FM 3-21.91 (FM 7-91)

TACTICAL EMPLOYMENT OF ANTIARMOR PLATOONS AND COMPANIES

HEADQUARTERS
DEPARTMENT OF THE ARMY

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PREFACE

This manual is based on the premise that although the unit organization, weapons systems, and conditions have changed, antiarmor company and platoon maneuver, fire, and movement have not changed.

FM 3-21.91 (FM 7-91) provides doctrine for employing the antiarmor company and platoon. It contains guidance on tactics and techniques that antiarmor companies and platoons use in offensive, defensive, stability, and support operations.

This manual borrows from "nested" concepts found in FM 7-10 and FM 71-1 and reemphasizes information from other manuals that are of critical importance. The target audience includes antiarmor platoon leaders, company and battalion commanders, and battalion staff officers. This manual provides training developers with the combat-critical tasks and missions of antiarmor companies and platoons, and it enables combat developers to refine and revise operational concepts for antiarmor organizations.

The proponent of this publication is the US Army Infantry School. Send comments and recommendations to doctrine@benning.army.mil or on DA Form 2028 directly to Commandant, US Army Infantry School, ATTN: ATSH-ATD, Fort Benning, Georgia 31905-5000.

Unless this manual states otherwise, masculine nouns and pronouns do not refer exclusively to men.

CHAPTER 1
THE ROLE OF ANTIARMOR ORGANIZATIONS

Antiarmor companies and platoons can fight and win engagements within the full spectrum of operations (offense, defense, stability, and support). The antiarmor company is normally task organized by the airborne/air assault infantry battalion commander or the Stryker brigade combat team (SBCT) commander, based on his estimate of the situation, to perform a variety of tactical missions as part of battalion or SBCT operations. The light infantry battalion commander task organizes his antiarmor platoon in much the same manner. In filling this combat role, the antiarmor unit integrates with combat, combat support (CS), and combat service support (CSS) elements. The company and platoons are capable of deploying as part of the Army's force projection requirements. This chapter addresses antiarmor doctrine, organization, fundamentals, and capabilities and limitations.

1-1. ANTIARMOR DOCTRINE

Antiarmor systems operate on the battlefield with infantry, armor, and other elements of the combined-arms team as well as with the SBCT. Long-range antiarmor fires are important to destroying the integrity of the enemy's combined-arms team. US tactical doctrine prefers to use a base-of-fire force or a fixing force along with a maneuver force. A commander’s situational understanding (SU) will allow units to effectively find and fix the enemy force while maintaining sufficient combat power for decisive maneuver and sufficient depth to reduce the risk and exploit success. Mass and depth are the keys to employing antiarmor assets. When terrain and fields of fire allow, an antiarmor commander (or platoon leader) should control antiarmor subordinate units, planning and directing antiarmor fires in accordance with the higher commander's scheme of maneuver. During tactical operations, antiarmor units suppress, fix, or destroy enemy at long ranges, allowing infantry forces to maneuver. Commanders should task organize and employ antiarmor units based on an analysis of the factors of mission, enemy, terrain, troops and support available, time available, and civil considerations (METT-TC).

1-2. ORGANIZATION AND CHARACTERISTICS

The armor and motorized threat of potential enemies has led to organizing light, airborne, and air assault battalions, and the SBCTs, with antiarmor units. Although they may differ in their organization and equipment, they all have the tube-launched, optically tracked, wire-guided (TOW) weapon system as a centerpiece. In the light, airborne, and air assault battalions, each antiarmor platoon has two sections, and each section has two vehicles. The SBCT antiarmor company consists of three platoons with three TOW-equipped antiarmor interim armored vehicles (ICVs) in each platoon. Table 1-1, page 1-2, depicts the table of organization and equipment (TOE) for antiarmor units.

SIZE ALLOCATED	TYPE OF TOE
Antiarmor Company (5 Platoons)	Infantry (air assault and airborne) battalions
Antiarmor Company (3 Platoons)	Stryker brigade combat team
Antiarmor Platoon	Light infantry battalion

Table 1-1. Antiarmor organization options.

a. **Antiarmor Company in the Airborne and Air Assault Battalion**. Each infantry battalion in the airborne or air assault division has an *assigned antiarmor company* (Figure 1-1). The antiarmor company commander is responsible for advising the battalion commander on the tactical employment of the company and its platoons.

