustaining digital training.
- **Maintainer.** Maintainers administer C2 systems and provide system and network support to other digital systems in an operational environment. Maintainers are trained either at the TRADOC schools system or at local systems administrator courses.
- **Leader.** Within the digital environment, the leaders must have the ability to operate a digital system at a functional level as well as understand both the vertical and horizontal relationship of the systems in the C2 network. Leaders must be able to operate at the basic level and integrate digital systems as well as supervise and train digital operators on command and control operations. Leader’s training is conducted at the operator level, the executive level and collectively as part of battle staff training.
- **Collective Training.** Collective training includes battlestaff, crews, teams, sections, cells, and organizations which must train both individually and collectively to optimize operational capabilities. Commanders should request assistance via training programs like the Army National Guard’s Battle Command Training Center for live, virtual, and constructive training environments to support battalion collective training for its C2 systems

INTEGRATING DIGITAL AND ANALOG UNITS

9-105. It will be a number of years before the majority of the Army is digitally equipped. Even then, the brigade will operate with elements without digital equipment, especially in joint or coalition environments. National Guard and Army Reserve units and UEy-level logistical units are the most likely types of analog Army units with which the HBCT's logistics units will operate. Procedures for integrating digital and analog units are essential for the brigade.

- FM and MSE are the primary communications mediums with the analog unit.
- Hard copy orders and graphics are required.
- Graphical control measures require the level of detail necessary to support operations of a unit without situational information. In general, this requires more control measures tied to identifiable terrain.
- Digitally equipped LNO teams are critical.

9-106. The battalion staff must recognize that integrating an analog unit into a digital unit requires retention of most of the analog control techniques. In essence, two control systems must be in operation, with particular attention paid to keeping the analog unit apprised of all pertinent information that flows digitally.

Appendix A

HBCT C2 Network and Logistics Architecture

Lessons learned reports and after-action reviews generated by Operations Enduring Freedom and Iraqi Freedom and recent war-games have been thoroughly analyzed to identify shortcomings in battle command and network capabilities. Network shortcomings evident in today's divisional brigades are being addressed as the Army restructures. The network support company (NSC) organic to the HBCT and network capabilities embedded in subordinate organizations will provide the commander with an enhanced suite of joint communications capabilities. These network capabilities will extend to units throughout the HBCT, the ability to send and receive situational information: For logisticians it provides situational understanding for sustainment of the HBCT in addition to its other capabilities to support the warfighter.

This discussion will address the command, control, communications and computers of support within the heavy brigade combat team (HBCT) and its automation sustainment architecture. It addresses the responsibilities of the brigade and battalion S6, and the organic network support organizations ensuring HBCT access to the Army portion of the Global Information Grid (GIG), the LandWarNet and describes the automation sustainment architecture used to support the HBCT. Lastly, the communications system Bridge to the Future (BFN) is outlined.

SECTION I – HBCT COMMUNICATIONS SUPPORT CONCEPT

A-1. The HBCT is supported by organic signal personnel and equipment. The historical relationship between the brigade and battalion S6 continues and is critical to the operation and success of the HBCT information network. The addition of an organic network signal company (NSC) provides new capabilities and allows the brigade and battalion S6 to provide increased support to the commander.

A-2. The introduction of wideband network capabilities down to the maneuver, combat service and logistics organizations provides increased voice, data and video capabilities. These commercial off-the-shelf (COTS) information technology (IT), hardware and software, and communications capabilities enable the units to achieve information superiority (IS).

BRIGADE S6

A-3. The brigade S6 is the senior signal officer within the HBCT and has the level of experience necessary to configure the HBCT network to support the HBCT commander's battle. The brigade S6 anticipates the communications requirements of the brigade commander and has the knowledge to execute network changes to meet those needs, and simultaneously integrates those changes into the overall network plan. The brigade S6 is capable of serving as the senior signal officer or the Army component G6 for an AO or joint AO.

A-4. As a principal staff officer, the brigade S6 interacts closely with the executive officer (XO), S3, and other staff officers. The brigade S6 is responsible for supervision of all automation information systems and the NETOPS functions required to integrate these systems into the HBCT networks. As an active member of the military decision making process (MDMP), the brigade S6 is the primary planner for all signal operations. He determines the supportability and feasibility of the signal plan versus the scheme of maneuver. Early involvement in the MDMP by the brigade S6 is critical to the successful development of a comprehensive and complimentary signal plan. This is also true of the BSB S6 and his battalion's MDMP.

A-5. The brigade S6 maintains overall authority and responsibility for all network operations (NETOPS) within the AO. The brigade S6 maintains functional control of the NSC; which includes the operational and technical direction of the HBCT network. The brigade S6 plans and directs the actions and movement of all organic signal elements in support of HBCT operations. The S6 establishes the HBCT network operations and security center (NOSC), which serves as a single control agency for the management and operational direction of the HBCT command, control, communications and computer network and its component systems. In this capacity the NOSC performs the planning, execution, technical direction, and asset management functions for all HBCT C2 systems and networks.

A-6. The NSC commander operates in close communication with the S6 and executes the plan developed by the S6. This close relationship with the brigade S6 results in a unity of effort for network support to the HBCT.

A-7. NETOPS functions performed by the network support organizations ensure the network supports achieving the HBCT information superiority (IS) goal. NETOPS provides tactical units the ability to harness the power of GIG enterprise services and bring this power to bear where needed most on the battlefield, thus increasing lethality. The ABCS is the overall system that allows the increased lethality and the BSB's sustainment capabilities to occur.

BRIGADE SUPPORT BATTALION S6

A-8. The BSB's S6 maintains the battalion's communications systems. As a principal staff officer, the battalion S6 interacts closely with the commander, XO, SPO, S3, and other staff officers to determine specific or unique signal requirements and develops situational understanding of the area of operation. The brigade support battalion S6:

- Is the signal support expert and advisor to the brigade support battalion commander.
- Advises the commander and staff on all signal support operations.
- Plans and executes range extension assets.
- Develops a network supportable battalion TOC location in conjunction with the brigade S6, the BSB battalion S3 and the BSB SPO.
- Coordinates with the brigade S6 for additional communications support.
- Sets-up and maintains the BSB's automation information networks at battalion level.

A-9. The BSB S6 is responsible for supervision and management of all automation information systems and ensures the NETOPS functions required to integrate these systems into the HBCT information network.

A-10. The BSB S6 supervises a section responsible for the installation, operation, management and defense of the battalion local area network. As an active member of the MDMP, he is the primary planner for all NETOPS. He determines the supportability and feasibility of the signal plan versus the scheme of maneuver. Early involvement in the MDMP at the HBCT level ICW the brigade S6 by the BSB S6 is critical to the successful

development of a comprehensive and complimentary signal plan for the BSB during its MDMP.

NETWORK SUPPORT ORGANIZATIONS

A-11. Organic network support organizations are embedded within the HBCT to enable commander centric operations. The HBCT has an organic NSC to support the brigade S6 and to enable commander centric operations. The NSC is subordinate to the brigade troops battalion (BTB) and the NSC company commander reports to the BTB commander for all administrative, UCMJ, training, readiness issues and mission execution. For technical and network oversight, the brigade S-6 has technical direction of all NSC equipment. The NSC contains a NETOPS and network extension elements designed to support the HBCT command posts. The NSC is resourced to support two major and one minor C2 nodes. The NSC interfaces directly with the strategic network, manages bandwidth to subordinate battalions like the BSB, and extends the strategic information assurance (IA) plan into the tactical formation of the HBCT.

NSC RESPONSIBILITIES

A-12. The HBCT NSC provides 24-hour connectivity and NETOPS support for the HBCT information network, as an extension of the LandWarNet. This element provides operational elements designed to engineer, install, operate, maintain, and defend the HBCT information network supporting operations as an integral part of the HBCT. The NSC extends LandWarNet services to the HBCT operating in a joint operational area and subordinate elements, and provides network management capabilities. This is especially important for the HBCT's use of ABCS to increase its lethality.

SECTION II – ARMY BATTLE COMMAND SYSTEMS

NETWORK COMPONENTS: FUNCTIONS AND CAPABILITIES

A-13. The HBCT communications support organizations provide the BSB linkages to enable it to connect to the network to provide ABCS connectivity. The HBCT information network supports the brigade support battalion by integrating many systems to provide the commander access to critical information and unit locations regardless of location on the battlefield. The following paragraphs address the different systems and components that link the HBCT information network into the BSB's information network.

JOINT NETWORK NODE (JNN)

A-14. The JNN is the communications package that will enable the HBCT headquarters to operate independently into the LandWarNet or directly into a joint headquarters. The JNN has the voice and data switching equipment allowing independent operations and enables both circuit switching and internet protocol (IP) based networking. The JNN will work with existing terrestrial transport (high capacity line-of-sight [HCLOS] and LOS), ground mobile forces (GMF, AN/TSC-85/93), Tropospheric (TROPO) Scatter Radio, AN/TRC-170, Secure Mobile Anti-jam Reliable Tactical-Terminal (SMART-T) AN/TSC-154, commercial Ku-band satellite, or Ka-band satellite (when available). Critical communications components of the JNN are the Vantage Flood Search Switch, the REDCOM IGX PBX, Cisco Router, Promina Multiplexer, Cisco call manager, Time Division Multiple Access (TDMA) and Frequency Division Multiple Access (FDMA) modems, Defense Message System (DMS) Server and tactical local area network encryptors (TACLANEs).

KU-BAND SATELLITE TERMINALS

A-15. The Ku-band satellite terminal uses commercial bandwidth and satellites to fill an existing military satellite capabilities gap and comes in three sizes to perform three different missions. The large terminal, a 3.7-meter dish, is used with the unit hub node (UHN). The medium terminal is used with the JNN. The small terminal is used with the battalion node or small command post node (Battalion Node: BNN). The medium and small terminal will use a 2.4-meter dish. The 2.4-meter dish is used with the JNN and the small command post node. Figure A-1 depicts the 3.7-meter dish.

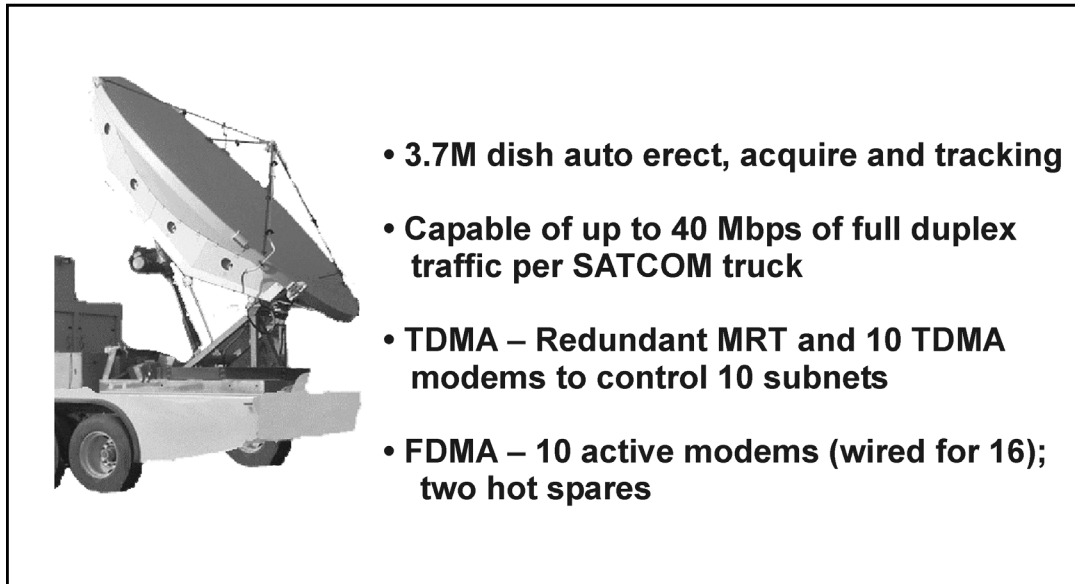


Figure A-1, The 3.7 M Dish

A-16. The large and medium dishes are capable of entering both the FDMA Ku-band and TDMA Ku-band networks. The FDMA capability allows for dedicated bandwidth to provide circuit connectivity to a joint headquarters or to existing teleports. The TDMA network allows the deployed units to more effectively manage and distribute much larger communications pipes to a large number of customers.

HIGH CAPACITY LINE-OF-SIGHT (HCLOS) RADIO SYSTEM

A-17. The HCLOS radio is a terrestrial, microwave radio system capable of 8 Mbps of data throughput. Each AN/TRC-190(V) 3 is equipped with three HCLOS radios and is paired with a JNN to provide a high bandwidth LOS capability, when terrestrial LOS exists.

BATTALION NETWORK NODE (BNN)/SMALL COMMAND POST NODE

A-18. The BNN is a small command post node designed to support a battalion level command post. The BNN is fielded to the battalion-level headquarters and is highly maneuverable, simple to use, and quick to set up. The BNN consists of a support vehicle, one 2.4-meter satellite dish on a trailer and two transit cases. The BNN operates in the TDMA satellite architecture to provide Secret data and Voice Over IP (VOIP) phone services. (See Figure A-2) This architecture allows the battalion data network to mesh into the GIG through either a unit hub node (UHN) or a JNN.

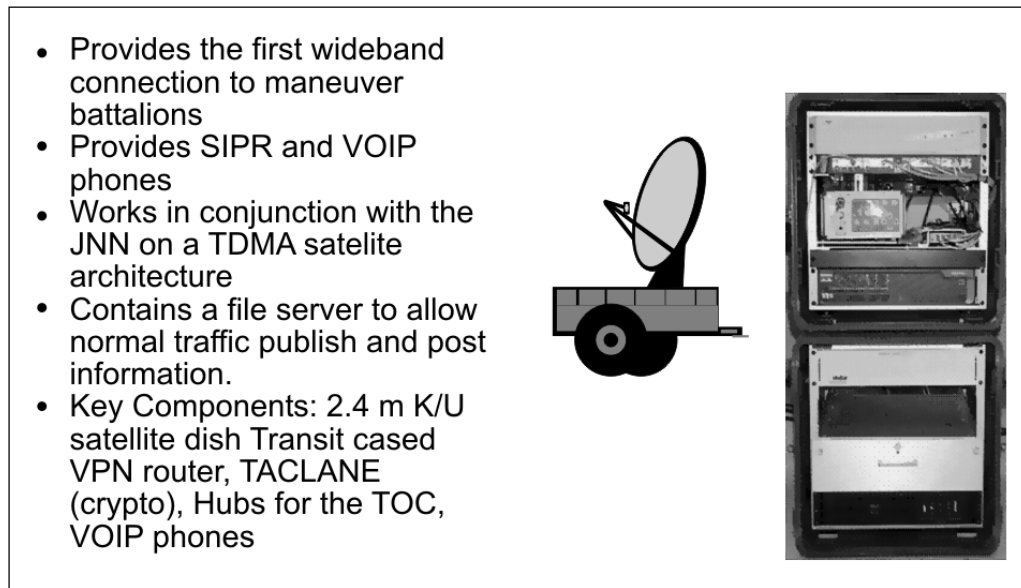


Figure A-2, Battalion Network Node (BNN)

ENHANCED POSITION LOCATION REPORTING SYSTEM

A-19. Enhanced Position Location Reporting System (EPLRS) is a terrestrial line-of-site system that is used for FBCB2 connectivity. EPLRS provides the backbone for HBCT mobile terrestrial tactical data network (does not include CP-to-CP communications), which distributes situational and command and control information across the BCT area of operations (AO). It requires relays to allow connectivity between tactical combat vehicles and CPs. The EPLRS network is established and controlled by a fully automated network management system.

A-20. EPLRS provides a gateway function that allows information to be passed to adjacent networks, including those of the Marines, and a range extension capability with the EPLRS grid reference unit.

SECURE MOBILE ANTI-JAM RELIABLE TACTICAL TERMINAL

A-21. Secure, mobile, jam resistant, and reliable tactical terminal (SMART-T) provides a protected satellite communications path that is capable of both single-channel voice communications and high-bandwidth data transfer. SMART-T utilizes the Military Strategic Tactical Relay (MILSTAR) satellite constellation and utilizes frequency-hopping technology that prevents jamming and interference from affecting satellite communications. SMART-T is a one-vehicle system that can be put into operation by only one Soldier in less than 30 minutes. SMART-T is planned to replace the legacy ground mobile forces X-band satellite platforms that are resident in the current force corps and division headquarters.

GLOBAL BROADCAST SERVICE

A-22. Global broadcast service (GBS) capitalizes on the popular commercial direct broadcast satellite technology to provide information to combat forces. GBS pushes a high volume of intelligence, weather, and other information to widely dispersed, low-cost receiving terminals, similar to the set-top-box used with commercial satellite television receivers. GBS

will include a capability for the users to request or pull specific pieces of information. These requests will be processed by an information management center where each will be prioritized, the desired information requested, and then scheduled for transmission.

COMMERCIAL MOBILE SATELLITE SERVICE

A-23. Commercial mobile satellite service provides mobile communications across the battlefield. It will replace the mobile subscriber equipment and mobile subscriber radiotelephone used at corps and division today (i.e. UEx and BCT under the Army's redesign). The system is similar to a commercial cellular phone service and provides voice, data, paging, facsimile, and messaging services.

BLUE FORCE TRACKER (BFT)

A-24. BFT is a tactical information system that links troops, vehicles, aircraft and sensors via satellite to provide a digital picture of friendly unit locations on the battlefield. BFT is the satellite-based equivalent of the terrestrial based FBCB2 network currently fielded in selected units. Units and vehicles equipped with BFT can track their own location and the location of other friendly forces, and can view the topography of the battlefield. BFT consists of an on-the-move satellite communications system connected to an FBCB2. FBCB2 provides near real-time situational awareness information and command and control capability to the lowest tactical echelons. It facilitates a seamless flow of battle command information across the battlespace, and interoperates with external information systems, such as the maneuver control system. The result is vertical and horizontal integration of battle command information across the digital battlespace and within BCTs and lower echelon tactical units.

ARMY BATTLE COMMAND SYSTEM (ABCS)

A-25. The Army Battle Command System (ABCS) supports leaders and planners at tactical to strategic level through an integrated digital information network designed to provide automated command and control (C2) and a common operating picture through seamless data architecture of existing and planned C2 systems.

A-26. The ABCS network feeds the C2 processes. C2 is an integrated system of doctrine, procedures, organizational structures, personnel, equipment, facilities and communications. The system will provide the commander and staff the ability to plan, execute, collect, control, exploit, disseminate, present, and protect, thus enabling effective command and control on the battlefield. See Figures A-3, A-5 and A-6 for employment of the HBCT systems supported by the logistics satellite system Very Small Aperture Terminal (VSAT) and the wireless communications device CSS Automated Information System Interface (CAISI).

A-27. ABCS includes the:

- Global Command and Control System-Army (GCCS-A).
- Force XXI battle command-brigade and below (FBCB2) systems which includes Blue Force Tracking.