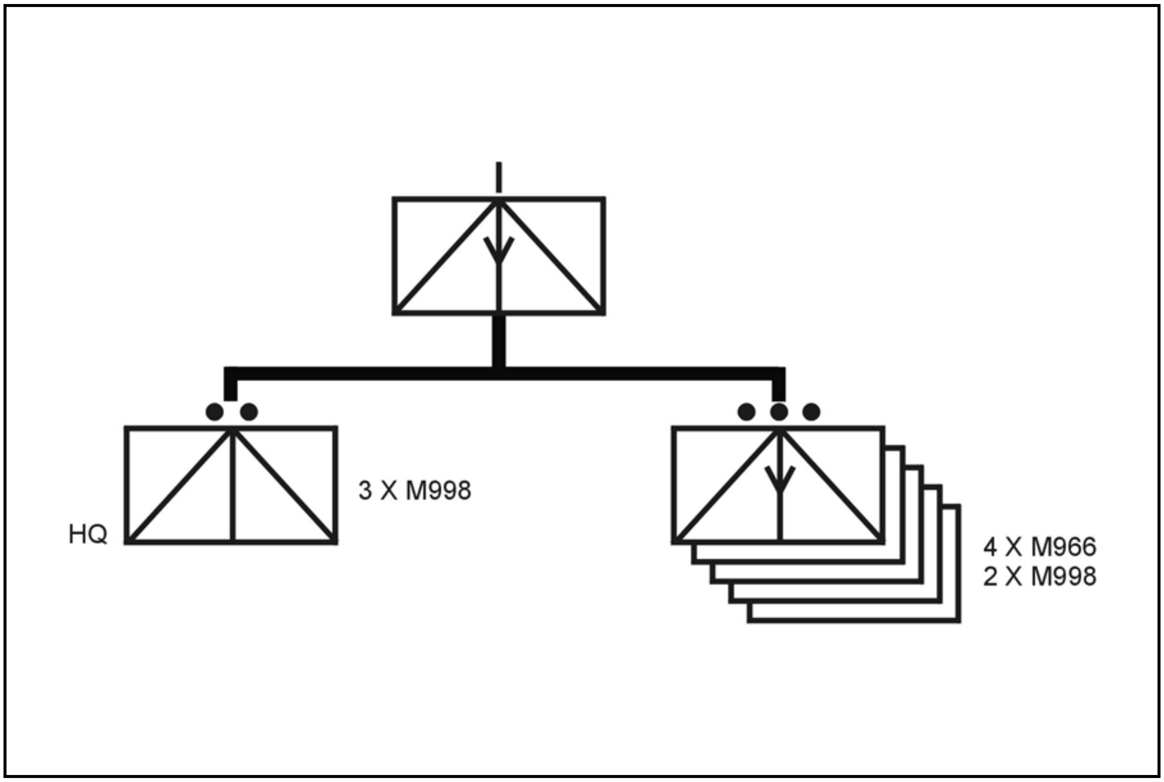


Figure 1-1. Air assault (or airborne) infantry battalion antiarmor company.

b. **Antiarmor Company in the Stryker brigade combat team (SBCT)**. Each SBCT has an *assigned antiarmor company* (Figure 1-2). The company commander is responsible for advising the SBCT commander on the tactical employment of the company and its platoons.

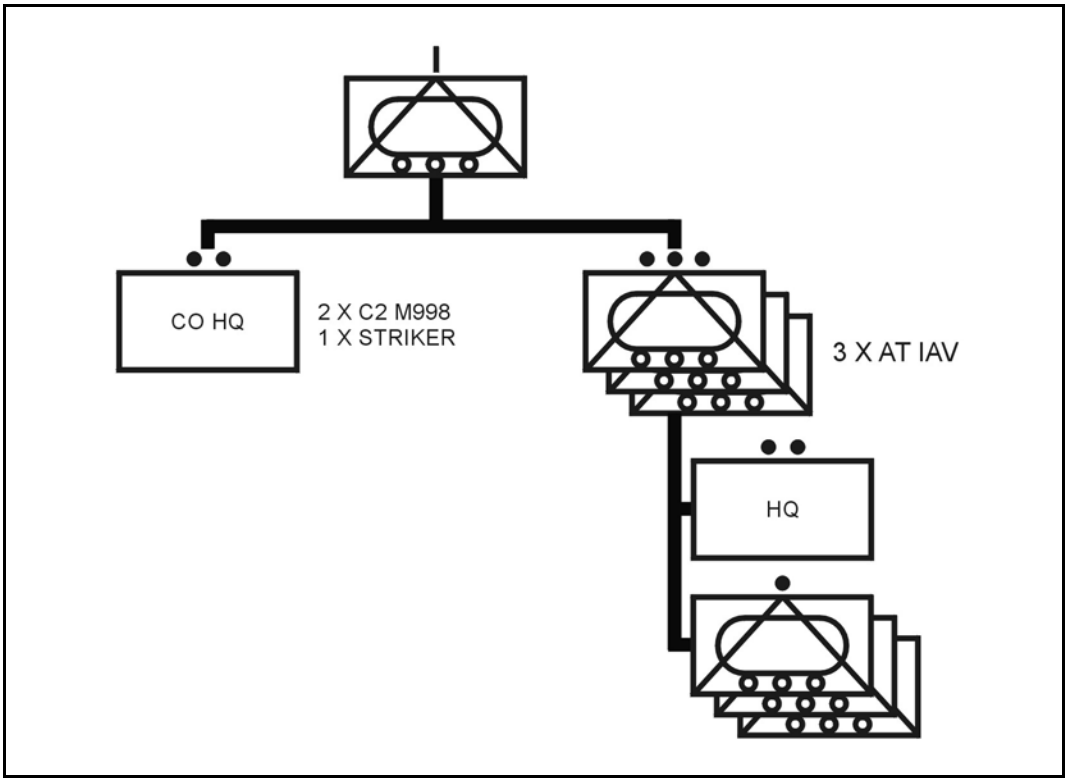


Figure 1-2. Stryker brigade combat team antiarmor company.

c. Antiarmor Platoon in the Light Infantry Battalion. In the light infantry division, each infantry battalion has one antiarmor platoon (Figure 1-3, page 1-4). The antiarmor platoon leader is responsible for advising the battalion commander on the tactical employment of the platoon and its sections.

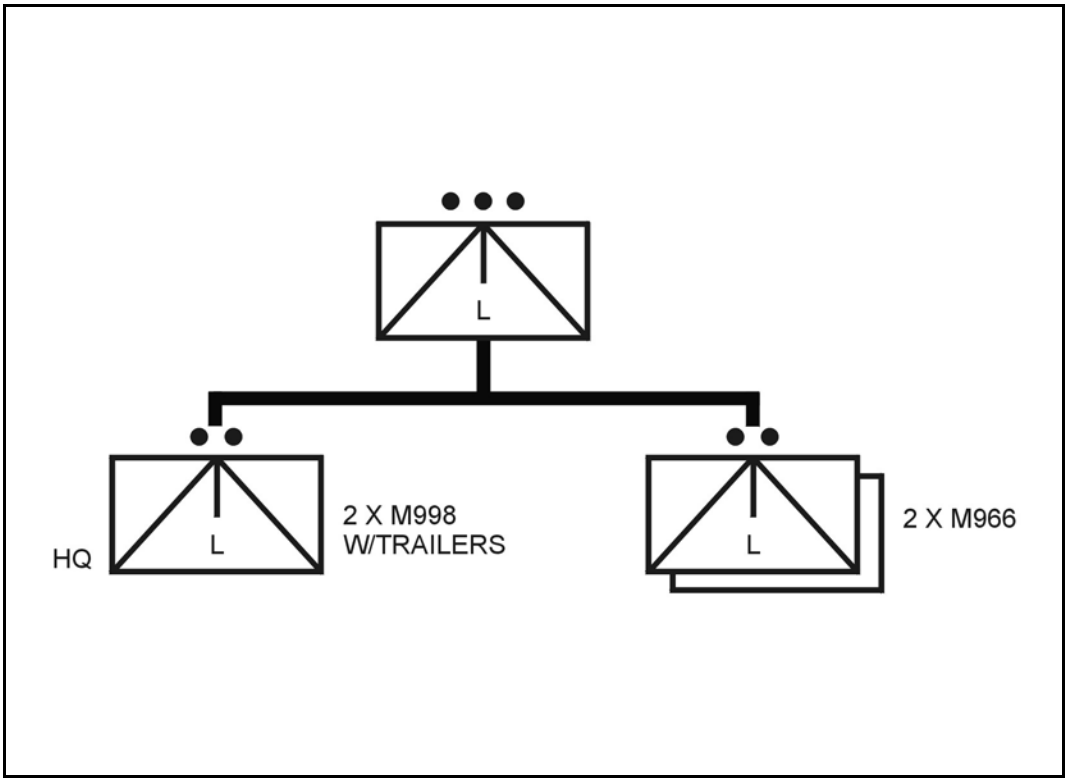


Figure 1-3. Light infantry battalion antiarmor platoon.

1-3. FUNDAMENTALS OF ANTIARMOR UNIT EMPLOYMENT

Following the basic rules of antiarmor employment increases the probability of destroying targets and enhances the survivability of the antiarmor elements.

a. **Mutual Support.** Antiarmor units must support each other due to their assigned tasks, relative positions to each other and to the enemy (obtained via reconnaissance and information sharing), and their inherent capabilities and limitations. To establish mutual support, TOWs are employed in sections with overlapping primary and secondary sectors of fire (Figure 1-4). If one squad is attacked or forced to displace, the other squad continues covering the assigned sector. In order to achieve this effect, the antiarmor squads are positioned so that fires directed at one squad can suppress only that squad. The SBCT antitank platoons' three squads function in the same manner.