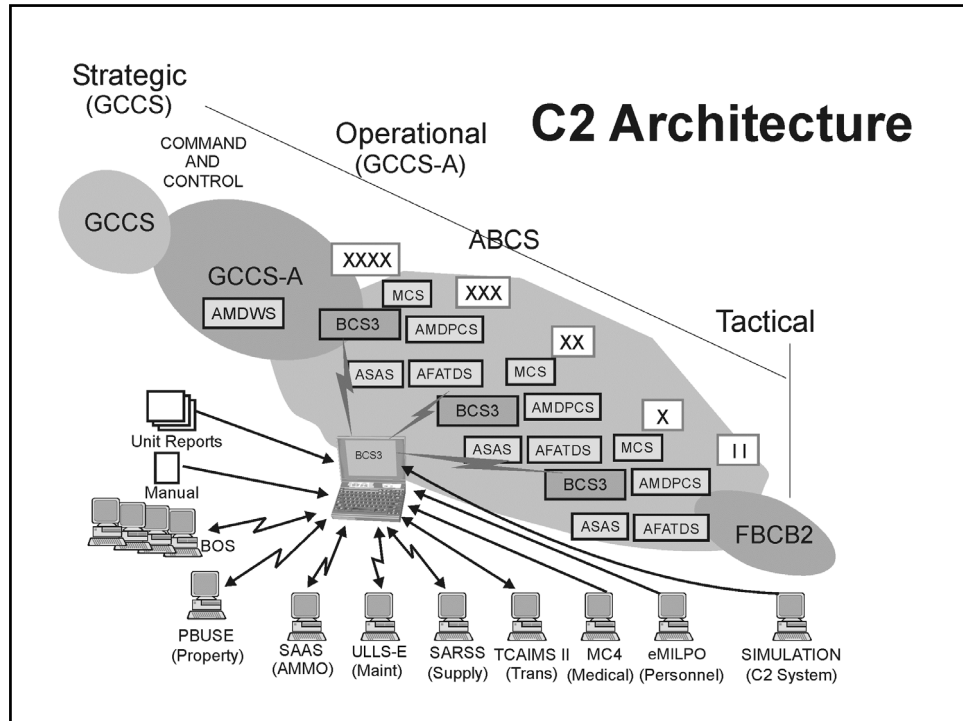


Figure A-3, C-2 Logistics Architecture

A-28. The Global Command and Control System-Army (GCCS-A) is the Army's Strategic and Theater Command and Control (C2) System. See Figure A-3 for the C-2 Sustainment Architecture. It provides readiness, planning, mobilization and deployment capability information for the strategic commanders. For UEy, UEx and HBCT and battalion commanders, GCCS-A provides common operational picture (COP) and associated friendly and enemy status information, force employment planning and execution tools (receipt of forces, staging, intra-theater planning, readiness, force tracking, onward movement, and execution status), and overall interoperability with joint, coalition and the tactical Army Battle Command Systems (ABCS).

A-29. Force XXI Battle Command Brigade and Below (FBCB2) provides both a common operating picture as well as battle command information to selected leaders in platoons and companies that are in the net with the leadership of battalions and brigade on the lower tier of the tactical internet. It will facilitate a seamless flow of battle command information across the battlespace, and will interoperate with external command and control and sensor systems. The end result will be a vertical and horizontal integration of the digital battlespace for brigade-and-below units. The FBCB2 system will support battle command logistics requirements within the HBCT that include:

- Real-time situational understanding for commander, staff, and Soldiers.
- Shared common picture of the battlespace with all command nodes of the HBCT.
- Graphical displays, with friendly and enemy unit locations.
- Target identification.
- Integrated logistics support that assists with production of a logistics COP and improved sustainment capabilities.
- Communications/electronics interfaces with pertinent leader/staff platforms.

ABCS CONTROL SYSTEMS FOR SUSTAINMENT OF THE HBCT

A-30. **Maneuver Control System.** The Maneuver Control System (MCS) is the maneuver component provided by ABCS. It is the primary information system supporting the battalion/squadron commander and staff. MCS serves as the horizontal and vertical integrator of force-level information from battalion to UEx. It maintains and disseminates the common operational picture (COP) for all command posts. Commanders and staffs update the MCS database by entering readiness data, battle plans, and battle plan changes as they occur at each echelon. The MCS system consists of window and menu-based software allowing system operators to process retrieve, store, and send information in textual or graphical form. Reports, operation orders (OPORD), overlays, and messages are available to the user.

A-31. **Battle Command Sustainment Support System.** Battle Command Sustainment Support System (BCS3) is the ABCS component that provides relevant logistics information for the maneuver units. It will provide critical, timely, integrated and accurate automated logistical information. BCS3 provides plan, rehearse, train and execute capabilities on one system. The system software can operate on unclassified or classified systems and it also provides a map-centric display on a commercial laptop.

A-32. BCS3 will collect and process selected sustainment data in a seamless manner from CSS Standard Army Management Information Systems (STAMIS), manual systems/processes, and other related source data and automated C2 systems (such as FBCB2 and the GCCS-A). It helps answer the questions of what can I bring to the fight, where are my parts and, what's the status of critical resources as specified in the commander's CCIR by providing the following information:

- **Combat Power.** Provides the latest status of critical weapon systems, fuel, ammunition and personnel
- **Logistical Course of Action (COA) Analysis.** Provides a simulation tool that allows the user to project supply consumption and assists with training, planning and execution.
- **Log Related Commander's CCIR Alerts.** Provides audio and visual cues that a log related CCIR event has occurred.

A-33. BCS3 provides a logistics picture for Battlefield Operating Systems (BOS) information in support of the ABCS common operating picture of the battlefield. The system provides information on all classes of supply, maintenance, medical services (a desired future capability), personnel, and movements to commanders and staffs. This information is consolidated and collated into situation reports and planning estimates for current and future operations. This capability provides a concise picture of unit requirements and support capabilities that commanders have deemed crucial to success of an operation. It also will have joint application. See Figure A-4 for its actionable capabilities.

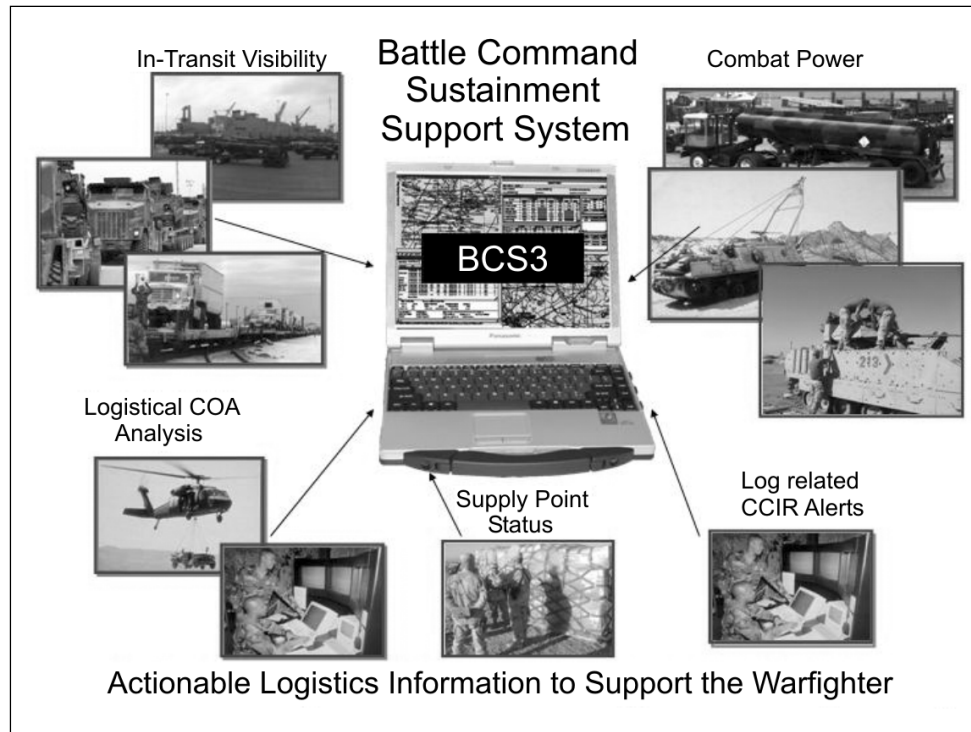


Figure A-4, Actionable Capabilities for Logisticians and Warfighters

A-34. The BCS3 maintains a database of unit personnel and equipment authorizations by Source Requirements Code (SRC) and of unit and equipment planning factors. Included in BCS3 is the Baseline Resource Item List (BRIL), a database of equipment and personnel. Therefore, it provides only a subset of all personnel and equipment. From the BRIL, the commander may identify items critical to the operations, which establishes the commander's tracked item list (CTIL). The BCS3's course of action (COA) analysis includes the variables combat intensity, combat posture, unit task organization, and miles traveled and geographical region.

A-35. The BCS3 supports the warfighting C2 and battle management process by rapidly processing large volumes of logistical, personnel and medical information. The BCS3 facilitates quicker, more accurate decision making by providing a more effective means for force-level commanders and logistics commanders to determine the sustainability and supportability of current and planned operations. The BCS3 collects and processes selected sustainment data in a seamless manner from CSS Standard Army Management Information Systems (STAMIS) and manual systems/processes, and other related source data and hierarchical automated C2 systems (e.g., Force XXI Battle Command Brigade and Below (FBCB2) and the Global Command and Control System-Army (GCCS-A)).

A-36. Based on these inputs, the BCS3 generates and disseminates near real time logistics C2 reports, responses to logistics related ad hoc queries, updates the database, and provides logistics BVOS information in support of the ABCS common operating picture of the battlefield. The latter capability represents the essence of ABCS and serves to insure that all force level commanders and staffs see and understand the battlespace and gain dominant situational understanding on the battlefield by sharing the pertinent data of that COP.

A-37. This functional capability is facilitated by ABCS BOS interoperability, use of ABCS common hardware/software (CHS), client/server architecture, and unique BCS3 software

modules. Within ABCS, the BCS3 is the capstone C2 decision support system (DSS) for all command and staff matters associated with sustainment operations and/or projections. Since we train in peace as we will fight in war, the BCS3 provides commanders with a DSS tool for everyday use in support of their logistics mission and C2 requirements.

A-38. Furthermore, the force level information (FLI) feature of BCS3 also provides the commander with a capability to exercise C2 over their subordinate units and/or operations. FLI is defined as a level of BOS proponent information for which an ABCS user has access to and input responsibilities for, i.e., UEy, UEx and the brigade combat team. The common operating picture of the battlefield is an ABCS universal product based on the selected sharing BOS proponent FLI amongst and common to the other ABCS BOS. ABCS common picture products include situational maps (terrain, disposition of friendly and enemy forces, etc.), battle resource reports, and other intelligence products. The ABCS common picture is the mainstay for the synchronization of leadership situational understanding. Access to Army FLI and the common picture displays support the effective assessment and integration of the battlefield operating systems (i.e., maneuver, fire support, mobility/counter mobility, C2, intelligence, electronic warfare, air defense, and logistics support).

A-39. BCS3 integrates a common operating picture of these key logistics mission areas:

- Arming the force.
- Fueling the force.
- Manning the force.
- Fixing the force.
- Moving the force.

A-40. The BCS3 will be employed at the battalion, brigade combat team, UEx and UEy levels. The BCS3 will interface with the other ABCS BOS, higher and lower C2 systems (e.g., GCCS-A and FBCB2), and Management Informational Systems for personnel, medical (future desired capability), supply, services, and transportation at all echelons.

A-41. **Force XXI Battle Command Brigade and Below.** The Force XXI Battle Command Brigade and Below (FBCB2) mission was explained in paragraph A-30. Logistics commanders and staffs will be digitally linked by FBCB2 to the platforms and organizations that they support. This capability will provide:

- Near real time visibility of combat operations to include precise unit locations.
- Near real time visibility of logistics assets and supported units on the battlefield.
- Automated management of logistics critical tasks,
- Enhanced visibility of unit logistics status and of supply point status.
- Enhanced capability to request, track and synchronize logistics support.

A-42. Logistics functionality on the FBCB2 will include when fully implemented:

- Logistics Situation Report (LOGSITREP)
- Personnel Situation Report (PERSITREP)
- Command Tracked Item List update message (CTIL/BRIL)
- Field Services Status Reports.
- Medical Unit Situation Report.
- Mortuary Affairs Reports.
- Logistical and Tactical Common Operating Picture.
- Digital diagnostics and Prognostics Interface (DDAP).
- Data Exchange with Mobile Tracking System (MTS), RF Tags.
- Task Management Suite that includes:
- Logistics Call for Support (CFS).

- Logistics Task Orders (LTO).
- Logistics Task Synchronization.
- Logistics Task Management.

A-43. Logistics functionality on the FBCB2 currently includes:

- Logistics Situation Report (LOGSITREP).
- Personnel Situation Report (PERSITREP).
- BRIL/CTIL Update.
- Supply Point Status Report.
- Medical Evacuation MEDEVAC.
- Logistics Call for Support (CFS).

SECTION III – VERY SMALL APERTURE TERMINAL (VSAT) AND CSS AUTOMATED INFORMATION SYSTEM INTERFACE (CAISI)

A-44. Coupling the CAISI local area network (LAN) with the VSAT LAN has had many positive capabilities that the logisticians have not had before. This satellite based capability coupled with the wireless extension of CAISI allows instantaneous transmission of requisitions for supplies, virtual maintenance and logistics synchronization meetings and the ability to reach back for support around the world.

Logistics' Very Small Aperture Terminal (VSAT)

A-45. Logistics' Very Small Aperture Terminal (VSAT) is software driven terrestrial based station used for the reliable transmission of logistics data via satellite. It permits the transmission of data from anywhere in the world to anyplace in the world with appropriate reception capability.

CSS Automated Information Systems Interface (CAISI)

A-46. CAISI is a secure, wireless LAN which provides the last mile connectivity between logistics automation systems and VSAT type networks. CAISI provides wireless line of sight (LOS) transmission, encryption on all wireless LAN links and a digital subscriber line back-up capability for a non-LOS requirement within a three kilometer distance (extended version has a greater distance). It extends the tactical connectivity capability from the UEy level to the combined arms battalion's combat trains command post (CTCP) or the combined arms battalion support area.

A-47. VSAT and CAISI should be used in garrison operations to support its logistics operator training. Their design allows the linking of all the STAMIS boxes (in garrison) with permanently-assigned internet protocol (IP) addresses, thereby facilitating train as you fight during garrison operations.

SECTION IV – LOGISTICS AUTOMATION ARCHITECTURE

A-48. The following two figures show how the logistics systems architecture can be set-up for a brigade support area (Figure A-5) and a combined arms or fires battalion or reconnaissance squadron support area (Figure A-6).

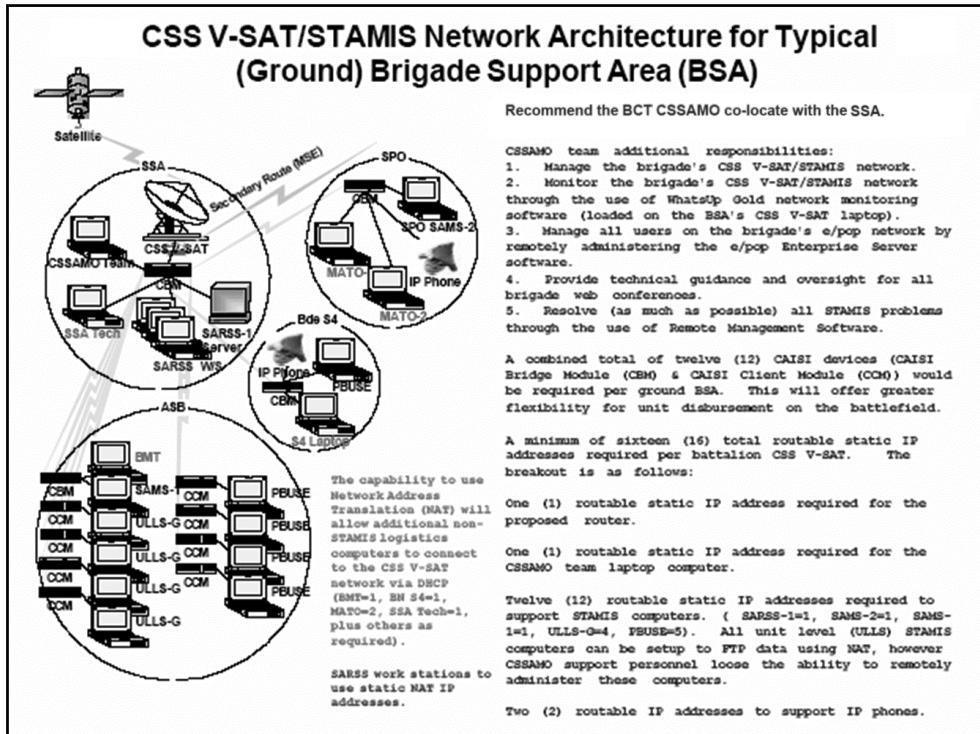


Figure A-5, Logistics VSAT and CAISI in Support of the BSA

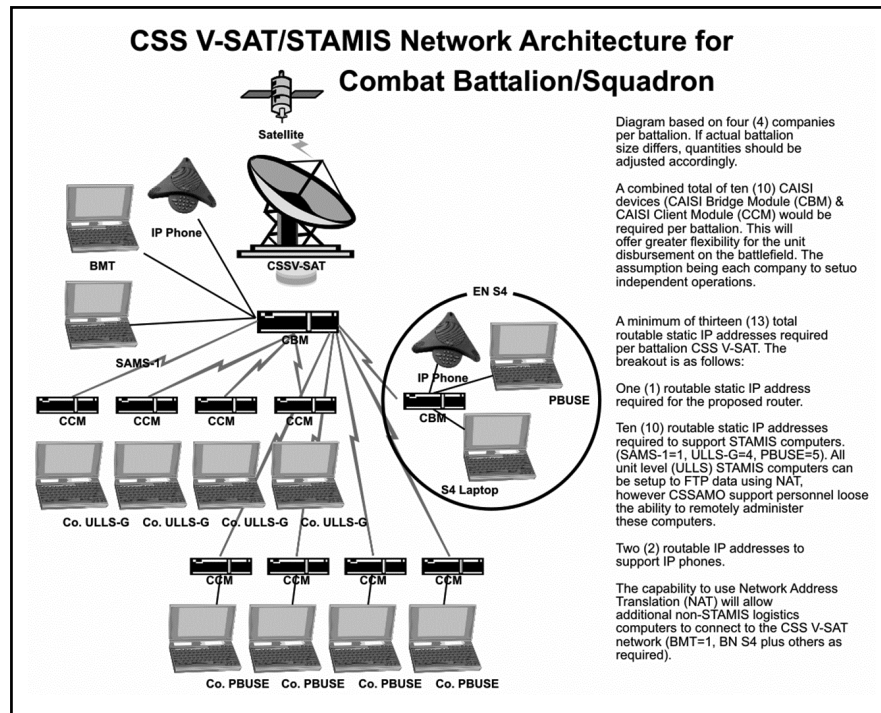


Figure A-6, CSS V-SAT/STAMIS Network Architecture for the Combat Battalion/Squadron

PROPERTY BOOK AND UNIT SUPPLY ENHANCED (PBUSE) PROGRAM

A-49. PBUSE provides close to real time, accurate visibility of the unit’s property book account that operates on the Army Knowledge Online portal. It proves a responsive and efficient means to maintain accountable records for the Army’s inventory of property. The old program only provided snapshots of the account when it was last updated. There are a number of additional benefits with the use of PBUSE:

- Capability to offer total asset visibility thus improving accuracy of combat power reports because of timely and accurate visibility of unit level weapons systems and stocks.
- Replaces two legacy systems: the SPBS-R and ULLS-S4.
- Use one common platform (light weight Pentium laptop) versus multiple platforms
- Better operational support with its web-enabled capabilities (i.e. operates on any computer with web connection).
- Provides office automation, e-mail, on-line help and end user manual and automated catalog changes.
- Provides support for unit transfer/task force/split operations.
- Fewer data sources are used because of the centralized database eliminating the need for thousands of smaller databases throughout the Army.
- Better collaboration and interoperability provided by a common source of information required to support war planning via the global combat support system (GCSS), the joint command and control system.