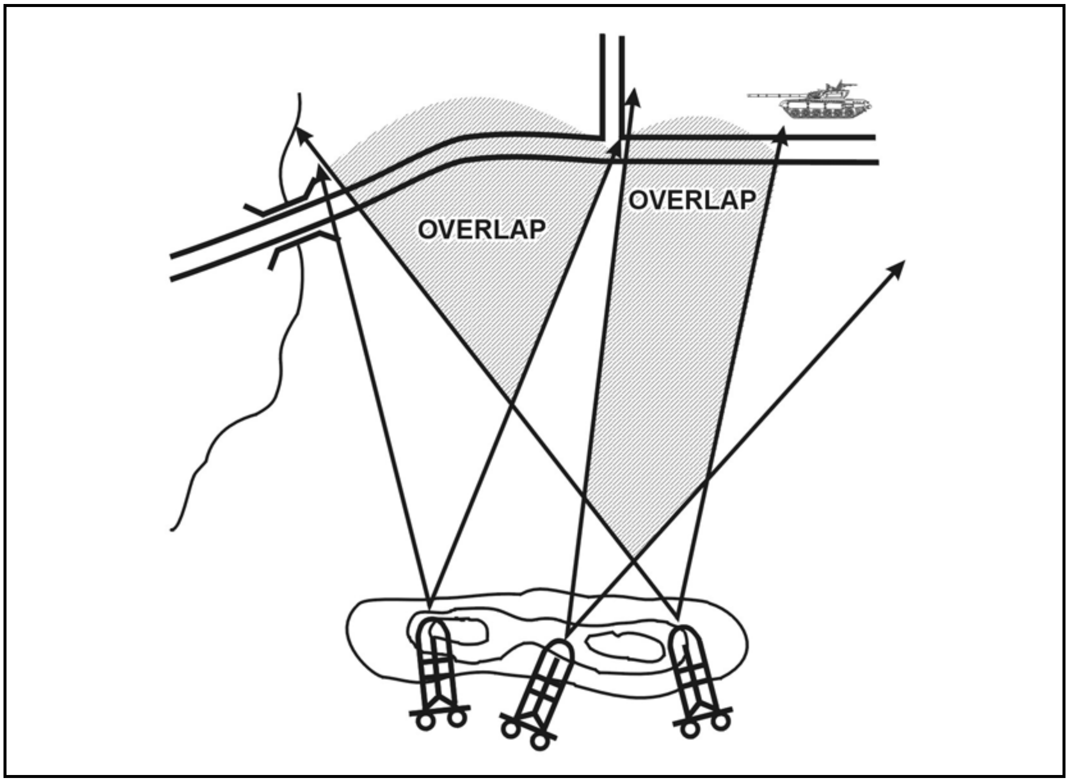


Figure 1-4. Overlapping sectors of fire.

b. **Security.** Antiarmor units must be positioned near friendly infantry units for protection against possible attack by dismounted enemy infantry. Though the infantry units are not required to collocate with antiarmor squads, they should be able to cover dismounted avenues of approach to the antiarmor positions. However, antiarmor units moving with infantry provide their own local security. During halts, the driver or loader dismounts to secure the flank and rear sectors. Overall flank and rear security must be planned at the platoon leader level; if omitted, this lack of protection can be costly. Without flank and rear security during movement, a single enemy vehicle could destroy entire antiarmor squads, sections, or platoons.

c. **Flank Shot Engagements**. Antiarmor squads and sections are positioned to engage tanks or armored vehicles from the flank. Frontal engagements at enemy armor are less desirable for the following reasons:

(1) An armored vehicle's protection is greatest to the front.

(2) An armored vehicle's firepower and crew are normally oriented to the front.

(3) A frontal engagement increases the chance of detection and suppression by enemy armored vehicles.

(4) An armored vehicle provides a smaller target from the front.

d. **Standoff.** Standoff is the difference between a friendly weapon's maximum range and an enemy weapon's maximum effective range (Figure 1-5, page 1-6). For example, the TOW weapon system's maximum range of 3,750 meters provides it with a standoff advantage over modern, western-built tanks (maximum effective ranges of 2,800 meters) and older, non-modernized tanks (maximum effective ranges of 2,000 meters). Despite this advantage, engaging enemy armored vehicles within the standoff range (2,000 to 3,750 meters) may not always be tactically feasible. The additional tracking time required to fire a TOW missile beyond 2,000 meters increases the likelihood of gunner error. This possibility gives a frontal target more time to maneuver against the friendly position and provides a flanking target more time to reach cover. Additionally, the terrain may not provide the fields of fire to support standoff distance engagements.

NOTE: The T-55 (modernized), T-64B, T-72S, T-80, T-80U, T-90 main battle tanks, and the BMP-3 can fire anti-tank guided missiles (ATGM) through their main gun tubes up to a range of 4,000 meters, which means the TOW weapon system loses the standoff advantage against them. Some of the tank-launched ATGMs can be fired while the vehicle is on the move. Also, threat armored vehicles can fire high explosive (HE) fragmentation rounds to suppress TOW gunners up to a range of 9,750 meters.

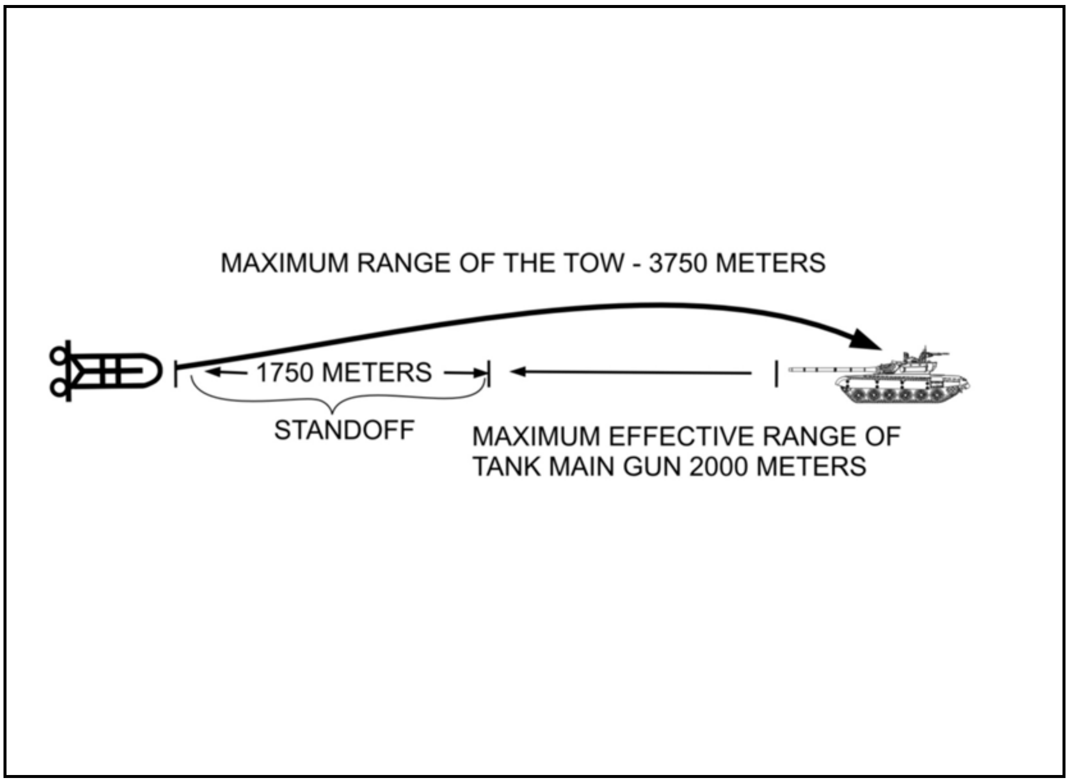


Figure 1-5. Standoff range.

e. Cover and Concealment. Cover and concealment are critical to the survival of antiarmor weapon systems and must be analyzed along with the other factors of METT-TC. An analysis of all of these factors is necessary for the antiarmor unit to be effective, to survive, and to overcome the following inherent weaknesses:

- The gunner is vulnerable because he is exposed while employing the weapon systems (TOW, M2, and MK19).
- The TOW missile and the MK19 40-mm round have a long flight time and a

distinctive firing signature.

- The TOW weapon system has a slow rate of fire and requires time to track.

(1) ***Cover.*** Cover is protection from the effects of enemy direct or indirect fires. It may be natural or made by man. *Natural cover* includes reverse slopes, ravines, and hollows. *Man-made cover* includes fighting positions, walls, rubble, and craters.

(2) ***Concealment.*** Concealment is the protection from enemy observation. Night vision devices (NVDs) and other detection devices penetrate darkness and prevent it from providing sufficient concealment. Leaders must choose inconspicuous positions and avoid silhouetting the vehicles or weapon systems against the skyline ("skylining"). The principles of concealment include avoiding unnecessary movement, using all available concealment (such as vegetation, rolling terrain, buildings), staying low to observe, exposing nothing that shines, avoiding "skylining," altering familiar outlines, and keeping quiet.

(a) *Avoid Unnecessary Movement*. Movement attracts attention. A concealed antiarmor position can be detected if the weapon system is traversed or raised, or if any other unnecessary movement occurs. Moving against a stationary background makes the position stand out.

(b) *Use All Available Concealment*. Background is important. To prevent detection, positions must blend with the varied colors and textures of whatever trees, bushes, grass, earth, or man-made structures form the background. (For example, a TOW weapon system stands out if located in an open area, but it is difficult to see in a wooded area.) An antiarmor weapon system should not be fired from the edge of a wood line but rather from a position inside the wood line hidden by the shape and shade of the trees. Leaders must ensure that the concealment does not interfere with the fields of fire of the weapon systems being employed.

(c) *Stay Low to Observe*. The enemy has difficulty seeing a position with a low silhouette. An antiarmor leader should move forward of his position to observe.

(d) *Expose Nothing That Is Reflective*. The reflection of light on a shiny surface attracts attention and can be seen from a great distance. Optics should be used cautiously in bright sunshine due to the reflections they cause. At night, a night vision device can detect light emitted from the instrument panels inside the vehicles.