ULLS-ENHANCED TO REPLACE ULLS-G AND SAMS

A-50. ULLS-Enhanced will enhance ULLS-G, SAMS-1 and SAMS-2 by incorporating the Windows graphical user interface (GUI) operating systems. This change is a maintenance systems modernization initiative which complies with the Chief of Staff of the Army's "Good Enough" guidance which allows ULLS-E to act as a bridge between current functionality and the Enterprise Resource Planning (ERP) solution. There are numerous benefits with ULLS-E:

- Replicates fully the functional capabilities of the current legacy systems: ULLS-G and SAMS-1 & 2.
- Reduces the number of computers and operators on the battlefield.
- Operates in the Windows 2003/XP environment that fully replicates the capabilities of the three legacy systems; ULLS-G and SAMS -1 become integrated and utilizes the same relational database as SAMS-2.
- Systems meet requirement of AR 25-2 Information Assurance, DODD 8500.1 Information Assurance and DODI 8500.2 Information Assurance Implementation.
- Enables Ordnance Corps' two (2) level maintenance concept.
- Allows better operational support with its Windows capabilities.

**SECTION V – MEDICAL COMMUNICATIONS (MC4) SYSTEM/THEATER
MEDICAL INFORMATION PROGRAM (TMIP)**

A-51. The MC4/TMIP system is the Army medical information management system in theater. The MC4 system will provide the required Army medical computer infrastructure to host the theater medical information program (TMIP) software and Army unique software. The Army communications network will connect the system. The MC4 system will interface with maneuver sustainment integrated, knowledge-based C2 architecture that supports reach to local, regional, and deployed sources. See Figure A-7. The system will operate within Army units, and other DoD and Non-DoD organizations and will be interoperable with joint, interagency and multinational (JIM) forces.

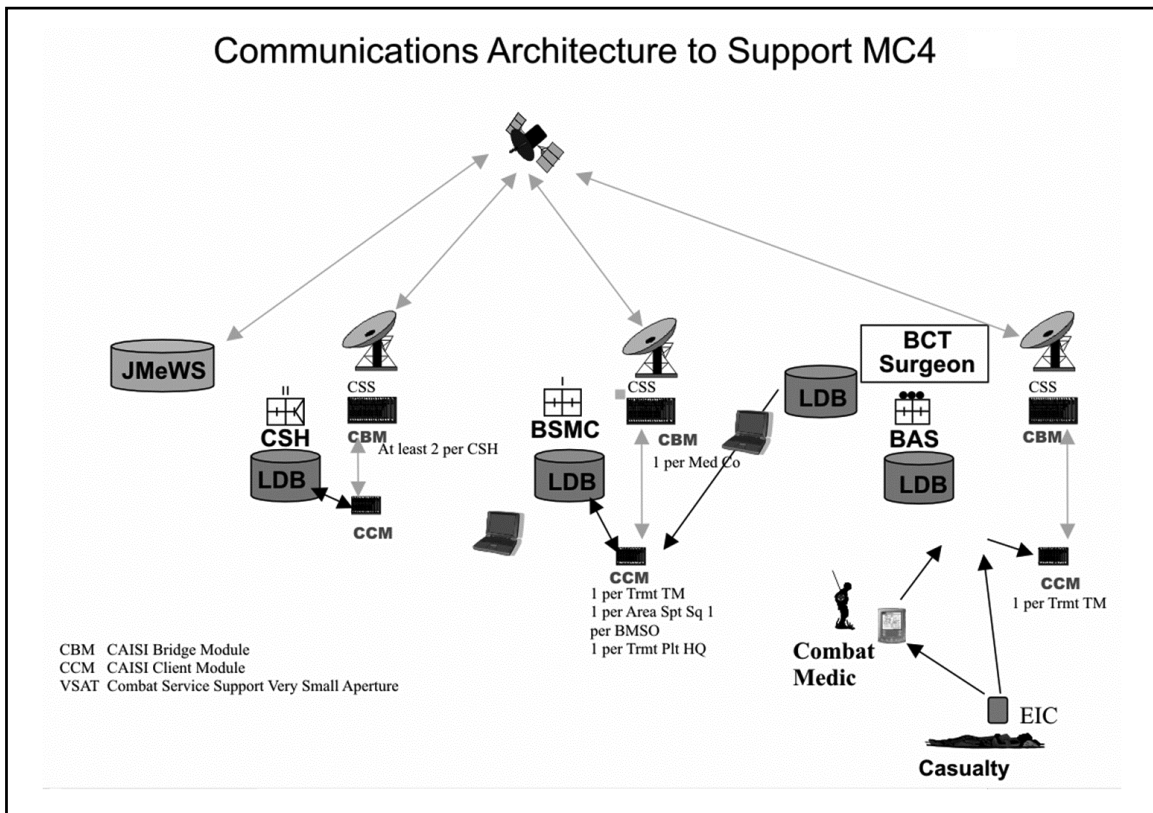


Figure A-7, Communications Architecture for MC4

A-52. **Composite Health Care System–New Technology (CHCS-NT).** This joint developed software is a legacy mainframe medical information system that has been converted for use on a Windows NT platform. It offers limited order entry (pharmacy, lab, x-ray) and patient administration functionality. This application will be found on the AN/TYQ-107 and 108 in the UEx hospital.

A-53. **Composite Health Care System II–Theater (CHCS II-T).** This medical communications system provides clinical encounter functionality that allows healthcare providers document outpatient care at levels I through IV. The system will provide digital data for theater medical surveillance and trend analysis. Encounter data will feed the theater level Joint Medical Workstation (JMeWS) for medical surveillance. This application will be found on the AN/TYQ-106 and 107 (battalion aid station, brigade support medical company (BSMC), and CSH); and AN/TYQ-108 (BSMC and the UEx hospital).

A-54. **Battlefield Medical Information System–Telemedicine (BMIS-T).** Designed to run on a handheld computing device, BMIS-T will provide initial patient encounter data collection on a handheld computer containing an automated DD Form 1380 (Field Medical Card) and SF 600 (Chronological Record of Medical Care). The BMIS-T will provide the capability to rapidly enter the limited data required during initial medical encounters and will interface with CHCS II-T. The BMIS-T will be found with BCT combat medics and treatment teams in the BCT and BSMC; and health care providers in the CSH.

A-55. **Local Data Base (LDB).** Each Army MTF (Level I MTF, BSMC, CSH) will maintain a local database (LDB) containing all medical data generated by that MTF. A LDB will also be found at the BCT Surgeon Section to capture data from all the BAS within the BCT.

Medical data captured in the LDB will be transmitted to the JMeWS database as encrypted email text. Each MTF will generate a daily disease non-battle injury (DNBI) report. The capture of all medical data in the LDB will facilitate medical trend analysis and medical surveillance. In a communications constrained environment, data will be downloaded to removable computer media (floppy disk, compact disk, memory stick, etc.) and carried to the next higher level of care and transmitted from that location.

A-56. **Reports.** Lower Echelon Reporting and Surveillance Module (LERSM). This TMIP application provides query capabilities against the local database. LERSM provides situational understanding information and medical treatment facility (MTF) patient visibility along with support for pre-defined status reporting and epidemiology monitoring.

A-57. **Data flow.** The following paragraphs address medical information flow by level of care. Figure A-7 depicts the communications architecture that will enable the exchange of medical information. The CAISI Client Module and Bridge Module will be found in the Level I MTF treatment teams, BSB-MC, and the UEx hospital. The Client Module will be wirelessly connected to the Bridge Module that is wirelessly connected to the logistics VSAT. The MC4 LDB found at the BAS, BSMC, and UEx hospital is connected by a wire LAN to the CAISI Client Module.

SECTION VI – COMMUNICATIONS OPERATIONS--A BRIDGE TO THE FUTURE

A-58. Achieving information superiority requires a network focused operations environment—a global information grid (GIG)—that provides an end-to-end set of information services, associated processes, and people to manage and provide the right information to the right user at the right time with appropriate protection across all DOD war fighting, intelligence, and business domains.

A-59. Attaining information superiority requires unity of effort in management and control across the GIG. Network operations (NETOPS) are the means by which this unity of effort is obtained. NETOPS provides tactical units the ability to harness the power of GIG enterprise services and bring this power to bear where it is needed most on the battlefield, thus increasing the lethality of Army tactical units.

A-60. Global Information Grid (GIG)—The GIG is defined as follows:

- Globally interconnected, end-to-end set of information capabilities, associated processes, and personnel for collecting, processing, storing, disseminating, and managing information on demand to warfighters, policy makers, and support personnel. The GIG includes all owned and leased communications and computing systems and services, software (including applications), data security services, and other associated services necessary to achieve Information Superiority.
- The GIG includes any system, equipment, software, or service that meets one or more of the following criteria:
 - Transmits information to, receives information from, routes information among, or interchanges information among other equipment, software, and services.
 - Provides retention, organization, visualization, IA, or disposition of data, information, and/or knowledge received from or transmitted to other equipment, software, and services.
 - Processes data or information for use by other equipment, software, and services.

A-61. **Non-GIG IT:** Non-GIG IT includes stand-alone, self-contained, or embedded IT that is not or will not be connected to the enterprise network.

A-62. **Information Superiority.** The capability to collect, process, and disseminate an uninterrupted flow of information while exploiting or denying an adversary’s ability to do the same (JP1-02). Information superiority is achieved in a non-combat situation or one in which there are no clearly defined adversaries when friendly forces have the information necessary to achieve operational objectives.

A-63. Table A-1 identifies the current force elements requiring bridge to the future networks (BFN) capabilities. This table identifies the current force elements requiring bridge to the Bridge to Future Networks (BFN) capabilities. Note that the capabilities annotated with an O (Other Program) or U (Unfunded) will be provided by another program in follow-on increments. The Army G3 approved a “Good Enough” COA to provide two TROJAN SPIRITs to the UEx, one TROJAN SPIRIT to each HBCT.

Table A-1, Location of Joint BFN Capabilities

Capabilities/Access To	Bn	BCT	UEx	UEx as JTF	UEy	UEy as JTF
Defense Switched Network (DSN)	X	X	X	X	X	X
Defense Red Switched Network (DRSN)		X	X	X	X	X
Tactical Voice ¹	X	X	X	X	X	X
Secret Internet Protocol Router Network (SIPRNET)	X	X	X	X	X	X
Unclassified but Sensitive Internet Protocol Router Network (NIPRNET) ²	O	X	X	X	X	X
Joint Worldwide Intelligence Communications System (JWICS) (Top Secret/Sensitive Compartmented Information [TS/SCI]) ³		O/U	O/U	O/U	O/U	O/U
Dismounted Secure Wireless Local Area Network (LAN) ⁴	O	O	O	O	O	O
Video Teleconference (VTC) Network Infrastructure (SIPRNET and NIPRNET)		X	X	X	X	X
VTC End Station		X	X	X	X	X
Information Assurance (IA)	X	X	X	X	X	X
Spectrum Management ⁵		O/U	O	O	O	O
Network Management	X	X	X	X	X	X
Coalition		X	X	X	X	X
Global Broadcast Service (GBS) ⁶	O	O	O	O	O	O
Joint Blue Force Tracking (BFT)	O	O	O	O	O	O
Sensor Reach Back ⁷	O/U	O/U	O/U	O/U	O/U	O/U
Line of Sight (LOS) ⁸	O	X	X	X	X	X
Beyond LOS (BLOS) (Troposcatter [TROPO], High Frequency [HF])	X	X	X	X	X	X
Tactical Satellite (TACSAT) (Commercial) ⁹	X	X	X	X	X	X
TACSAT (Military) ¹⁰	O	O	O	O	O	O
Strategic Satellite (Teleport) ¹¹	O	O	O	O	O	O
Link with Standardized Tactical Entry Point (STEP) Site Access		X	X	X	X	X
Personal Wireless Access	X	X	X	X	X	X
Personal Satellite Access ¹²	O	O	O	O	O	O

Table A-1, Location of Joint BFN Capabilities

Capabilities/Access To	Bn	BCT	UEx	UEx as JTF	UEy	UEy as JTF
Broadband Satellite Communications (SATCOM) On-the-Move ¹³	O	O	O	O	O	O
Combat Service Support (CSS) Business Enterprise Architecture (NIPRNET) ¹⁴	O	O	O	O	O	O
Web Publishing Services (e.g., Information Dissemination Management-Tactical [IDM-T])	X	X	X	X	X	X
Defense Message Service (DMS) ¹⁵	O	O	O	O	O	O

KEY: X=BFN, O=Other Program and U=Unfunded/ Unresourced

Table A-1 Footnotes	Program
¹ Tactical Voice	Warfighter Information Network-Tactical (WIN-T)
² NIPRNET	Unit Provided
³ JWICS (TS/SCI)	Trojan Spirit Light = O; Unfunded JWICS=U
⁴ Dismounted Secure Wireless LAN	WIN-T
⁵ Spectrum Management	Spectrum XXI – Spectrum Management; ISYSCOM (V4)Frequency Assignment
⁶ GBS	GBS
⁷ Sensor Reach Back	Intel Program and Command and Control (C2) Battlefield Operating System (BOS)
⁸ LOS	WIN-T
⁹ TACSAT (Commercial)	INMARSAT (L-Band), Iridium (L-Band), CSS (Ku-Band), and Phoenix (C & Ku-Bands)
¹⁰ TACSAT (Military)	Spitfire (UHF), SCAMP (EHF), SMART-T (EHF), TSC-85/93 (GMF X-Band), and Phoenix (X & Ka-Bands)
¹¹ Strategic Satellite (Teleport)	STEP and Teleport
¹² Personal Satellite Access	WIN-T
¹³ Broadband SATCOM On-the-Move	WIN-T
¹⁴ CSS Business Enterprise Architecture (NIPRNET)	CSS Program
¹⁵ Defense Message Service (DMS)	Defense Message Service (DMS) Program

A-64. Current forces must be enhanced immediately with commercial technologies as a bridge to future capabilities. Rapid infusion of commercial off-the-shelf (COTS) communications and information technology hardware, software and training capabilities into the HBCT, UEx and UEy Army platforms, strategic reach-back sites, and signal formations is needed to provide our Soldiers information dominance on the battlefield and in the continuing global war on terrorism.

LandWarNet

A-65. LandWarNet is under development and will include all Army networks—from sustaining military bases to forward-deployed forces. It is the approved concept for the Army's portion of the Global Information Grid (GIG) supporting users around the world. LandWarNet will provide networks to the Active Component forces, National Guard, Army

Reserve, and the sustaining base. It supports the Army transformation into joint, network focused, interoperable, knowledge-based warfare. It will provide for processing, storing, and transporting information over a seamless network. LandWarNet's network elements consist of:

- Installation connectivity to the GIG. The National Guard's GuardNET and the Army Reserve's ARNET are both part of LandWarNet at this level.
- Echelons-Above-UEx connectivity to the GIG supporting Combatant Commanders, Land Component Commanders, and Joint Force Commanders; and providing the bridge between the deployed soldier and the GIG.
- Echelons-UEx-and-Below connectivity to the GIG supporting Soldiers, brigade combat teams and UEx elements located in the deployed theater.

SECTION VII – COMMUNICATIONS IN SUPPORT OF THE HBCT

COMMUNICATIONS SYSTEMS AND SUSTAINMENT OF THE HBCT

A-66. The HBCT is the basic maneuver formation for the modularized Army. As such, the HBCT has been resourced to deploy, fight, and operate in a distant AO with its own signal capability that is sufficient to C2 the HBCT and to link with C2 nodes to communicate world-wide as necessary. In addition to being able to self-deploy and operate, the HBCT depends upon network focused operations to bring lethal fires to bear on enemies that previously would have taken the combat power of a division to destroy. This focus on networks creates a powerful, easily deployable formation that can be used on short notice. The BSB's logistics automation systems allow the BSB commander to develop the requisite situational understanding to support the HBCT.

A-67. HBCT commanders require constant connection to the joint NIPRNET. SATCOM enables the logistical support elements in the HBCT to travel with the maneuver formation during combat operations, set up at the quick halt, and continue to provide connectivity to joint logistics through all subsequent phases of operations from stability to redeployment.

A-68. SATCOM provides maximum flexibility and support to rapidly changing mission scenarios and enables the rapid task organization and task organization for support changes.

A-69. All HBCT and higher commanders will require an information system to support the transport of logistical common operating picture (LCOP) information that contributes to Situational Understanding. SATCOM enables the BCS3 layered network of information and communications capabilities required to support effective tactical support operations. Reachback to the GIG and reach assets to higher, lower and adjacent units are needed to ensure logistical information dominance by tactical commanders. The logistics SATCOM provides increased throughput that meets speed of service requirements; a robust and redundant communications architecture; and provides a constant connection that supports portable fixed IP addressing, Quality of Service, and distributes logistics information in a flat network topology.

A-70. HBCTs require access to higher, lower, and adjacent support echelons to provide sustainment and distribution support, development of the LCOP, and timely and accurate data on the lines of logistical communications. HBCTs must be able to communicate at the quick-halt and exchange logistics data to higher, adjacent and subordinate units through a connection to the GIG.

BATTALION SATCOM

A-71. **Battalion level logistics data connection.** (This includes company level and Soldier/platform echelon levels where necessary). Logistics SATCOM provides the battalion's forward support company with logistical data connection to those forces supporting them.

A-72. All battalions require the transport of feeder data that enables logistics, distribution, personnel, and health processes plus feed the LCOP information that contributes to logistical Situational Understanding. Reachback to the NIPRNET is required to ensure continuity of support operation to tactical commanders.

A-73. Battalions require access to higher echelons to sustain themselves, to include timely and accurate business intelligence data. Battalions must be able to exchange logistical data with higher and adjacent units.

SUSTAINING BASE SATCOM

A-74. SATCOM allows commanders, staffs, and other users to simultaneously exchange logistical data between the sustaining base and the deployed area of operation. Logistics SATCOM extends connectivity from the unit to DoD, joint, allied, and coalition networks, plus U.S. and foreign commercial networks that to support Army and Joint logistics.

A-75. The logistics SATCOM enabled force will have connectivity for logistical and sustainment entities that extend from sustaining base into the tactical environment and throughout their respective area of responsibility. Commanders will have a simultaneous, physical presence at numerous, dispersed locations and be able to see and understand their area of interest, gain logistics information dominance, achieve situational understanding, exercise support operations, and enable distribution of support products to Soldiers and units.

A-76. SATCOM supporting logistics directly enables train and operate as you fight operations in peace and war by enabling the network for continuous operations in garrison and deployed locations.

Appendix B

METL Development for the BSB

METL DEVELOPMENT PROCESS

B-1. The mission essential task list (METL) development process links the unit's wartime operational mission with its training. Battle focused training programs are based on wartime operational requirements. The HBCT's logistics units cannot achieve and sustain proficiency on every possible training task. The commander is responsible for identifying the tasks essential to accomplish the organization's wartime operational mission. Battle focused METL identifies the tasks essential to accomplish the unit's wartime operational mission and provides the foundation for the unit's training program. All sustainment company level and above develop a METL. Staffs at each level also develop a METL that supports their unit's METL. All leaders should read FM 7-1, *Battle Focused Training* to learn the entire process for METL development and how to use it to train their unit.

CATALYST FOR TRAINING ON WARTIME OPERATIONAL MISSIONS

B-2. The METL development process is the catalyst to focus training on wartime operational missions. See figure B-1, METL development process. It:

- Uses the wartime operational mission and other inputs to METL development to focus the unit's training on essential tasks.
- Provides a forum for professional discussion and leader development among senior, subordinate, and adjacent commanders concerning the linkage between mission and training.
- Enables subordinate commanders and key NCOs to crosswalk collective, leader, and individual tasks to the mission.
- Leads to buy-in and commitment to the organization's training plan by unit leaders.

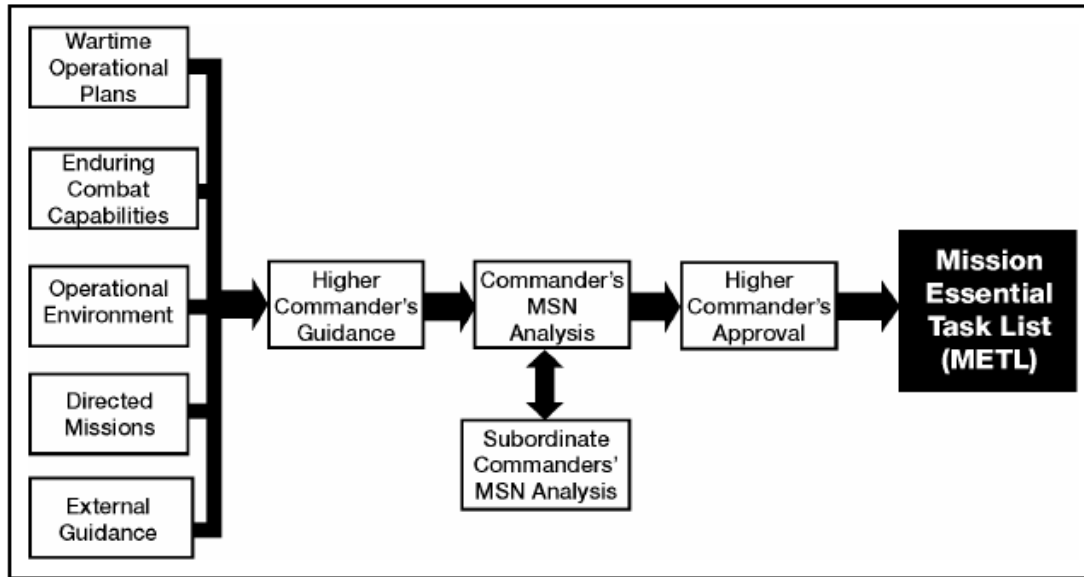


Figure B-1, Mission Essential Task List Development Process

INPUTS TO METL DEVELOPMENT

B-3. There are five primary inputs to METL development (See Figure B-1):

- **Wartime operational plans.** The most critical input to METL development is the organization's wartime operational mission.
- **Enduring combat capabilities.** The fundamental reason for the organization and operation of Army forces is to generate effects of combined arms. Army commanders form battlefield operating system's forces into cohesive teams through training for combat proficiency. Enduring combat capabilities are the unique contribution each unit makes to ensure that the Army successfully accomplishes any mission, anytime, anywhere.
- **Operational environment (OE).** The six dimensions of the operational environment are defined in FM 3-0, Chapter 1. They are: threat, political, unified action, land combat operations, information, and technology. They are also discussed in Chapter 2 of this FMI.
- **Directed missions.** Army organizations are frequently directed to execute a mission other than their assigned wartime operational mission. These missions can range from major combat operations to humanitarian assistance, security cooperation activities, or other types of stability operations or support operations, and often include a combination of all of these mission types.
- **External guidance.** External guidance serves as an additional source of training tasks that relate to an organization's wartime operational mission. See figure, B-2, UJTL-AUTL-ARTEP-MTP crosswalk. Some examples of these external sources of guidance are:
 - Higher headquarters directives.
 - ARTEP-MTPs.
 - Mobilization plans.
 - Installation wartime transition and deployment plans.
 - Force integration plans.

- Army Universal Task List (AUTL).
- Universal Joint Task List (UJTL).

B-4. The UJTL (CJCSM 3500.04C) serves as a common language and common reference system for joint force commanders to communicate mission requirements. It is the basic language for developing a joint METL (JMETL). The UJTL defines tasks and functions performed by joint headquarters, the Army, and other service components operating at the operational and strategic levels of war.

B-5. The AUTL (FM 7-15) is a comprehensive listing of Army tactical level collective tasks and functions for tactical units (company through UEx) and staffs. It complements the UJTL. The AUTL provides a basis for establishing unit-specific ARTEP-MTP linkage to the UJTL. This mission-to-task-to-training linkage assists forces in training the way they intend to fight. The AUTL:

- Provides a common, doctrinal structure for Army tactical mission tasks.
- Articulates what the Army does to accomplish missions.
- Applies to all four types of military operations (offense, defense, stability, support).
- Lists collective Army tactical tasks subordinate to each of the seven BOS elements.

B-6. See figure B-2 for the UJTL to AUTL to ARTEP-MTP crosswalk.

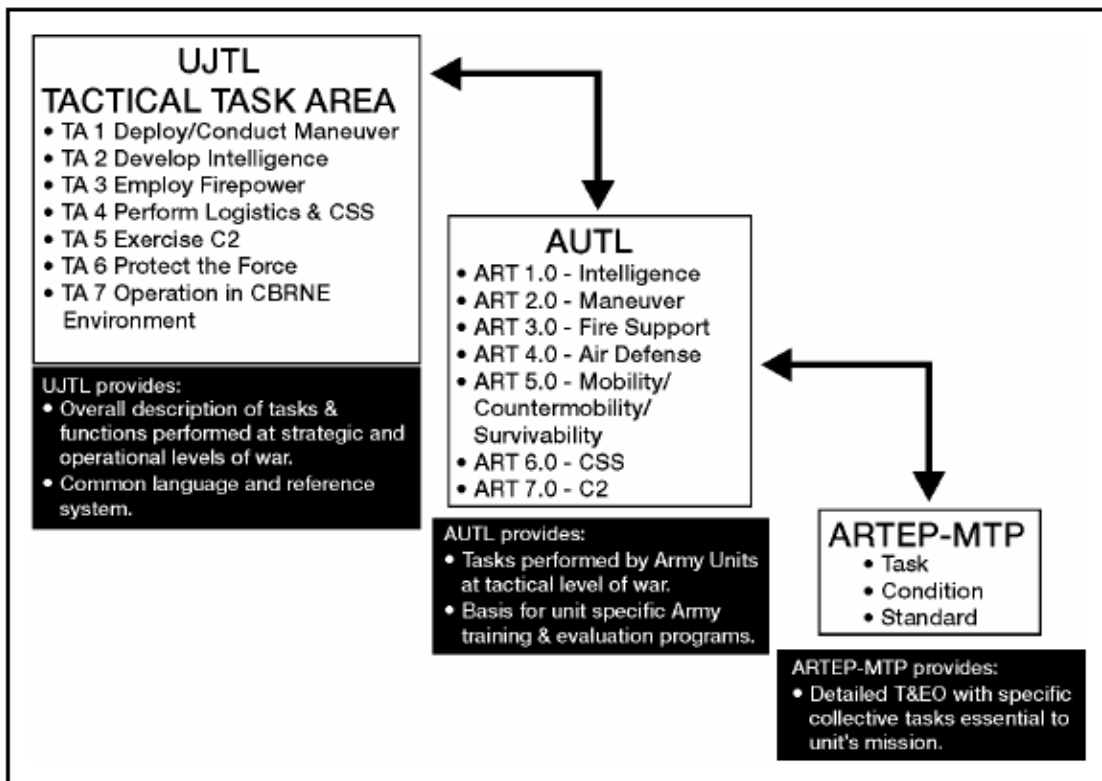


Figure B-2, UJTL-AUTL-ARTEP-MTP Crosswalk

COMMANDERS’ ANALYSIS

B-7. To identify mission essential tasks, the BSB commander conducts an analysis of the unit’s operational mission. In the absence of a directed operational mission, analysis is based on the unit’s assigned mission in wartime operational plans. In the absence of clear alignment with wartime operational plans, mission analysis is based on analysis of missions for which the unit was designed to accomplish in wartime, as established in the unit’s modified table of organization and equipment (MTOE) and how-to-fight doctrine. Higher commanders (HBCT commander for example) provide guidance to help their subordinate commanders focus their analysis. Mission analysis results in identification of specified and implied tasks the unit must perform and in a restatement of the unit’s mission. To provide battle focus, the BSB commander identifies those tasks critical for mission accomplishment. These tasks constitute the organization’s METL. The next higher level commander (HBCT commander) approves the METL. A change of operational mission requires the BSB commander to analyze his mission again and adjust the unit’s METL accordingly and submit for approval by the next higher level commander (HBCT commander).

GENERIC METL TO CONSIDER FOR THE BRIGADE SUPPORT BATTALION

B-8. The development of METL should not occur in a vacuum with only the commander’s involvement. The METL provided at Table B-1 is generic in nature and should not be construed as the correct solution for any particular unit.

Table B-1, Generic METL for Brigade Support Battalion

1	Conduct Deployment/Redeployment Activities
2	Sustain the HBCT’s forces.
3	Displace by ground or air subordinate elements and sustainment resources in the BSA.
4	Establish subordinate elements and facilities in the BSA
5	Defend the BSA through Force Protection Activities with units in support of the HBCT and the BSA tenant units.
6	Support Stability Operations and Support Operations

B-9. The AUTL for Battle Command and C2 at Table B-2 is provided for a leader’s use in METL development.

Table B-2, AUTL for Consideration in METL Development

Plan Operations Using the Military Decision Making Process [AUTL Task # 7.4.1]
Conduct Intelligence Preparation of the Battlefield [AUTL Task # 1.1.1]
Establish Command Post Operations [AUTL Task # 7.1]
Establish Tactical Information Network and System [AUTL Task 7.2.1.4]
Perform Intelligence, Surveillance and Reconnaissance Integration [AUTL Task # 1.3.2]
Conduct Rehearsals [AUTL Task # 7.5.2]
Conduct Pre-Operations Checks and Inspections [AUTL Task # 7.5.5]
Synchronize Current Operations [AUTL Task # 7.6.4]
Coordinate Targeting and Effects [AUTL Task # 3.0]
Synchronize Offensive Information Operations [AUTL Task # 3.3.2]
Synchronize Defensive Information Operations [AUTL Task # 5.3.7]
Coordinate Sustainment Operations [AUTL Task # 6.0]
Coordinate Force Protection [AUTL Task # 5.3]
Manage Tactical Information [AUTL Task # 7.2]

Table B-2, AUTL for Consideration in METL Development

Coordinate Civil Military Operations [AUTL Task # 2.1.2.2]
Maintain Continuity of Command and Control [AUTL Task # 7.8.3]
Assess Situation[AUTL Task # 7.3]
Coordinate Actions, Sequels, and Branches [AUTL Task # 7.6.2]
Adjust Resources, Concept of Operations, or Mission [AUTL Task # 7.6.3]
Conduct Coordination and Liaison [AUTL Task # 7.5.1]

B-10. Commanders involve subordinate commanders, their CSM or 1SG, and key NCOs in METL development to create a team approach to battle focused training. Subordinate participation develops a common understanding of the organization's critical wartime operational mission requirements so that METLs throughout the organization are mutually supporting. Subordinate commanders can subsequently apply insights gained during preparation of the next higher headquarters' METL in the development of their METL. The CSM/1SG and other key NCOs must understand the organization's collective METL so that they can identify individual tasks for each collective mission essential task.

LEADER DEVELOPMENT BY COMMANDERS

B-11. The next higher level commander should use the METL for leader development of his subordinate leaders (e.g. BSB commander with his company commanders). The senior commander can have a professional dialogue with subordinates on METL development, selection of battle tasks, and training. These dialogues give the commander the opportunity to coach and mentor subordinates and trains them for positions of higher authority. Mentoring and training should be done at all levels.

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Appendix C

Aerial Sustainment

SECTION I – OVERVIEW OF AERIAL SUSTAINMENT OPERATIONS

GENERAL

C-1. Army aviation is an extension of ground maneuver providing an aerial dimension to the HBCT. Army aviation performs sustainment missions within all the battlefield operating systems (BOS) and performs missions for all the BOS units. Aviation is ideal for air movement and aerial sustainment in support of special operations, light, airborne, air assault, and heavy forces.

C-2. Aviation performs crucial tasks in providing aerial sustainment support to the force as a whole, primarily during sustainment replenishment operations and mission staging operations (SRO/MSO). Current operations are sustained through a globally-networked, distribution based logistics system and reach-back capabilities. Increased operational distances, non-secure lines of communication (LOCs) and a non-contiguous battlespace, result in greater reliance on aerial distribution platforms as a means of providing responsive and agile support from multiple locations within the theater.

C-3. Lift aviation forces conduct air assaults, team insertion/extraction, mine dispensing, C2, air movement, and aerial sustainment to accelerate the tempo of ground combat elements.

C-4. Enhanced lift capabilities of multi-function aviation battalions increases the tonnage of aerial sustainment supplies, which means aerial sustainment can supply a larger percentage of fuel, ammunition, and other needs to supplement ground transport.

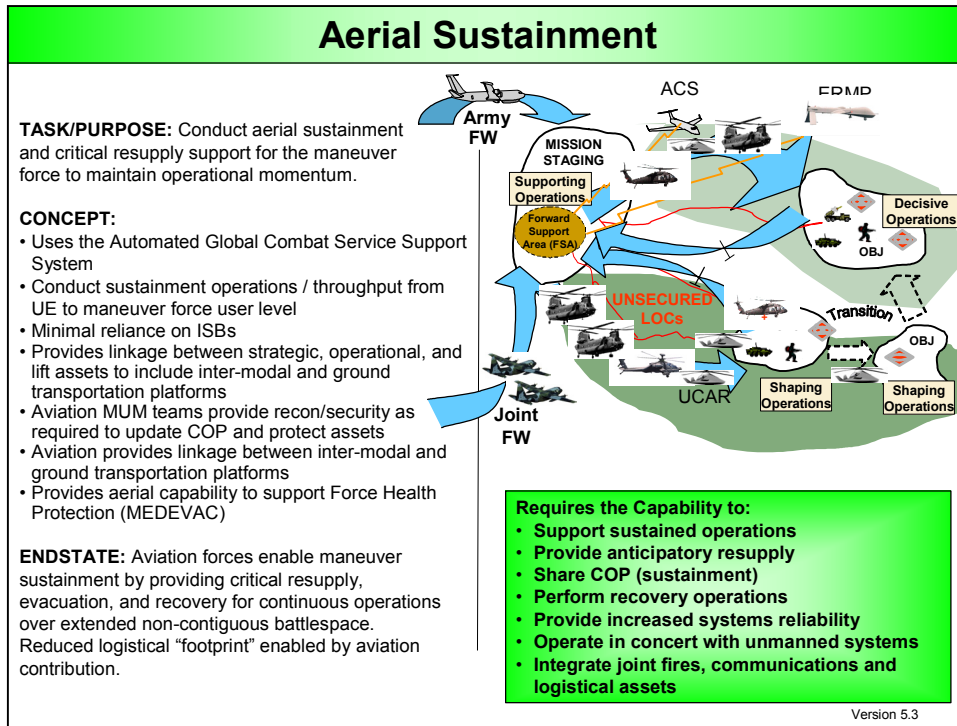


Figure C-1, Aerial Sustainment

AERIAL SUSTAINMENT

C-5. Aerial sustainment is the movement of equipment, material, supplies, and personnel by utility, heavy, and fixed-wing assets for operations other than air assault and combat support. See Figure C-1, Aerial Sustainment. Aviation provides air movement of personnel, equipment, ammunition, water, parts and supplies; and performs casualty evacuation (CASEVAC) and aviation maintenance. These air movements are considered sustainment missions because aviation forces are not task-organized with combined arms forces, nor do they move combat or combat support forces or assets whose primary mission is to engage and destroy enemy forces.

C-6. HBCTs and IBCTs have significantly different needs and requirements. Aerial sustainment through direct support (DS) and general support (GS) is critical for light, airborne, and air assault forces. Resupply of key ammunition and parts is critical for HBCT.

C-7. Aerial sustainment of the modular force is achieved through DS and GS on an anticipatory preplanned basis, not attachment to the support command structure. The number and variety of missions, coupled with the limited lift assets, necessitates that command, not logistics channels, initiate air movement and aerial sustainment taskings. Mission requests go through command channels for allocation of support based on the commander's and G3 priorities. Although aircraft may provide a level of DS and GS support to a particular aerial sustainment mission, these aircraft are not transportation assets, and do not fall under the logistician's unit control. The myriad of combat and combat support missions these aircraft must perform with limited assets prohibits organic or attached support as a transportation asset.

C-8. Aviation taskings through command channels allow rapid transition between all BOS missions, keeps aircrews better informed, and permits simultaneous execution of all three mission types with the same set of aircraft.

C-9. The tempo of replenishment operations can dramatically impact combat operations. It is essential that aircraft utilization be optimized. The goal is to maximize the number of turns during each shift. This can only be accomplished through coordination and training.