(e) *Avoid "Skylining."* Figures and vehicles on the crests of hills can be seen from a great distance, even at night, since dark outlines stand out against lighter sky.

(f) *Alter Familiar Outlines*. Both military equipment and people provide familiar outlines to the enemy. Camouflage changes the familiar outline.

(g) *Keep Quiet*. Noises, such as talking, idling vehicles, or touching metal to metal, can be heard by enemy patrols or listening posts.

(3) ***Considerations.*** When employing antiarmor weapon systems, leaders should avoid conspicuous terrain, disperse weapons laterally and in depth so that no single enemy weapon can suppress two antiarmor squads, and disperse antiarmor squads to reduce casualties and equipment damage that could result from enemy mortar and artillery fires (Figure 1-6, page 1-8). The considerations for antiarmor weapon system employment also apply during route selection and movement.

(a) *Offensive Considerations.* Determine the routes where cover and concealment are good, identify areas along the approaches to the objective where cover and concealment are poor, and consider using smoke or conducting missions during limited visibility to provide concealment.

(b) *Defensive Considerations.* Focus on locations with good fields of fire. Determine how the enemy can use the available cover and concealment and look at it from his point of view, both in daylight and at night.

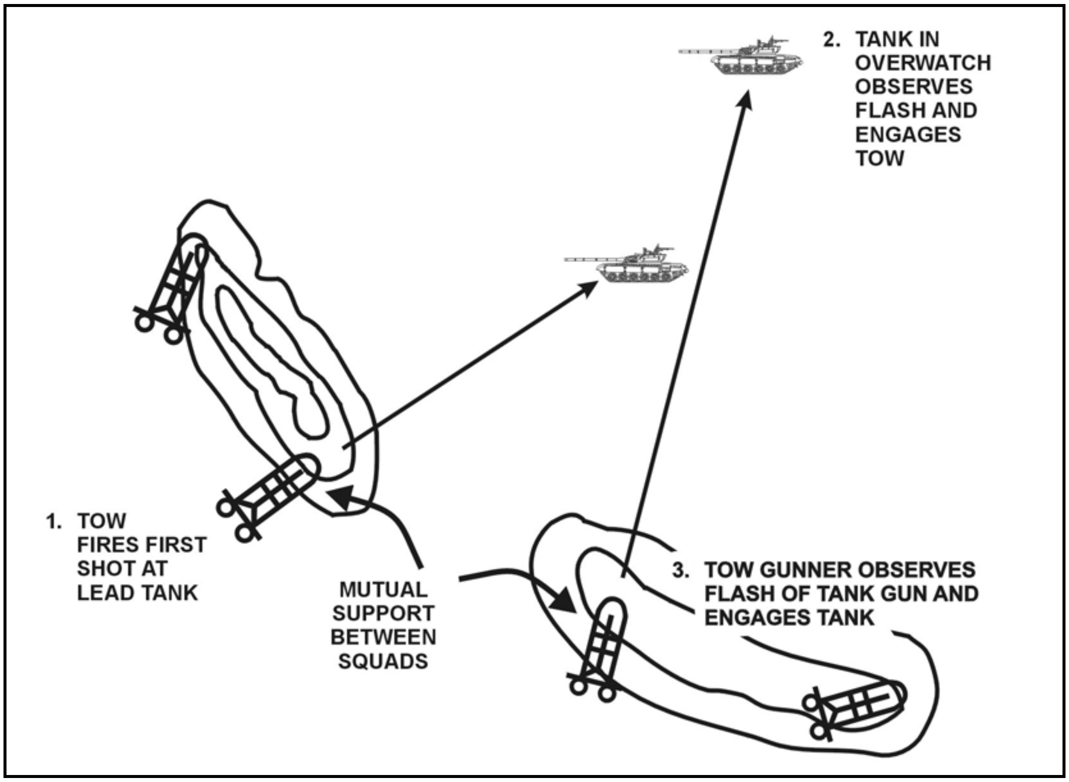


Figure 1-6. Dispersion between squads.

f. **Employment in Depth**. Antiarmor squads should be employed in depth. In the offense, routes and firing positions should be selected to support the forward movement of attacking units. In the defense, antiarmor squads can be positioned forward then moved to positions in depth as the enemy closes, or the squads may be positioned in depth initially.

g. **Employment as Part of a Combined Arms Team**. Skillful integration of infantry, armor, engineer, and indirect fire assets improves the survivability and lethality of antiarmor units.

(1) ***Infantry.*** Infantry is needed to provide local security and to engage enemy infantry and enemy antiarmor weapon systems. Antiarmor units also support the maneuver of infantry forces.

(2) ***Armor***. Antiarmor units support the maneuver of armor forces. Antiarmor units may focus on destroying lightly armored enemy vehicles and dismounted soldiers at long ranges, allowing the tanks to focus on destroying enemy tanks.

(3) ***Engineers***. Engineers help shape the battlefield by enhancing mobility, countermobility, and survivability.

(a) Engineers shape the engagement area (EA) for a commander by emplacing tactical obstacles that reduce the enemy's ability to maneuver, mass, or reinforce, and increase his vulnerability to direct and indirect fires. To accomplish this, obstacles must disrupt, fix, turn, or block the enemy. The engineers emplace the obstacles inside designated obstacle zones, belts, and groups. To be effective, the obstacles must be covered by both direct and indirect fire.

(b) Engineers provide expertise and assistance in breaching operations to allow infantry and armor freedom to maneuver.

(c) Engineers provide assistance in the construction of survivability positions. This assistance is especially important when building vehicle (high mobility, multi-purpose wheeled vehicle [HMMWV] or ICV) fighting positions.

(4) ***Indirect Fires***. Antiarmor leaders must be part of the indirect fire planning process at higher levels. They must coordinate frequencies, call signs, and priorities of fire. Antiarmor leaders can request indirect fires. To do this, they must contact the battalion mortar platoon, the battalion fire support element (FSE), a fire support team (FIST), or the direct support (DS) artillery battalion. Indirect fires (artillery and mortars) are used to--

- Destroy or neutralize the enemy.
- Slow the enemy rate of advance.
- Destroy or disrupt enemy formations.
- Cause enemy vehicles to button up.
- Suppress accompanying enemy artillery and ATGM support by fire.
- Fire white phosphorous/hexachloroethane (WP/HC) smoke to conceal weapon system firing signatures and to cover the movement of antiarmor squads between positions.

NOTE: When using obscurants in this manner, antiarmor company commanders (or platoon leaders) must consider the degrading effects these obscurants have on their own weapon systems.

1-4. CAPABILITIES AND LIMITATIONS

The antiarmor weapon systems available (TOW, M2, and MK19) provide direct fire against armored or other hard targets to support maneuver of infantry.

a. **Offensive Capabilities.** An antiarmor unit initially provides the base of fire in an attack in order to suppress, fix, or destroy the enemy in position. The antiarmor unit also can be employed in the offense to engage enemy in planned EAs, to isolate objectives by destroying enemy counterattacks, or by destroying withdrawing enemy forces. The antiarmor unit is also well suited to protect flanks, to fix enemy for destruction by infantry or armor companies, or to repel a counterattack.

b. **Defensive Capabilities.** Antiarmor units can be positioned forward of the defensive sector to participate in security operations or to overwatch reconnaissance units or obstacles. As the enemy closes, the antiarmor unit displaces to positions that provide the direct fires into an EA. Antiarmor units often are positioned throughout the depth of the decisive operation's area of operation to cover likely armor avenues of approach. During counterattacks, the antiarmor unit provides overwatching fires for the maneuvering element.

c. **Additional Capabilities.** Depending on the modified table of organization (MTOE), some infantry antiarmor units can use the HMMWV interchangeable mount systems (HIMS). This system enables the unit to adapt quickly to changes resulting from an analysis of the factors of METT-TC. With the HIMS, the unit can quickly mount the MK19 or the M2 on the HMMWV to destroy light armored vehicles, field fortifications, and troops. These weapon systems complement other weapon systems, especially the TOW. The M249, 5.56mm squad automatic weapon (SAW), provides the antiarmor unit with an asset that can engage targets (dismounted threat) without revealing its M2 or MK19 in the close fight.

d. **Limitations.** Antiarmor units have limitations that apply to both offensive and defensive situations.

(1) Antiarmor units equipped with HMMWVs must consider that these vehicles lack protection against direct and indirect fires. Although ICV-equipped antiarmor vehicles have greater protection against direct and indirect fires than the HMMWV, they are still vulnerable to enemy antiarmor weapons. The SBCT antiarmor company commander must take these vulnerabilities into considerations.

(2) An antiarmor squad (three soldiers) cannot adequately defend itself when confronted with a dismounted threat for an extended period of time.

(3) TOW missiles are accurate, but missile flight time is long (Appendix A). The slow rate of fire and the visible launch signature of the TOW missile increase the antiarmor squad's vulnerability, especially if an HMMWV-mounted TOW engages within an enemy's effective direct-fire range (no standoff). Antiarmor elements can reduce this vulnerability by displacing often and by integrating their fires with those of other weapon systems (M2 and MK19) within the antiarmor unit, with other antiarmor weapons within the battalion (Javelin and AT4), with obstacles, and with indirect fires. Integrated direct and indirect fires, with obstacles, complicate the enemy's target-acquisition process.

(4) Combat service support is limited for units conducting security missions. Additional support should be coordinated with a higher headquarters when an antiarmor unit participates in a security mission.