SECTION II – EXECUTING AERIAL SUSTAINMENT OPERATIONS

DEVELOPING AERIAL SUSTAINMENT REQUIREMENTS

C-10. At the beginning of sustainment operations, the brigade support battalion (BSB) support operations officer (SPO) receives support requirements from the BCT S4 during the logistics meeting that occurs the day prior to the actual re-supply operation. The BCT S4 is responsible for consolidating each Battalion's logistics status (LOGSTAT), constructing the BCT LOGSTAT from the derived forecasts, prioritizing the support requirements from the subordinate battalion S4 and synchronizing the delivery of the sustainment assets with the BSB SPO.

C-11. After wargaming, which includes input from the BSB commander, the BCT commander approves the BCT operations order (OPORD) with a concept of support plan which includes the support annex and logistics synchronization matrix. The SPO plans re-supply missions for the entire BCT based on input from the BCT S4. During the BCT military decision-making process (MDMP) process, the SPO provides recommendations on how best to array support assets to perform re-supply for units. If this is a daily or periodic mission where a MDMP process is not occurring, the BSB commander approves the SPO and the BCT S4 recommendation and then ensures the tasking order is approved by the BCT commander prior to it being published by the BCT S3. The HBCT brigade aviation element (BAE) will assist in this effort, providing information and requirements to the aviation task force as appropriate.

C-12. The aviation force supporting the HBCT will provide aerial resupply for sustainment based on mission, enemy, terrain and weather, troops and support available, time available, and civil considerations (METT-TC) and the HBCT resupply plan (logistics synchronization Matrix).

AIR MISSION COORDINATION MEETING (AMCM) FOR LOGISTICS

C-13. After support requirements have been identified, the SPO conducts an AMCM at the BSB TOC the night before the planned aerial resupply. Attendees include:

- SPO.
- Aviation operations representatives (BAO, S3, LNO, CO CDR, PLT LDR or pilots).
- BCT S4.
- Logistics helipad (LOGPAD) OIC.
- Battalion S4.
- BSB Company CDR/FSC Co CDR or Distribution platoon leaders.

C-14. The SPO presents the air mission brief (AMB) in five paragraph OPORD format. The LOGPAD OIC provides a pick-up zone (PZ) sketch of the LOGPAD to the aviation operations representative. The battalion S4s and distribution leaders also provide landing zone (LZ) sketches to the aviation operations representative for each LZ. The battalion S4 coordinates with their battalion S3 for LZ/logistics release point (LRP) security and Army air command and control (A2C2) deconfliction. The BSB SPO provides PZ and LZ times to the aviation operations representatives.

C-15. This AMCM produces an operational resupply mission matrix (Table C-1) used to execute the resupply missions. This table can be used as is or reconfigured as needed by the user.

Table C-1, Operational Resupply Mission Matrix

<i>Unit</i>	<i>ACFT Type</i>	<i>Cargo</i>	<i>Time</i>	<i>PZ</i>	<i>LZ</i>	<i>Marks</i>	<i>Freq</i>	<i>Call Sign</i>
		Sample						

C-16. Distribution leaders ensure that their resupply loads are prepared on the BSB LOGPAD using their respective unit’s air items. When the re-supply aircraft arrive (in accordance with the operational matrix coordinated the night before), battalion S4s take control of the hookup crews and the distribution leaders may fly in the lead aircraft during the resupply missions. This allows the distribution leaders to coordinate last minute changes at the load drop-off point due to changes in the tactical situation. It also allows the distribution leader to coordinate directly with the combat trains and provide terminal guidance for the pilots.

PREPARATION FOR AERIAL SUSTAINMENT OPERATIONS

C-17. Some units establish in the brigade support area (BSA) a logistics pad (LOGPAD) controlled by a designated logistician. The LOGPAD often serves as the focal point for aerial replenishment missions where internal and external loads can be picked up for delivery to units. Battalion’s direct their distribution unit leaders to prepare supplies for slingload operations on the BSB LOGPAD based on the guidance from the BCT S3, S4, and the BSB SPO.

C-18. The BSB LOGPAD operates in the BCT AO and should ideally accommodate four each CH-47s simultaneously. As always, safety is paramount; training, rehearsals, communications, coordination, and NCO supervision must mitigate the inherent danger in LOGPAD operations. The following items should be considered when establishing a LOGPAD.

- Location: road networks to and from.
- Security.
- Size: enough usable space?
- Spill plan (petroleum, oil, and lubricants (POL)) with berm for BLIVET filling and spill kits prepared.
- Can multiple loads be staged on each point?
- Aviation hazards in immediate vicinity such as wires, poles/antennas, dust.
- Approach and departure headings (do not over-fly tents or TOCs).
- Trafficability of terrain in poor weather.

C-19. At BCT level, LOGPAD sketches are developed by the BSB and distributed to the supporting aviation S3s by the BAE for dissemination to their units. All sketches should be kneeboard size and contain at a minimum the following information.

- Name.
- Lead touchdown coordinates.
- Markings (NATO, swinging chem-lights, flashlights with cones).
- PZ control location.
- Numbered pick-up points (essential for C2).
- Call sign.

- PZ frequency (FM, frequency HOP secure).
- PZ alt frequency (FM, single channel unsecure).
- Emergency touchdown points.
- Approach/departure headings.
- Go-around direction.

C-20. A2C2 sketches are developed by the BAE or aviation (AVN) liaison officer (LNO) and reviewed by both the BSB support operations section and LOGPAD OICs. Sketches should be distributed to support aviation S3s for dissemination to their units. Sketches are kneeboard size and contain a general concept of the flow of air traffic in and out of the BCT AO. These concepts must tie in with the UEx and BCT A2C2 plan.

C-21. When possible, a rehearsal will be conducted of LOGPAD operations. This will consist of an actual hook up, load transport, and after-action report (AAR). A fuel spill rehearsal will also be conducted; this will consist of a physical inventory of spill kits, a class on spill procedures, and actual rehearsal of these procedures.

C-22. The supporting aviation unit provides aircraft and crews to conduct hookup training on the LOGPAD for personnel who comprise hook-up teams. The LOGPAD OICs are overall responsible for supervising this training.

SECTION III – MEDICAL EVACUATION/CASUALTY EVACUATION

GENERAL

C-23. The aviation brigade has an organic aeromedical evacuation company as a part of the general aviation support battalion (GASB). Air ambulance assets of the aeromedical evacuation company can collocate with health service support (HSS) organizations, the aviation battalion or higher to provide air ambulance support throughout the UEx AO. When required to collocate air ambulance assets, the GASB will normally provide air ambulance platoons of three medical evacuation (MEDEVAC) aircraft as determined by METT-TC.

C-24. MEDEVAC uses purpose-built, specially manned, unarmed aircraft. MEDEVAC aircraft are equipped with medical personnel and equipment that facilitates enroute care of casualties.

C-25. Casualty evacuation (CASEVAC) uses standard mission aircraft to move the wounded. Utility and heavy helicopter units conduct CASEVAC operations when medical aircraft are inadequate or not readily available. CASEVAC aircraft and crews do not include medical personnel, are not able to provide enroute medical care, and are not protected under the Geneva Convention. CASEVAC aircrews are neither trained nor equipped to provide the medical treatment available on air ambulances.

C-26. During high tempo combat operations, it may be necessary to reinforce the air ambulance unit with utility and heavy helicopter CASEVAC support. CASEVAC is a part of force health protection (FHP). CASEVAC includes battlefield pickup of casualties; evacuation of casualties to initial treatment facilities; and subsequent movement of casualties to treatment facilities within the combat zone. CASEVAC is an aviation mission directly supporting a ground unit.

C-27. Utility and heavy helicopters augment air ambulances to move casualties normally not in need of en route care beyond level 1 health care. CH-47 aircraft transport medical personnel, equipment, and supplies as necessary to augment air ambulances. Utility and heavy helicopters are designed to carry litters, if litters are available.

C-28. The CH-47 can transport up to 24 litter patients, or 31 ambulatory patients, or some combination thereof. The UH-60 A/L can carry three or four litters depending on seating

configuration. Supported units should ensure that aircrews know the locations of their battalion and brigade treatment facility LZs or casualty collection points (CCP) where ground ambulances can meet and treat casualties.

EXECUTING MEDICAL EVACUATION

C-29. Table C-2 is the 9-line MEDEVAC request format. The 4-line format uses only lines 1, 2, 3, and 5.

Table C-2, MEDEVAC Request Format

<i>LINE ITEM</i>	<i>EXPLANATION</i>	<i>WHERE/HOW OBTAINED</i>	<i>WHO PROVIDES</i>	<i>REASON</i>
1 Location of pick-up site	Transmit the grid coordinates of the pickup site	From map/PLGR	Unit leader; check with GPS PLGR	Required so aircrew knows where to pickup casualty. Also so that unit Coordinating the mission can approve and clear the route for the MEDEVAC/CASEVAC aircraft.
2 Radio frequency, call sign and suffix of requestor	Transmit the freq of the radio at the pickup site (not a relay freq). The call sign of person to be contacted at the pickup site may be transmitted in the clear.	From SOI	RTO	Required so aircraft can contact requesting unit while enroute.
3 Number of casualties by precedence	Report only applicable information and the brevity codes. A = urgent B = urgent-surgical C = priority D = routine E = convenience If two or more categories must be used in the same request, insert the word "break" between each category	From assessment of casualties	Medic, combat life saver, or unit leader	Required by commander controlling the aircraft to assist in prioritizing missions.
4 Special equipment	Send the applicable brevity codes. A = none B = hoist C = extraction equipment (jaws of life) D = ventilator	From senior medic or combat life-saver	Medic, combat life saver, or unit leader	Required so that the equipment can be placed on board the aircraft prior to takeoff.

Table C-2, MEDEVAC Request Format

LINE ITEM	EXPLANATION	WHERE/HOW OBTAINED	WHO PROVIDES	REASON
5 Number of casualties by type	Report only applicable information and send the brevity code. If requesting MEDEVAC for both types, insert the word "break" between the litter entry and ambulatory entry. L + # of casualties - litter A + # of casualties - ambulatory	From assessment of casualties	Medic, combat life saver, or unit leader	Required so that the appropriate number of appropriately configured aircraft may be dispatched to the PZ.
6 Security of pickup zone (Wartime Mission)	N = no enemy troops in area. P = possible enemy troops in area. E = enemy troops in area. X = enemy troops in area; PZ under fire. (request armed escort)	From evaluation of situation	Unit leader	Required to orient and protect inbound aircrews.
6 Number and type of wounded, injury or illness (Peacetime lifesaving)	Specific information regarding casualty wounds by type. Report serious bleeding, along with patient blood type, if known	From assessment of casualties	Medic, combat life saver, or unit leader	Required to permit more rapid and effective treatment of casualties.
7 Method of marking PZ	Send brevity codes: A = VS-17 panels. B = pyrotechnic signal. C = smoke signal. D = none. E = other (then describe).	Based on situation SOP, and availability of materials	Unit leader	Required to assist aircrew on final approach to PZ. Do not transmit color of panels, smoke, or pyrotechnic; make inbound aircrew identify the color on final approach.
8 Patient nationality and status	The number of casualties in each category need not be transmitted. Send only the applicable brevity codes. A = US military B = US civilian C = Non-US military D = Non-US civilian E = EPW	From assessment of casualties	Medic, combat life saver, or unit leader	Required to alert destination aid stations and hospitals of inbound patient load, and to alert guards for EPWs. Ensure at least one rep at the PZ speaks English.

Table C-2, MEDEVAC Request Format

LINE ITEM	EXPLANATION	WHERE/HOW OBTAINED	WHO PROVIDES	REASON
CBRN contamination (Wartime Mission)	Include this line only when applicable. Send the applicable brevity codes. N = nuclear B = biological C = chemical	From evaluation of situation	Unit leader	Required to protect and orient inbound aircrews.
9 Detailed terrain description (Peacetime lifesaving)	Include details of terrain features in and around LZ. If possible, describe relationship of site to prominent terrain feature (lake, tower, mountain, road).	From evaluation of situation	Unit leader	Required to reduce risks on final approach, especially if hoist will be used.

C-30. The following are keys to successful MEDEVAC or CASEVAC operations.

- Request MEDEVAC thru the controlling headquarters.
- Deconflict airspace through the BAE.
- Plan every MEDEVAC mission as a combat operation.
 - Use lethal and non-lethal suppression of enemy air defense (SEAD).
 - Integrate attack reconnaissance aviation escort and/or PZ overwatch.
 - Ensure PZ security.
- Send MEDEVAC aircraft into secure PZs.
 - Select LZ's that are level and clear of debris (wires, engineer tape, loose equipment) within a 50 meter radius
- Ensure terminal guidance into the PZ.

C-31. When task organized to the BCT, MEDEVAC aircraft work for the aviation battalion. When an aviation battalion is assigned to the BCT, the MEDEVAC aircraft work for the BSB CDR

LANDING ZONE OPERATIONS

C-32. Preferred methods of marking LZs:

- Day = smoke (do not pop until instructed), panel marker
- Night = strobe or chemlight (blue/green not visible under aviation night vision goggles (NVG))

C-33. Keep vehicles and personnel, except signalman, clear of area until instructed otherwise by aircrew. A well marked LZ and inexperienced signalman is better than a poorly marked LZ and experienced signalman.

C-34. Keep all other light sources away from LZ (they will shut down aviators' NVGs) unless instructed otherwise by aircrew.

C-35. Once aircraft is inbound, expect an estimated time of arrival call from the crew. The person on the radio at the site must have visual on the LZ to confirm signal, if required, or to assist crew in positioning.

C-36. Once landed, keep personnel away from the aircraft, the medic will come to the patient. The unit must provide personnel to assist in loading the patient on the aircraft (under direction of the medic).

C-37. Weapons and pyrotechnics will not normally be evacuated (real-world casualties).

MEDICAL EVACUATION (MEDEVAC) PAD

C-38. The BSB medical company commander ensures the MEDEVAC pad is appropriately marked and easily identifiable for pilots conducting day and night MEDEVAC/CASEVAC operations. Once the BSB establishes a dedicated MEDEVAC pad, the location of the pad will be disseminated throughout the BCT and relayed to the UEx medical operations center if applicable. This pad will be within the BSA perimeter, also the forward support medical company commander will have a PZ control node controlling the medical pad and tracking all MEDEVAC/CASEVAC missions of the company headquarters.

CASUALTY EVACUATION REHEARSAL

C-39. Casualty evacuation (CASEVAC) requires its own distinct rehearsal to get it right. This is distinct from the logistics rehearsal. When time permits, a formal rehearsal should be conducted by BCT or battalion XO. Depending on the mission, BCT participants may include:

- BCT S1 (OIC).
- BCT surgeon.
- BAO.
- BCT fire support element (FSE) representative or FA battalion representative.
- Aviation battalion representative.
- BSB logistics operations officer.
- BSB health services support officer.
- BSB medical company commander.
- BSB S2.
- BSB ground ambulance platoon leaders.
- Air ambulance forward support medical team (FSMT) leader.
- BCT medical operations center representative.
- All battalion S1s and S4s involved with the operation.
- All battalion medical platoon leaders involved with the operation.

C-40. The rehearsal of the FHP plan includes review of the enemy and friendly situation and C2 relationships. It rehearses communications, casualty collection, casualty treatment, evacuation, and the use and manning of MEDEVAC and CASEVAC aircraft for each phase of the operation. Specific points covered include:

- A walk through of casualty collection from point of injury to CCPs.
- Locations and markings of CCPs.
- Transmission of MEDEVAC request format.
- Tracking of casualties and MEDEVAC/CASEVAC missions from the point of injury to treatment facilities.
- Airspace control, to include PZs, LZs, routes, and suppression of enemy air defense (SEAD) plans.
- Planned location and daytime/nighttime marking of the MEDEVAC pad located near the forward support medical company.
- Communications plan and timings. (When time permits, MEDEVAC/CASEVAC communications should be rehearsed using actual means.)

- Litter exchange.
- Class VIII resupply.

Appendix D

Risk Management and Fratricide Avoidance

The primary objective of risk management and fratricide avoidance is to help units protect their combat power and logisticians' ability to sustain the HBCT through risk reduction, enabling them to win the battle quickly and decisively with minimum losses. This appendix focuses on two topics: risk management and the avoidance of fratricide. Risk is the chance of injury or death for individuals and of damage to or loss of vehicles and equipment. Risk, or the potential for risk, is always present across the full spectrum of operations. Risk management must take place at all levels of the chain of command during each phase of every operation; it is an integral part of planning. The HBCT commander, battalion commanders, staffs, company commanders, and all Soldiers must know how to use risk management, coupled with fratricide avoidance measures, to ensure the battalion executes the mission in the safest possible environment within mission constraints. (For additional information on risk management, refer to FM 100-14.)

SECTION I – RISK MANAGEMENT

D-1. Risk management is the process of identifying and controlling hazards to conserve combat power and resources. Leaders (to include the staff) must always remember that the effectiveness of the process depends on their understanding of the situation. They should never approach risk management with one-size fits all solutions to the risks their unit faces. They must consider the essential tactical and operational factors that make each situation unique. There are five steps of the risk management process: identify hazards, assess hazards to determine risk, develop controls and make risk decisions, implement controls and supervise and evaluate. This five-step process should also be integrated into the military decision-making process. See Table D-1 for risk management steps correlated to MDMP tasks.

Table D-1, Risk Management Steps Correlated with MDMP Tasks.

	<i>Risk Management Steps</i>				
Military Decision-Making Process	Step 1 Identify Hazards	Step 2 Assess Hazards	Step 3 Develop Controls and Make Risk Decisions	Step 4 Implement Controls	Step 5 Supervise and Evaluate
Mission Receipt	X				
Mission Analysis	X	X			
COA Development	X	X	X		

Table D-1, Risk Management Steps Correlated with MDMP Tasks.

	<i>Risk Management Steps</i>				
COA Analysis	X	X	X		
COA Comparison			X		
COA Approval			X		
Orders Production				X	
Rehearsal ¹	X	X	X	X	X
Execution and Assessment ¹	X	X	X	X	X
¹ All boxes are marked to emphasize the continued use of the risk management process throughout the mission.					

STEP 1: IDENTIFY HAZARDS

D-2. A hazard is a source of danger. It is any existing or potential condition that could result in injury, illness, or death of personnel; damage to or loss of equipment and property; or some other form of mission degradation. Hazards arise in both tactical and training operations. Leaders must identify the hazards associated with all aspects and phases of the mission, paying particular attention to the factors of mission, enemy, terrain and weather, troops and support available, time available, and civil considerations (METT-TC). Risk management must never be an afterthought; leaders must begin the process during military decision-making process (MDMP) (troop leading procedures for company and below) and continue it throughout the operation. Table D-2 lists possible sources of risk the battalion might face during a typical tactical operation. The list is organized according to the factors of METT-TC.

Table D-2, Examples of Potential Hazard

SOURCES OF BATTLEFIELD RISK
<p>MISSION</p> <p>Duration of the operation.</p> <p>Complexity or clarity of the plan. (Is the plan well developed and easily understood?)</p> <p>Proximity and number of maneuvering units.</p>
<p>ENEMY</p> <p>Knowledge of the enemy situation.</p> <p>Enemy capabilities.</p> <p>Availability of time and resources to conduct reconnaissance.</p>
<p>TERRAIN AND WEATHER</p> <p>Visibility conditions, including light, dust, fog, and smoke.</p> <p>Precipitation and its effects on mobility.</p> <p>Extreme heat or cold.</p> <p>Additional natural hazards (broken ground, steep inclines, and water obstacles).</p>
<p>TROOPS and SUPPORT AVAILABLE</p> <p>Equipment status.</p> <p>Morale.</p> <p>Experience units conducting the operation have working together.</p> <p>Soldier and leader proficiency.</p> <p>Soldier and leader rest situation.</p> <p>Degree of acclimatization to environment.</p> <p>Impact of new leaders and crewmembers.</p>
<p>TIME AVAILABLE</p> <p>Time available for planning and rehearsals.</p> <p>Time available to conduct the mission.</p>
<p>CIVIL CONSIDERATIONS</p> <p>Applicable ROE and ROI.</p> <p>Operations involving potential contact with civilians (such as NEO, refugee or disaster assistance, stability operations, support operations, or counterterrorism).</p> <p>Potential for media contacts or inquiries.</p>

STEP 2: ASSESS HAZARDS TO DETERMINE RISKS

D-3. Hazard assessment is the process of determining the direct impact of each hazard on an operation (in the form of hazardous incidents). Use the following steps.

- Determine which hazards can be eliminated or avoided.
- Assess each hazard that cannot be eliminated or avoided to determine the probability that the hazard will occur.
- Assess the severity of hazards that cannot be eliminated or avoided. Severity, defined as the result or outcome of a hazardous incident, is expressed by the degree of injury or illness (including death), loss of or damage to equipment or property, environmental damage, or other mission-impairing factors (such as unfavorable publicity or loss of combat power).

- Taking into account both the probability and severity of a hazard, determine the associated risk level (extremely high, high, moderate, or low). Table D-3 summarizes the four risk levels.
- Based on the factors of hazard assessment (probability, severity, and risk level, as well as the operational factors unique to the situation), complete risk management worksheet. (Figure D-1 shows an example of a completed risk management worksheet.)

Table D-3, Risk Levels and Impact on Mission Execution

RISK LEVEL	MISSION EFFECTS
Extremely high (E)	Mission failure if hazardous incidents occur in execution.
High (H)	Significantly degraded mission capabilities in terms of required mission standards. Not accomplishing all parts of the mission or not completing the mission to standard (if hazards occur during mission).
Moderate (M)	Expected degraded mission capabilities in terms of required mission standards. Reduced mission capability (if hazards occur during the mission).
Low (L)	Expected losses have little or no impact on mission success.

A. Mission or Task: Conduct a deliberate attack		B. Date/Time Group Begin: 010035R May XX End: 010600R May XX		C. Date Prepared: 28 April XX	
D. Prepared By: (Rank, Last Name, Duty Position) CPT Smith, Cdr					
E. Task	F. Identify Hazard	G. Assess Hazard	H. Develop Controls	I. Determine Residual Risk	J. Implement Controls (How To)
Conduct obstacle breaching operations	Obstacles	High (H)	Develop and use obstacle reduction plan	Low (L)	Unit TSOP, OPORD, training handbook
	Inexperienced soldiers	High (H)	Additional training and supervision	Moderate (M)	Rehearsals, additional training
	Operating under limited visibility	Moderate (M)	Use NVGs, use IR markers on vehicles	Low (L)	Unit TSOP, OPORD
	Steep cliffs	High (H)	Rehearse using climbing ropes	Moderate (M)	FM 3-97.6, Mountain Operations; FM 3-97.61, Military Mountaineering
	Insufficient planning time	High (H)	Plan and prepare concurrently	Moderate (M)	OPORD, troop-leading procedures
K. Determine overall mission/task risk level/after controls are implemented (circle one)					
<p style="text-align: center;"> LOW (L) <u>MODERATE (M)</u> HIGH (H) EXTREMELY HIGH (E) </p>					

Figure D-1, Example of Completed Risk Management Worksheet

STEP 3: DEVELOP CONTROLS AND MAKE RISK DECISIONS

D-4. Step 3 consists of two subsets: develop controls and make risk decisions. This step is done during the course of action (COA) development, COA analysis, COA comparison, and COA approval of the MDMP.

- **Develop Controls.** Controls are the procedures and considerations the unit uses to eliminate hazards or reduce their risk. After assessing each hazard, develop one or more controls that will either eliminate the hazard or reduce the risk (probability, severity, or both) of potential hazardous incidents. When developing controls, consider the reason for the hazard, not just the hazard itself.
- **Make Risk Decisions.** A key element in the process of making a risk decision is determining whether accepting the risk is justified or, conversely, is unnecessary. The decision-maker must compare and balance the risk against mission expectations, then decide if the controls are sufficient and acceptable and whether to accept the resulting residual risk. If the risk is determined unnecessary, the decision-maker directs the development of additional controls or alternative controls; as another option, he can modify, change, or reject the selected COA for the operation.

STEP 4: IMPLEMENT CONTROLS

D-5. Implementing controls is the most important part of the risk management process. It is the chain of command's contribution to the safety of the unit. Implementing controls includes coordination and communication with appropriate superior, adjacent, and subordinate units and with individuals executing the mission. The commander must ensure that specific

controls are integrated into operations plan (OPLAN), operations order (OPORD), standard operating procedure (SOP), and rehearsals. The critical check for this step is to ensure that controls are converted into clear, simple execution orders understood by all levels. If the leaders have conducted a thoughtful risk assessment, the controls will be easy to implement, enforce, and follow. Examples of risk management controls include the following:

- Thoroughly brief all aspects of the mission, including related hazards and controls, and ensure that subordinates know the plan.
- Allow adequate time for rehearsals at all levels.
- Drink plenty of water, eat well, and get as much sleep as possible (at least 4 hours in any 24-hour period).
- Enforce movement safety procedures.
- Establish recognizable visual signals and markers to distinguish maneuvering units.
- Enforce the use of ground guides in assembly areas and on dangerous terrain. Limit single-vehicle movement.
- Establish SOPs for the integration of new personnel.

STEP 5: SUPERVISE AND EVALUATE

D-6. During mission execution, leaders must ensure their subordinates properly understand and execute risk management controls. Leaders must continuously evaluate the unit's effectiveness in managing risks to gain insight into areas that need improvement.

D-7. **Supervision.** Leadership and unit discipline are the keys to ensuring implementation of effective risk management controls. All leaders are responsible for supervising mission rehearsals and execution to ensure standards and controls are enforced. In particular, NCOs must enforce established safety policies as well as controls developed for a specific operation or task. Techniques include spot checks, inspections, situation reports (SITREPs), confirmation briefs, and supervision. During mission execution, leaders must continuously monitor risk management controls to determine whether they are effective and modify them as necessary. Leaders must also anticipate, identify, and assess new hazards. They ensure that imminent danger issues are addressed on the spot and that ongoing planning and execution reflect changes in hazard conditions.

D-8. **Evaluation.** Whenever possible, the risk management process should also include an after-action review to assess unit performance in identifying risks and preventing hazardous situations. Leaders should then incorporate lessons learned from the process into unit SOPs and plans for future missions.

D-9. **Commander's guidance.** The HBCCT commander gives the battalion commanders and staff direction, sets priorities, and establishes the command climate (values, attitudes, and beliefs). Successful preservation of combat power requires him to imbed risk management into individual behavior. To fulfill this commitment, the commander must exercise creative leadership, innovative planning, and careful management. Most importantly, he must demonstrate support for the risk management process. The commander and others in the chain of command can establish a command climate favorable to risk management integration by:

- Demonstrating consistent and sustained risk management behavior through leading by example and stressing active participation throughout the risk management process.
- Providing adequate resources for risk management. Every leader is responsible for obtaining the assets necessary to mitigate risk and for providing them to subordinate leaders.

- Understanding their own and their Soldier's limitations, as well as their unit's capabilities. Allowing subordinates to make mistakes and learn from them.
- Preventing a zero defects mindset from creeping into the unit's culture.
- Demonstrating full confidence in subordinates' mastery of their trades and their ability to execute a chosen COA.
- Keeping subordinates informed.
- Listening to subordinates.

D-10. **Leader Responsibility.** For the commander, subordinate leaders, and individual Soldiers alike, responsibilities in managing risk include the following: Make informed risk decisions; establish and then clearly communicate risk decision criteria and guidance. Establish clear, feasible risk management policies and goals. Train the risk management process. Ensure that subordinates understand the who, what, when, where, and why of managing risk and how these factors apply to their situation and assigned responsibilities. Accurately evaluate the unit's effectiveness, as well as subordinates' execution of risk controls during the mission. Inform higher headquarters when risk levels exceed established limits.

SECTION II – FRATRICIDE AVOIDANCE

D-11. Fratricide avoidance is a complex problem defying simple solutions. Fratricide can be defined broadly as employing friendly weapons and munitions with the intent of killing the enemy or destroying his equipment or facilities but resulting in unforeseen and unintentional death or injury to friendly personnel. This section focuses on actions leaders can take to reduce the risk and occurrence of fratricide using current resources.

MAGNITUDE OF THE PROBLEM

D-12. The modern battlefield is more lethal than any in history. The tempo of operations is rapid, and the nonlinear nature of the battlefield creates command and control challenges for unit leaders. The accuracy and lethality of modern weapons make it possible to engage and destroy targets at extended ranges. However, the ability of US forces to acquire targets using thermal imagery and other sophisticated sighting systems exceeds its capability to identify these targets accurately. Consequently, friendly elements can be engaged unintentionally and destroyed in a matter of seconds. Added to this is battlefield obscuration, which becomes a critical consideration whenever thermal sights are the primary source of target identification. Rain, dust, fog, smoke, and snow degrade identification capability by reducing the intensity and clarity of thermal images. On the battlefield, positive visual identification cannot be the sole engagement criteria at ranges beyond 1,000 meters. An accurate common operating picture (COP) is essential and must be maintained throughout any operation. Use of digital C2 systems for a better situational understanding can help, but they will not entirely alleviate the problem.

RISK IDENTIFICATION AND PREVENTIVE MEASURES

D-13. Reduction of fratricide risk begins during the planning phase of an operation and continues through preparation and execution. Risk identification must be conducted at all levels during each phase. The results must be clearly communicated up and down the chain of command so risk assessment can begin. The following paragraphs cover considerations influencing risk identification and focus on measures the leader can implement to make the identification process more effective and help prevent friendly fire incidents from occurring.

D-14. Leaders must consciously identify specific fratricide risk for any mission. Using this structured approach, commanders can predict the most likely causes of fratricide and take action to protect their Soldiers. Whether used for an actual combat operations or a training

event, this thought process complements the troop-leading procedures and analysis of METT-TC factors used in the military decision-making process.

D-15. The fratricide risk assessment matrix (Figure D-2) shows an approach to assess the relative risk of fratricide for combat maneuver. To assign a risk value to each direct cause of fratricide, pair the most critical METT-TC contributing factors associated with each cause. For each primary cause, favorable conditions lead to a lesser risk value, found in the cell on the left side of the corresponding sub-matrix. As a contributing factor becomes unfavorable, risk increases. The worst precondition for each kind of fratricide is represented by the risk value in the cell on the right side of the sub-matrix. Figure D-2 is an example of a fratricide risk assessment matrix that should be used in assessing every mission.

SITUATION AWARENESS				BATTLEFIELD HAZARDS				RATING	
FIRE & MANEUVER CONTROL				USE OF ADD'L DUAL-PRODUCING MUNITIONS				RATING	
CLARITY OF THE SITUATION				KNOWLEDGE OF EXISTING HAZARDS					
DENSITY OF FORCES	Maintain Force Separation	Forces Converge	Forces Intermingle	Extensive	Partial	Extremely Limited			
	Heavy	5	7	9	3	4	5		
	Normal	3	5	7	2	3	4		
Sparse	1	3	5	1	2	3			
FIRE DISTRIBUTION PLAN				POSITIVE IDENTIFICATION				RATING	
PREP TIME REHEARSALS DISSEMINATION				COMBAT IDENTIFICATION				RATING	
COLLECTIVE PROFICIENCY				ENGAGEMENT RANGES & FIELDS OF FIRE					
Brief Back Rehearsals	Strong SOPs Hab Attachmnts	Mod Trained or Fam Task Org	Unseasoned & Unfam Task Org	IC Unlikely	Practiced	Expedient Some-what Effective	Marginally Effective		
	Reduced Force Rehearsals	3	4		5	Very Effective	6		7
	Full Force Rehearsals	2	3		4	Marginal ID	2		4
Optimal ID	1	2	5						
LAND NAVIGATION				DISCIPLINE				RATING	
EXTENT OF RECON & IPB				FIRE CONTROL DISCIPLINE				RATING	
VISIBILITY & NAVIGATION DIFFICULTY				COMMAND & CONTROL OR SUPERVISION					
Minimal	Ample Controls High Competence	Confidence With Much Effort	Very Difficult Low Confidence	Ad Hoc-Improvised	Complete & Effective	Complete Some-what Effective	Expedient Untested		
	Limited	3	4		5	4	6		7
	Extensive	2	3		4	Attached	2		4
Organic	1	2	3						
FIRE CONTROL & BATTLE TRACKING				TROOPS				RATING	
CLEARANCE OF FIRES				SOLDIER & LEADER PREPAREDNESS				RATING	
COMMO & CROSSTALK				MISSION-RELATED EXPERIENCE & COMPETENCE					
Passive Only	Reliable Redundant	Adequate Means	Unreliable No Backups	Unseasoned	SOLDIER & LEADER FATIGUE				
	Positive	1	3		5	Rested Low Exertion	Mod Rest & Exertion		Limited Rest High Exertion
	Moderate Experienced	3	5		7	5	7		9
Highly Experienced	1	3	5						
				LOW RISK CAUTION HIGH RISK TOTAL					
				8 to 20 21 to 30 >30					

Figure D-2, Sample Format of Fratricide Risk Assessment Matrix

PLANNING PHASE

D-16. A thoroughly developed, clearly communicated, and completely understood plan helps minimize fratricide risk. The following factors affect the potential for fratricide in a given operation:

- Clarity of the enemy situation.
- Clarity of the friendly situation.
- Clarity of the Commander's Intent.
- Complexity of the operation.
- Planning time available at each level.

D-17. Graphics are a basic tool commanders at all levels use to clarify their intent, add precision to their concept, and communicate their plan to subordinates. Graphics can be a very useful tool in reducing the risk of fratricide. Each commander must understand the definitions and purposes of operational graphics and the techniques of their employment. (See FM 1-02 for the definitions of each type of graphic control measure.)

PREPARATION PHASE

D-18. Confirmation briefs and rehearsals are primary tools for identifying and reducing fratricide risk during the preparation phase. The following are considerations for their use:

- Confirmation briefs and rehearsals ensure subordinates know where fratricide risks exist and what to do to reduce or eliminate them.
- Briefbacks ensure subordinates understand the commander's intent. They often highlight areas of confusion or complexity or planning errors.
- The type of rehearsal conducted determines the types of risks identified.
- Rehearsals should extend to all levels of command and involve all key players.

D-19. The following factors may reveal fratricide risks during rehearsals:

- Number and type of rehearsals.
- Training and proficiency levels of units and individuals.
- The habitual relationships between units conducting the operation.
- The physical readiness (endurance) of the troops conducting the operation.

EXECUTION PHASE

D-20. During execution, in-stride risk assessment and reaction can overcome unforeseen fratricide risk situations. The following are factors to consider when assessing fratricide risks:

- Intervisibility between adjacent units.
- Amount of battlefield obscuration.
- Ability or inability to identify targets positively.
- Similarities and differences in equipment, vehicles, and uniforms between friendly and enemy forces.
- Vehicle density on the battlefield.
- The tempo of the battle.
- Maintaining an understanding of the COP at all levels and at all times is another key to fratricide reduction as an operation progresses. Units develop and employ effective techniques and SOPs to aid leaders and Soldiers in this process, including:
 - Monitoring the next higher radio net.
 - Radio/Force, XXI Battle Command for Brigade and Below (FBCB2), Blue Force Tracker cross-talk between units.
 - COP updates.
 - Accurate position reporting and navigation.
 - Training, use, and exchange of liaison officers.

FRATRICIDE REDUCTION MEASURES

D-21. The following measures provide a guide to actions that can reduce fratricide risk. Use of these measures is not required, nor are they intended to restrict initiative. Apply them as appropriate based on the specific situation and METT-TC factors.

- Identify and assess potential fratricide risks in the estimate of the situation. Express these risks in the OPOD or fragmentary order (FRAGO).

- Maintain understanding of the current situation, focusing on areas such as current intelligence, unit locations and dispositions, denial areas (minefields and scatterable munitions), contaminated areas such as improved conventional munitions (ICM) and CBRN, SITREPs, and METT-TC factors.
- Ensure positive target identification. Review vehicle and weapon identification cards. Know at what ranges and under what conditions positive identification of friendly vehicles and weapons is possible.
- Establish a command climate that stresses fratricide prevention. Enforce fratricide prevention measures and emphasize the use of doctrinally sound tactics, techniques, and procedures. Ensure constant supervision in the execution of orders and the performance of all tasks and missions to standard.
- Recognize the signs of battlefield stress. Maintain unit cohesion by taking quick, effective action to alleviate it.
- Conduct individual, leader, and collective (unit) training covering fratricide awareness, target identification and recognition, and fire discipline.
- Develop a simple, decisive plan.
- Give complete and concise mission orders.
- Use SOPs that are consistent with doctrine to simplify mission orders. Periodically review and change SOPs as needed.
- Strive for maximum planning time for you and your subordinates.
- Use common language and vocabulary and doctrinally correct standard terminology and control measures, such as fire support coordination line, restrictive fire area and restrictive fire line.
- Ensure thorough coordination is conducted.
- Plan for and establish effective communications (to include visual).
- Plan for collocation of command posts whenever it is appropriate to the mission, such as during a passage of lines.
- Designate and employ LNOs as appropriate.
- Ensure rules of engagement are clear.
- Include fratricide risk as a key factor in terrain analysis (observation, avenues of approach, key terrain, observation and fields of fire, cover and concealment [OAKOC]).
- Conduct rehearsals whenever the situation allows time to do so.
- Be in the right place at the right time. Use position location and navigation devices (GPS and position navigation (POSNAV)); know your location and the locations of adjacent units (left, right, leading, and follow-on) and the location of LOGPACs and other tactical resupply convoys through use of FBCB2, MTS and other means. Synchronize all tactical movement by all BOS elements.
- Plan and brief OPSEC, especially when utilizing dismounted operations (challenge and password, sign and countersign).
- Include discussion of fratricide incidents in after-action reports.
- Ensure fire commands are accurate, concise, and clearly stated. Make it mandatory for Soldiers to ask for clarification of any portion of the fire command that they do not completely understand.
- Stress the importance of the chain of command in the fire control process; ensure Soldiers get in the habit of obtaining target confirmation and permission to fire from their leaders before engaging targets they assume are enemy elements.
- Know who will be in and around the AO.

Appendix E

Environmental Considerations

This appendix provides guidance on how to attain balance between mission accomplishment and protection of the natural and physical environment. AR 200-1 and AR 200-2 provide information on Army environmental programs. FM 3-100.4 lists items of interest in the preparation for daily operations, training, and combat operations while respecting the natural and physical environment.

SECTION I – ENVIRONMENTAL RESPONSIBILITIES

COMMANDER

E-1. Commanders must instill an environmental ethic in their subordinate leaders, staffs, and Soldiers. They train and counsel subordinate leaders to monitor potential environmental hazards to the environment and enforce compliance with laws and regulations.

E-2. Logistics commanders have unique environmental concerns and responsibilities. They supervise maintenance activities and chemical, biological, radiological and nuclear (CBRN) and Class III and V operations. Table E-1 shows points of contact available to assist commanders in environmental matters.

Table E-1, Environmental Assistance

<i>TOPIC</i>	<i>POINT OF CONTACT</i>
Air Pollution	Environmental Management Office
Audits/environmental compliance assessment system (ECAS)	Environmental Management Office
Archaeological & Historic Sites	Environmental Management Office and Range Control (DPTM)
Clean and Safe Water	Environmental Management Office
Command Environmental Issues	Chain-of-Command/ Environmental Quality Control Committee/Environmental Compliance Review Board
Environmental Training	G3/S-3, Environmental Management Office
Hazardous Communications (HAZCOM) (Gas) Training	G3/S-3, Safety Office, Fire Department
Hazardous Materials (HM)	G4/S-4, Directorate of Logistics, Safety Office, Fire Department
HW	G4/S-4, Environmental Management Office, Defense Reutilization and Marketing Office
Laws and Regulations	G1/S-1, Environmental Management Office, JAG/Legal Office
Noise Pollution	Environmental Management Office, Range Control (DPTM)
Range Clearances/Restrictions	Range Control (DPTM)
Recycling Program	G4/S-4, Environmental Management Office (EMO)
Standard Operating Procedures	G3/S-3 and G4/S-4, EMO
Spill Reporting	G3/S-3, and G4/S-4, EMO, Fire Department

Table E-1, Environmental Assistance

TOPIC	POINT OF CONTACT
Threatened/Endangered Species	EMO (Fish and Wildlife)
Water Pollution	EMO, G3/S-3, and G4/S-4
Wetland Protection	EMO, Range Control (DPTM)
Wildlife Management	EMO (Fish and Wildlife), Range Control, Provost Marshal Office

STAFF

E-3. Primary staff officers and NCOs integrate environmental considerations into the military decision-making process (MDMP) in operations and training. At battalion and above level, the commander appoints an assistant staff officer to serve as the environmental compliance officer (ECO) for the unit. Nevertheless, all staff officers must integrate environmental considerations into their activities. The support operations officer, S3, S4 and special project officer have the major responsibilities.

BRIGADE/BATTALION SURGEON

E-4. The surgeon monitors potential environmental hazards that could affect the health of Soldiers in the command. When deployed, monitoring could include regional health matters such as water quality, air pollution, and environmental, endemic, and epidemic diseases. He monitors environmental considerations—such as smoke, chemical, and biological weapons—that the enemy could impose on the friendly force. He monitors field sanitation to ensure elimination of unnecessary environmental disruption and danger to Soldiers from unsanitary conditions.

CBRN OFFICER/NONCOMMISSIONED OFFICER

E-5. The chemical officer/NCO recommends the use of, and requirements for chemical protection assets, CBRN decontamination and CBRN defense, and smoke operations. With the surgeon, the chemical officer advises the commander on possible CBRN hazards such as low-level radiation and toxic industrial material.

STAFF MAINTENANCE OFFICER/ NONCOMMISSIONED OFFICER

E-6. The SPO's maintenance officers/NCOs plan and supervise maintenance and repair activities within the battalion. These activities routinely use hazardous material (HM) and generate hazardous waste (HW). The maintenance officer/NCO ensures safe use, storage, and disposal of these materials. Activities may involve operating temporary storage areas for used oils, contaminated fuels, paint residues, spill cleanup residues, and solvents. Because maintenance personnel work with hazardous chemicals, the maintenance officer/NCO must ensure that all personnel comply with safety requirements.

ALL MAINTENANCE OFFICERS/ NONCOMMISSIONED OFFICERS

E-7. Maintenance officers/NCOs plan and supervise repair activities within the battalion and as appropriate throughout the brigade. These leaders at all levels in the maintenance operations must enforce proper use of HM and disposal of HW, while ensuring safe temporary storage of the same. Proper disposal and recycling of oil, coupled with the use of drip pans, ensure compliance with applicable regulations.

CLASS III/V PLATOON LEADER/SERGEANT

E-8. Class III and V activities can generate substantial HW unless the III/V platoon leader/NCO enforces the use of tarps under fuel drums, drip pans near nozzles, and sand bags under hose joints. The refueling activity itself has many potential environmental, safety, and health hazards requiring grounding, proper protective clothing, gloves, eyewear, and helmets. Proper fuel-truck operations and manned emergency shut-off valves help prevent major fuel spills. Waste fuel and other petroleum, oil, and lubricants (POL) must be stored and disposed of properly. Fuel testing occurs periodically to ensure that fuel has not been contaminated with water; daily with aviation fuel. Leaders ensure that safeguards exist to prevent fuel spills during fuel recirculation to filter out water/impurities.

ENVIRONMENTAL COMPLIANCE OFFICER

E-9. Each unit, down to company level, appoints environmental compliance officer (ECO). AR 200-1 directs all unit commanders to “appoint and train ECOs at appropriate levels to ensure compliance actions take place.” In company-sized units, this generally translates into an extra duty. The appointed person advises the commander on environmental compliance matters and coordinates with the battalion ECO to clarify requirements or obtain assistance. The battalion ECO, in turn, coordinates with the supporting installation environmental staff.

E-10. The ECO accomplishes environmental compliance requirements on behalf of the commander. The ECO does the following:

- Advises the unit on environmental compliance during training, operations, and logistics functions.
- Serves as the commander’s environmental eyes and ears.
- Coordinates between the environmental staffs of the unit and higher headquarters and as appropriate the installation headquarters.
- Manages information concerning the unit’s environmental training and certification requirements.
- Performs unit environmental self-assessment inspections.
- Performs environmental risk assessments.

Subordinate Leaders

E-11. The role of leaders in environmental stewardship centers on building an environmental ethic in their Soldiers by training, operating, and maintaining/sustaining in an environmentally responsible manner. Leaders counsel subordinates, lead by example, and enforce compliance by holding Soldiers accountable. Leaders do the following:

- Communicate the Army environmental-friendly ethic while training Soldiers to operate properly.
- Develop and sustain a positive and proactive commitment to environmental protection.
- Identify environmental risks associated with individual, collective, and mission essential task list (METL) performance.
- Plan and conduct actions and training that sustain and protect the environment and integrate environmental considerations into daily unit activities.
- Analyze the influence of environmental factors on mission accomplishment.
- Train peers and subordinates to identify the effects of plans, actions, and missions on the environment.
- Counsel Soldiers on the importance of protecting the environment and possible consequences of noncompliance with environmental laws and regulations.

- Ensure that Soldiers are familiar with the unit's standard operating procedure (SOP), and supervise their compliance with laws and regulations.
- Incorporate environmental considerations into after-action reviews (AARs).
- Understand the linkage between environmental considerations and their associated effect on safety, force protection, and force health protection.

Soldiers

E-12. Soldiers have the inherent professional and personal responsibility to understand and support the Army's environmental program. They must do the following:

- Comply with environmental requirements in unit and installation SOPs.
- Maintain environmental understanding throughout daily activities.
- Provide recommendations to the chain of command on techniques that ensure compliance with environmental regulatory requirements.
- Identify the environmental risks associated with individual and team tasks.
- Support recycling programs.
- Report HM and HW spills immediately.
- Make sound environmental decisions based on guidance from the chain of command, training, and personal concepts of right and wrong.

SECTION II – PLANNING: INTEGRATING ENVIRONMENTAL CONSIDERATIONS

MILITARY DECISION-MAKING PROCESS (MDMP)

E-13. Commanders and staffs integrate environmental considerations into the MDMP and training plan process. The commander and staff should include environmental considerations in the MDMP. The commander and staff refer to the environmental appendix of the higher HQ order and gather maps, SOPs, FMs, host-nation agreements, and existing staff estimates, lessons learned, and AARs to assess potential environmental impact. Staff planners make a generic list of environmental factors that pertain to their staff area and integrate these considerations into the seven-step process during:

- **Receipt of Mission:** Gather resources to help restate the mission and include environmental information resources.
- **Mission Analysis:** During the mission-analysis process, the staff considers environmental impact as a factor.
- **Course-of-Action Development:** In stability operations and support operations, environmental factors have more effect than in combat; weigh environmental risk against mission requirements.
- **Course-of-Action Analysis:** Will a CL III/V location or Class III (package) products pollute fresh-water sources for friendly forces and civilians?
- **Course-of-Action Comparison:** When comparing most likely enemy and best friendly COAs, consider the likelihood that the enemy may pollute as a means of obscuring the battlefield or preventing friendly use of abandoned resources; this, in turn, may affect flight visibility, friendly and enemy force identification, and laser designation and range-finding.
- **Course-of-Action Approval:** When choosing the most likely friendly COAs, consider whether slight plan modification would reduce environmental impact without affecting the mission.

- **Orders Production:** Include environmental impacts and precautions in the OPORD's coordinating instructions of the execution paragraph or Annex F (Engineer), Appendix 2 (Environmental Considerations).

SECTION III – OPERATIONS: INTEGRATING ENVIRONMENTAL CONSIDERATIONS

ENVIRONMENTAL PROTECTION DURING MILITARY OPERATIONS

E-14. Protecting the physical and natural environment while conducting operations against a hostile force is seldom feasible. The spectrum of conflict or nature of the stability operations and support operations determines the viable environmental control measures. Units establish protective actions that minimize environmental impact while accomplishing the mission.

E-15. Rescue and noncombatant evacuation operations (NEOs), humanitarian assistance, firefighting, and overseas flight and logistical operations may impose unique environmental requirements and hazards. CALL Newsletter 99-9, *Integrating Military Environmental Protection*, provides insights on the emerging doctrine for base-camp operations that may include airfields. Operations, when possible, should avoid unnecessary effects on the environment of the host nation and should minimize collateral damage.

UNNECESSARY ENVIRONMENTAL IMPACTS

E-16. Unnecessary impacts include environmental damage that military necessity cannot justify. These acts are either wanton intentional acts or negligent unintentional acts. Examples of a wanton act could include dumping diesel into a river or depositing medical waste onto a farmer's. An example of a negligent act might include spilling changed oil from a drip pan onto the ground, because of hurried attempts to dispose of the oil properly.

ENVIRONMENTAL COLLATERAL DAMAGE

E-17. Environmental collateral damage results from military actions during armed conflict that unintentionally causes other environmental consequences. Damaging enemy targets—such as ammunition stockpiles or wastewater treatment plants—can release hazardous substances that cause unintended casualties long after the battlefield/AO is secured. This may result in health and logistical (water) problems that could jeopardize the health of noncombatants—including occupational peace enforcement and peacekeeping allied forces left behind. Such collateral damage increases rebuilding efforts and may leave noncombatants with negative feelings toward the United States and its allies.

E-18. Articles 54 and 55 of the Geneva Convention protect objects indispensable for the survival of the civilian population and natural environment, respectively. There are similar issues regarding destruction of ancient monuments, churches, and similar cultural sites.

RISK MANAGEMENT

E-19. Preparation is key to successful environmental understanding and protection in daily operations and training. Commanders (company and above) must designate an environmental compliance officer to be responsible for environmental education, SOP updates, environmental risk assessments, and incident reporting. Commanders and ECOs also must assess areas where unit activities are most likely to violate environmental compliance.

E-20. The commander or ECO can coordinate most matters by contacting the environmental management office (EMO), Chief of Range Division, and the military fire department. In

most cases, the EMO also includes the fish and wildlife officers and foresters, all located under the Directorate of Public Works (DPW). In cases where training is conducted overseas without corresponding U.S. organizations, units must coordinate with the host nation's equivalent of the above listed POCs. If there is no host-nation equivalent, training is conducted according to U.S. policies and regulations.

SUMMARY

E-21. Unit leaders use environmental risk assessments to estimate the potential effect of unit activities on the natural and physical environment. This process applies to routine activities, training, mobilization, or deployment. The environmental risk assessment allows leaders and their staffs to identify potential environmental problems. The process also allows unit leaders to identify and manage residual risk.

Appendix F

Continuous Operations

Logistics units often operate for extended periods of time in continuous operations. Continuous operations are combat operations that continue at the same high intensity level for extended periods. During continuous operations, leaders and Soldiers must think faster, make decisions more rapidly, and act more quickly than the enemy. Leaders must know the commander's intent. They must be able to act spontaneously and synchronously, even though the situation has changed and communications are disrupted. This continuous cycle of day and night operations and the associated stress of combat will cause degradation in performance over time. Reducing this impact on performance is a significant challenge for the command and control (C2) system.

EFFECTS OF CONTINUOUS OPERATIONS

F-1. Continuous operations force leaders and Soldiers to perform under adverse conditions that cause degradation in performance and may lead to combat stress. Figure F-1 depicts combat stress behaviors.

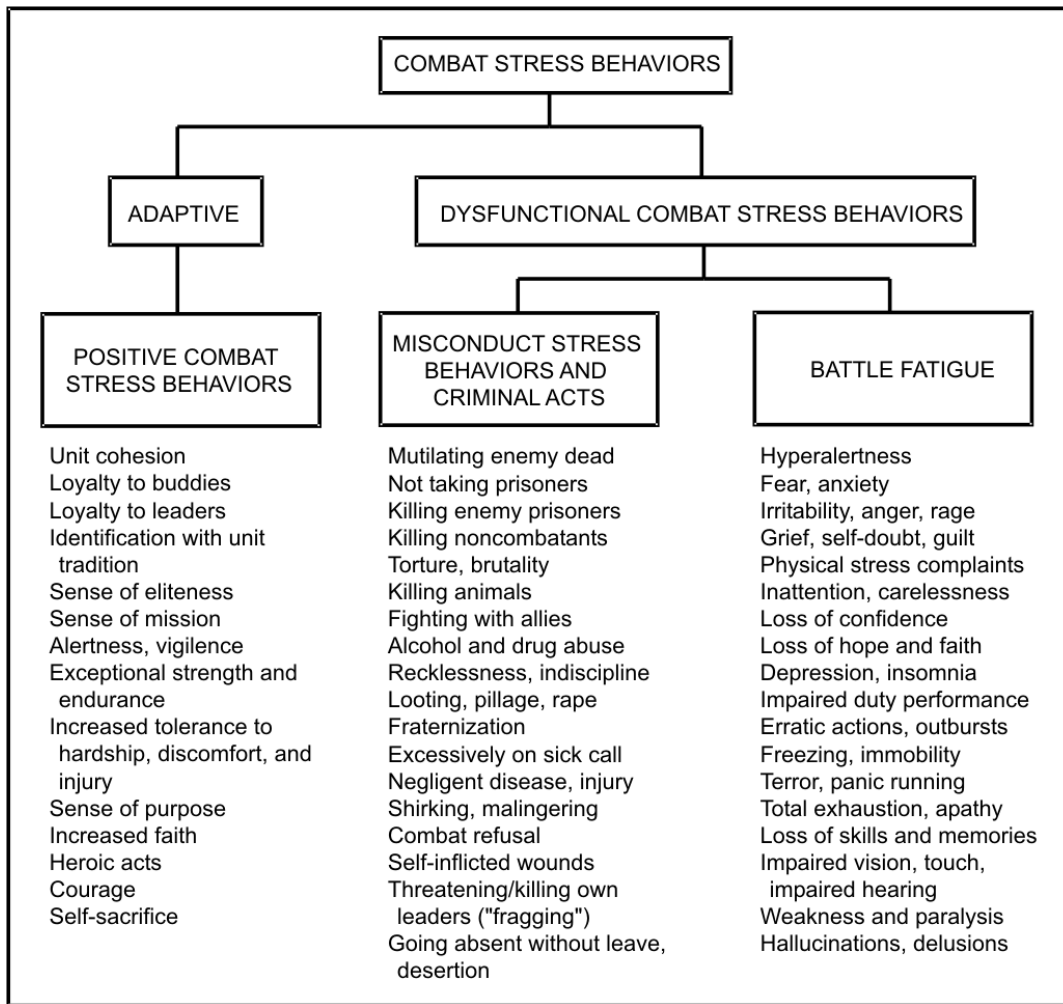


Figure F-1, Combat Stress Behaviors.

COMBAT STRESS CONTROL

F-2. Controlling combat stress is often the deciding factor between victory and defeat in all forms of human conflict. Stressors are a fact of combat and Soldiers must face them. It is controlled combat stress, when properly focused by training, unit cohesion, and leadership, which gives Soldiers the necessary alertness, strength, and endurance to accomplish their mission. Controlled combat stress can call forth stress reactions of loyalty, selflessness, and heroism. Conversely, uncontrolled combat stress causes erratic or harmful behavior that disrupts or interferes with accomplishment of the unit mission. Uncontrolled combat stress could impair mission performance and may bring disgrace, disaster, and defeat.

F-3. The art of war aims to impose so much stress on the enemy's Soldiers that they lose their will to fight. Both sides try to do this and at times accept severe stress themselves in order to inflict greater stress on the enemy. To win, combat stress must be controlled.

RESPONSIBILITIES FOR CONTROLLING COMBAT STRESS

F-4. Responsibility for combat stress control requires a continuous interaction that begins with every Soldier and his buddies. Combat stress control also includes unit combat lifesavers and medics. The interaction continues through the small unit leaders and extends up through the organizational leaders, both officers and NCOs, at all echelons.

Unit Cohesiveness Development

F-5. Rigorous, realistic training for war must go on continuously to assure unit readiness. Emphasis must be placed on establishing and maintaining cohesive units. Unit training and activities must emphasize development of Soldier skills. This development should focus on building trust and establishing effective communication throughout the unit.

Senior (Organizational) Leaders' Responsibilities

F-6. The chain of command ensures that the standards for military leadership are met. Senior leaders provide the necessary information and resources to the junior leaders to control combat stress and to make stress work for the US Army and against the enemy. The following are some suggestions for senior leadership considerations for combat stress control.

- Be competent, committed, courageous, candid, and caring.
- Plan to accomplish the mission with as few losses as possible.
- Set the policy and command climate for stress control, especially to build teams with high cohesion.
- Serve as an ethical role model.
- Make the bureaucracy work for the Soldiers.
- Assure resources to take care of the Soldiers.
- Plan for and conduct tough, realistic training to include live fire.
- Provide as much information as possible to the Soldiers.
- Assure that medical and mental health/combat operational stress control personnel are assigned and trained with their supported units.
- Plan for combat operational stress control in all operations.
- Provide junior leaders/NCOs with necessary guidance.
- Ensure risk assessments are conducted prior to all training and combat operations.
- Supervise the junior leaders/NCOs and reward their success.
- Be visible.
- Lead all stress control by good example.
- Maintain (through positive leadership and, when necessary, with disciplinary action) the high standards of the international law of land warfare.

Junior (Direct) Leaders' Responsibilities

F-7. Junior leaders, and especially the NCOs, have the crucial task of applying the principles of stress control day-by-day, hour-by-hour, and minute-by-minute. These responsibilities overlap with senior leaders responsibilities but include parts that are fundamentally sergeants business, supported by the officers. The following are junior leadership considerations for combat stress control.

- Be competent, committed, courageous, candid, and caring.
- Build cohesive teams; integrate new personnel quickly.
- Cross-train Soldiers wherever and whenever possible.
- Plan and conduct tough realistic training that replicates combat conditions.
- Take care of Soldiers (including leaders).

- Assure physical fitness, nutrition, hydration, adequate clothing and shelter, and preventive medicine (PVNTMED) measures.
- Make and enforce sleep plans.
- Keep accurate information flow down to the lowest level and back up again as the best way to dispel rumors.
- Encourage sharing of resources and feelings.
- Conduct after-action debriefings routinely.
- Maintain (through positive leadership and, when necessary, with disciplinary action) the high standards of the international law of land warfare.
- Recommend exemplary Soldiers for awards and decorations.
- Recognize excess stress early and give immediate support.
- Keep those stressed Soldiers who can still perform their duties in the unit and provide extra support and encourage them back to full effectiveness.
- Send those stressed Soldiers who cannot get needed rest in their small unit back to a supporting element for brief sleep, food, hygiene, and limited duty, to return in 1 to 2 days.
- Refer temporarily unmanageable stress/neuropsychiatry cases through channels for medical evacuation and treatment.
- Welcome recovered battle fatigue casualties back and give them meaningful work and responsibilities.

DEGRADATION DUE TO LACK OF SLEEP

F-8. Adequate sleep can be the deciding factor between victory and defeat. Commanders should consider sleep an item of logistic re-supply—like water, food, fuel, and ammunition—crucial to sustaining mission performance. As continuous wakefulness is extended beyond the normal 16 hours per day, reaction time slows, ability to focus attention is impaired, capacity for handling stress is reduced, and the ability to recognize and solve problems is diminished. In some respects, the effects of sleep loss on mental abilities are like those of alcohol—and like an intoxicated person, the sleepy Soldier has little self-awareness of the extent to which he is impaired.

POSSIBLE INDICATORS OF SLEEP DEPRIVATION AND FATIGUE

F-9. Commanders should be familiar with signs of sleep loss and fatigue. Table F-1 shows some possible indicators. However, it should be noted that these signs could be subtle, or even absent, in some sleepy Soldiers. So, although the presence of some of these indicators suggests possible sleep loss and fatigue, their absence does not guarantee that a particular Soldier is well rested, alert, and capable.

Table F-1, Indicators of Sleep Deprivation and Fatigue

<i>DIFFICULTY PROCESSING INFORMATION</i>	Slow comprehension and perception. Difficulty assessing complex situations. Slow to understand information.
<i>IMPAIRED ATTENTION SPAN</i>	Decreased vigilance. Difficulty completing routines. Reduced attention span. Short-term memory loss. Inability to concentrate.
<i>COMMUNICATION PROBLEMS</i>	Difficulty carrying on a conversation. Forgetfulness.
<i>MOOD CHANGES</i>	Less energetic, less alert, and less cheerful. Loss of interest in surroundings. Depressed or apathetic mood; more irritable.
<i>PHYSICAL CHANGES</i>	Drooping eyelids. Vacant stare. Bloodshot eyes.

REDUCING THE IMPACT OF CONTINUOUS OPERATIONS

F-10. Get adequate sleep, and encourage others to do the same. In the operational environment, make the best choices available in terms of work-rest schedules. This includes locating sleep areas away from ongoing activities and minimizing noise and light exposure. Because the operational environment is unpredictable, be flexible and frequently reassess/update work/rest schedules.

- If possible, set stable shifts that allow the Soldiers to sleep and awaken at the same times each day. This avoids jet lag-like symptoms.
- Shifts of 12 hours on and 12 hours off have the advantage of simplicity and leave enough time for Soldiers to engage in other activities (eating, bathing, letter-writing, etc.) without sacrificing sleep.
- Normal performance is only maintained with shifts that allow 6 to 8 hours of continuous sleep on a regular basis. Note that daytime sleep is less efficient than nighttime sleep, so more time in bed is needed during the daytime.
- With 8 hours of sleep per day, performance will be sustained indefinitely.
- With less than 7 but more than 4 hours of sleep per day, performance will degrade but stabilize at a lower level.
- With less than 4 hours of sleep per day, performance will continue to degrade.
- Nap early and nap often. Soldiers who are averaging 7 or fewer hours of sleep per night should take every opportunity to nap—even short catnaps have significant beneficial effects.
- It is possible to bank sleep, so fill up the sleep tank before an operation.
- Sleepy Soldiers require extra time to perform tasks; need simple and precise orders; and require extra safeguards to ensure accuracy of work.
- High levels of motivation, will, and effort do not reverse the effects of sleep loss. The deficits in alertness and mental performance that occur during sleep loss are due to physical changes in brain functioning.
- Although increased stimulation (noise, physical activity, conversation) can have an alerting effect in sleepy Soldiers, these effects are mild and short-lived. The Soldier who is trying these strategies is already impaired.
- Sleep loss degrades the ability to self-assess one's own alertness and performance.

- Even when highly aroused and excited, sleep deprived Soldiers will perform poorly.
- Caffeine (200-300 mg—the equivalent of 2-3 cups of coffee) taken every 3-4 hours can temporarily enhance alertness and performance when sleep loss is unavoidable.
- Caffeine is most effective for Soldiers who are low- or non-users of caffeine at other times (i.e., who don't habitually drink coffee, tea, or other caffeinated beverages).
- There is no substitute for sleep. Caffeine and other stimulants do not replace sleep; they temporarily sustain performance and delay sleep. The only way to fully reverse all of the effects of sleep loss is to obtain recovery sleep.

DELIBERATELY LIMITING SLEEP

F-11. Soldiers and their leaders sometimes regard themselves as being invulnerable to fatigue and the effects of sleep loss. Deliberately limiting your own sleep is counterproductive—comparable to deliberately limiting your own water intake.

Appendix G

Field Processing Detainees

PURPOSE

G-1. This appendix provides guidance on field processing detainees.

GENERAL

G-2. There will be times when U.S forces capture and detain detainees or other individuals who may pose a threat to US personnel or security.

G-3. Detainee is a term used to refer to any person captured or otherwise detained by an armed force (JP 1-02, AR 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.

G-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.

G-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

G-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

G-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).

G-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.

G-9. Capturing units field process detainees using the method outlined in Table G-1.

Table G-1. 5 Ss and T Method of Detainee Field Processing

Action	Description
Search	<p>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.</p> <p>Captives may keep the following items found in a search:</p> <ul style="list-style-type: none"> • 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. <p>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 or any other field expedient substitute.</p>
Silence	<p>Silence the detainees by directing them not to talk. Gags may be employed if necessary (ensure detainee can breath after application).</p>
Segregate	<p>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.</p>

Table G-1. 5 Ss and T Method of Detainee Field Processing

Action	Description
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	<p>Use DD Form 2745 (<i>Enemy Prisoner of War Capture Tag</i>) or a field expedient alternative and include the following information:</p> <ul style="list-style-type: none"> • 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 or an appropriate field expedient, to document this information. • List all documents and items of significance found on the detainee. <p>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.</p>

RESOURCES FOR FIELD PROCESSING OF DETAINEES

G-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 G-3), DA Form 2823 (*Sworn Statement*), DA Form 4137 (Figure G-1, *Evidence/Property Custody Document*) 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

G-11. MP Soldiers shall be in the task organization for a mission likely to result in detaining personnel.

G-12. Consider including interpreters or linguists to support the operation. These assets can assist greatly in tactical questioning and screening of detainees.

G-13. Ensure Soldiers know to consult with their supporting 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

G-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

G-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 G-3 and G-4, Capture Tag), DA Form 2823 (Sworn Statement), DA Form 4137 (Figures G-1 and G-2, Evidence/Property Custody Document), 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.

EVIDENCE/PROPERTY CUSTODY DOCUMENT			OFFICIAL SOURCE NUMBER	
For use of this form see AF 18D-08 and AF 18D-09. Use appropriate agency to US Army Criminal Investigation Command			LED REPORT/LOG NUMBER	
RECEIVING ACTIVITY		LOCATION		
NAME, GRADE AND TITLE OF PERSON FROM WHOM RECEIVED <input type="checkbox"/> QUANT <input type="checkbox"/> OTHER		ADDRESS (Include ZIP Code)		
LOCATION FROM WHICH OBTAINED		PERSON OBTAINED	TIME/DATE OBTAINED	
ITEM NO.	QUANTITY	DESCRIPTION OF ARTICLES <small>(Include serial, serial number, model and national stock or stockless)</small>		
Sample				
CHAIN OF CUSTODY				
ITEM NO.	DATE	RELEASED BY	RECEIVED BY	PURPOSE OF CHANGE OF CUSTODY
		SIGNATURE	SIGNATURE	
		NAME, GRADE OF TITLE	NAME, GRADE OF TITLE	
		SIGNATURE	SIGNATURE	
		NAME, GRADE OF TITLE	NAME, GRADE OF TITLE	
		SIGNATURE	SIGNATURE	
		NAME, GRADE OF TITLE	NAME, GRADE OF TITLE	
		SIGNATURE	SIGNATURE	
		NAME, GRADE OF TITLE	NAME, GRADE OF TITLE	
		SIGNATURE	SIGNATURE	
		NAME, GRADE OF TITLE	NAME, GRADE OF TITLE	

DA FORM 4137, 1 JUL 78 Explains DA FORM 4137, 1 Aug 78 and DA FORM 4137-1, Primary Task Statement 08 Sep 78 (Mik) use 08/08/08 DOCUMENT NUMBER _____

Figure G-1, DA Form 4137, Evidence/Property Custody Document (Front)

ITEM NO.	DATE	CHAIN OF CUSTODY (Continued)		PURPOSE OF CHANGE OF CUSTODY
		RELEASED BY	RECEIVED BY	
1		SIGNATURE	SIGNATURE	
		NAME, GRADE OR TITLE	NAME, GRADE OR TITLE	
		SIGNATURE	SIGNATURE	
		NAME, GRADE OR TITLE	NAME, GRADE OR TITLE	
		SIGNATURE	SIGNATURE	
		NAME, GRADE OR TITLE	NAME, GRADE OR TITLE	
		SIGNATURE	SIGNATURE	
		NAME, GRADE OR TITLE	NAME, GRADE OR TITLE	
		SIGNATURE	SIGNATURE	
		NAME, GRADE OR TITLE	NAME, GRADE OR TITLE	
		SIGNATURE	SIGNATURE	
		NAME, GRADE OR TITLE	NAME, GRADE OR TITLE	
		SIGNATURE	SIGNATURE	
		NAME, GRADE OR TITLE	NAME, GRADE OR TITLE	
		SIGNATURE	SIGNATURE	
		NAME, GRADE OR TITLE	NAME, GRADE OR TITLE	
FINAL DISPOSAL ACTION				
RELEASED TO OWNER OF OTHER _____				
DESTROY _____				
OTHER _____				
FINAL DISPOSAL AUTHORITY				
I HEREBY _____ ON THIS DOCUMENT, PERTAINING TO THE INVESTIGATION INVOLVING _____				
_____ (Signature) _____ (Signature) _____ (Signature)				
REMOVED AS EVIDENCE AND MAY BE DEPOSED OF AS INDICATED ABOVE. (If additional copies are retained, the word "copy" and number of copies should be indicated.)				
_____ (Type/Grade/Name, Grade, Title) _____ (Signature) _____ (Signature)				
WITNESS TO DESTRUCTION OF EVIDENCE				
THE ARTICLES LISTED AT ITEM NUMBER(S) _____ (S) (S) (S) DESTROYED BY THE EVIDENCE CUSTODIAN, IN MY PRESENCE, ON THE DATE INDICATED ABOVE.				
_____ (Type/Grade/Name, Grade, Title) _____ (Signature)				

Figure G-2, DA Form 4137, Evidence/Property Custody Document (Back)






	
1. DATE AND TIME OF CAPTURE	2. SERIAL NO. A
3. NAME	4. DATE OF BIRTH
5. RANK	6. SERVICE NO.
7. UNIT OF EPW	8. CAPTURING UNIT
9. LOCATION OF CAPTURE (Grid coordinates)	
10. CIRCUMSTANCES OF CAPTURE	11. PHYSICAL CONDITION OF EPW
12. WEAPONS, EQUIPMENT, DOCUMENTS	
<p>DD FORM 2745, MAY 96 REPLACES DA FORM 5976, JAN 91, USABLE UNTIL EXHAUSTED.</p>	
	
1. DATE AND TIME OF CAPTURE	2. SERIAL NO. B
3. NAME	4. DATE OF BIRTH
5. RANK	6. SERVICE NO.
7. UNIT OF EPW	8. CAPTURING UNIT
9. LOCATION OF CAPTURE (Grid coordinates)	
10. CIRCUMSTANCES OF CAPTURE	11. PHYSICAL CONDITION OF EPW
12. WEAPONS, EQUIPMENT, DOCUMENTS	
<p>DD FORM 2745, MAY 96 REPLACES DA FORM 5976, JAN 91, USABLE UNTIL EXHAUSTED.</p>	
	
1. DATE AND TIME OF CAPTURE	2. SERIAL NO. C
3. NAME	4. DATE OF BIRTH
5. RANK	6. SERVICE NO.
7. UNIT OF EPW	8. CAPTURING UNIT
9. LOCATION OF CAPTURE (Grid coordinates)	
10. DESCRIPTION OF WEAPONS, SPECIAL EQUIPMENT, DOCUMENTS	
<p>DD FORM 2745, MAY 96 REPLACES DA FORM 5976, JAN 91, USABLE UNTIL EXHAUSTED.</p>	
	

Figure G-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.

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 G-4, DD Form 2745, Enemy Prisoner of War (EPW) Capture Tag (Back)

Appendix H

Media on the Battlefield

PRACTICAL CONSIDERATIONS

H-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

H-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.

H-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.

H-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.

H-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.

H-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

H-7. The austere 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.

H-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)

H-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 UEx’s Information Plan.

H-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 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

H-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

H-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

H-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

H-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.

H-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.

H-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 medical 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.

H-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 CRD 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/SSAN/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 001-01-001 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 I

Digital Command and Control Rehearsal

BACKGROUND

I-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 System (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 warmup 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?

I-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

I-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 I-1 shows an example of the systems equipment checks that must be done to validate equipment in the architecture.

PHASE 2. CONNECTIVITY TESTING

I-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 I-2, I-3, and I-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

I-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											
HQ 84											
HQ 85											
HQ 90											
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	+

EVERY COMPONENT PART OF THE SYSTEM ARCHITECTURE MUST BE PRESENT AND FUNCTIONAL FOR THE DC2R TO WORK.

Figure I-1, Example of Equipment Listing for DC2R Functions Check

FBCB2 Phase II				
#	ACTION	FROM	TO	TIME
WINGMAN/SECTION ; PHASE II				
100a	SEND FREE TEXT MESSAGE, K01.01		ALL PLT FBCB2s	
100b	RECEIVE FREE TEXT MESSAGE, K01.01	ALL PLT FBCB2s		
101	SEND SPOT REPORT MESSAGE, K04.01		BN S2 ASAS	
102a	RECEIVE RED SA ICON, K05.19 (automatically posted to map)	SPAWNED SA FROM ALL CO FBCB2s		
103a	SEND POSITION REPORT, K05.01 (automatically sent)		N/A (ALL)	
103b	RECEIVE BLUE SA ICON, K05.01 (automatically posted to map)	SPAWNED SA FROM ALL CO FBCB2s		
PLATOON SGT/PLATOON LDR ; PHASE II				
100b	SEND FREE TEXT MESSAGE, K01.01		ALL PLT FBCB2s	
100a	RECEIVE FREE TEXT MESSAGE, K01.01	ALL PLT FBCB2s		
100c	SEND FREE TEXT MESSAGE, K01.01		1SG/XO/CO FBCB2	
100d	RECEIVE FREE TEXT MESSAGE, K01.01	1SG/XO/CO FBCB2		
101	SEND SPOT REPORT MESSAGE, K04.01		BN S2 ASAS BN S3 MCS	
102a	RECEIVE RED SA ICON, K05.19 (automatically posted to map)	SPAWNED SA FROM ALL CO FBCB2s		
103a	SEND POSITION REPORT, K05.01 (automatically sent)		ALL PLT FBCB2s	
103b	RECEIVE BLUE SA ICON, K05.19 (automatically posted to map)	SPAWNED SA FROM ALL CO FBCB2s		
1SG/XO (LOGISTICIAN) ; PHASE II				
100d	SEND FREE TEXT MESSAGE, K01.01		PL/PS FBCB2	
100c	RECEIVE FREE TEXT MESSAGE, K01.01	PL/PS FBCB2		
101	SEND SPOT REPORT MESSAGE, K04.01		BN S2 ASAS BN S3 MCS	
102a	RECEIVE RED SA ICON, K05.19 (automatically posted to map)	SPAWNED SA FROM ALL CO FBCB2s		
103a	SEND POSITION REPORT, K05.01 (automatically sent)		ALL CO FBCB2s	
103b	RECEIVE RED SA ICON, K05.19 (automatically posted to map)	SPAWNED SA FROM ALL CO FBCB2s		
1SG/XO (LOGISTICIAN) ; PHASE II				
100d	SEND FREE TEXT MESSAGE, K01.01		PL/PS FBCB2	
100c	RECEIVE FREE TEXT MESSAGE, K01.01	PL/PS FBCB2		
100e	SEND FREE TEXT MESSAGE, K01.01		BN S2 ASAS BN S3 MCS BN S1/S4 CSSCS BN FSE AFATDS	

**EXAMPLE OF
FBCB2 CHECKLIST**

Figure I-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 01 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	AMD/W/S	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 POSTING								
308	UPDATE FIRE UNIT LOCATION IN AFATDS, VERIFY POSTING TO								
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 State, 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 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 I-3, Example of ABCS Checks at the Battalion Level

Glossary

SECTION I – ACRONYMS AND ABBREVIATIONS

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
BSTB	brigade special troop battalion
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	chemical officer
CHL	combat health logistics
CHS	combat health support
CHU	container handling unit
CI	counterintelligence
CIP	combat identification panel
CK	containerized kitchen
CL	class; 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	command 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	sensor 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
EOCA	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
JVMF	joint variable message format
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 marshal/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
SINGARS	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
UE_x	unit of employment x
UE_y	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

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