1-5. ENEMY ANTIARMOR COUNTERMEASURES

Two events have contributed significantly to the worldwide proliferation of antitank, guided missile-countermeasures (ATGM-CM): the end of the Cold War and the dramatic allied success in the Persian Gulf War. The success of ATGMs in the Persian Gulf War has resulted in the design and production of ATGM-CM devices. The ATGM-CM devices available include: use of antiarmor reaction drills, indirect fire, direct fire, reactive armor, camouflage, smoke and obscurants, active protection systems, sensors including laser warning receivers, infrared and laser jammers, and blinders. Although most of the ATGM-CM devices have yet to prove their combat effectiveness, TOW weapon system engagements may become more difficult in the future. Enemy countermeasures to the weapon system include--

- Enemy actions taken before the TOW gunner fires.
- Enemy actions taken while the TOW missile is in flight.
- Enemy actions taken to reduce the effectiveness of the TOW when it hits.

a. **Enemy Actions Taken before the TOW Gunner Fires**. Enemy commanders can counter the effectiveness of the TOW well before exposing their combat formations to its fires. Enemy commanders may conduct aggressive reconnaissance to locate TOW positions and then attempt to destroy them with indirect fires and attack helicopters. Enemy forces are likely to employ deception, camouflage, and heavy use of obscurants to degrade the target acquisition capabilities of the TOW.

(1) ***Reconnaissance.*** All armies reconnoiter continuously to locate and to target antiarmor systems. To protect friendly units from ground reconnaissance elements, US forces employ security operation forces, which must use all available concealment to augment information sharing (digital and nondigital). US forces also use dummy and hide positions to help give the enemy a false picture of the US defense.

(2) ***Deception.*** Deception is part of the doctrine of all modern armies. It includes using camouflage to disguise, conceal, or distort; using darkness, weather, and obscurants to mask operations; using decoy equipment; masking light and sound; conducting diversionary actions or demonstrations; and practicing communications security.

(a) *Camouflage*. Many armored vehicles are now equipped with various methods to reduce their signatures and conceal their presence, to include--

- Camouflage paint.
- Camouflage nets to provide concealment from both optics and radar.
- Low silhouette profiles.
- Less dependence on active infrared (IR) during limited visibility.

(b) *Smoke and Obscurants***.** Enemy forces may employ obscurants to mask movement from identified or templated TOW positions. Natural dust and obscurants restrict the capability of thermal sights and TOW guidance mechanisms. Obscurant-filled projectiles are typically used to lay blinding smoke on TOW positions. Improved obscurants can degrade thermal sights. Dust kicked up by high explosive projectiles, mortar, artillery, rocket, and tracked vehicle movement is an effective screening agent that blocks out thermal, laser, and direct view optics.

(c) *Decoys.* Many countries have developed full-sized tank decoys that confuse TOW gunners. Heat sources can be used to defeat, degrade, or confuse TOW guidance systems.

(d) *Artillery and Mortars.* The enemy tries to suppress or destroy TOW weapon systems by either observed or unobserved fires on known or likely positions. Some armies have 122-mm and 152-mm howitzers to fire flechette rounds that are effective against unprotected soldiers and equipment. These rounds have a maximum range of 15,300 to 17,000 meters. Each round explodes above the ground and scatters about 8,500 small, finned flechettes over an area about 30 meters in diameter.

(e) *Attack Helicopters.* The enemy may follow the previously described preparatory fire with attack helicopters. Enemy attack helicopter pilots follow concealed routes that allow them to approach the flank or rear of each antiarmor unit undetected.

b. **Enemy Actions Taken While the TOW Missile is in Flight**. Enemy armor units are trained and equipped to counter TOW fires. This training includes terrain driving, suppressing or destroying TOWs with direct fire, use of on-board obscurants, and active protection systems.

(1) ***Terrain Driving.*** Enemy forces make use of contours in the terrain (dead space) to reduce their exposure to TOWs. Antiarmor units must account for dead space by emplacing obstacles, by observation, and by the employment of other weapon systems (MK19, M203, and mortar or artillery fires.

(2) ***Suppressing or Destroying ATGMs with Direct Fire.*** The TOW missile's launch signature gives away its position, and armored crews are trained to engage these systems upon detection. Many enemy vehicles are armed with weapons and munitions that can suppress or destroy TOW positions.

(a) *Tanks.* Several Russian-produced tanks (T-55 AM modernized, T-64B, T-80, T-80U, and T-90) and the Boyevaya Mashina Pekhoty (BMP-3, Russian combat vehicle, infantry) can fire ATGM (AT-8, AT-10, AT-11). These missile-firing tanks can be used to destroy our antiarmor systems. However, *all* tanks can fire high explosive fragmentation (HE-FRAG) rounds at ranges beyond 4,000 meters. The 125-mm time-and-percussion-fused HE-FRAG round can be programmed to explode over a defensive position out to 5,000 meters or can be contact-detonated out to 9,700 meters to suppress or destroy antitank weapons. The use of hide positions before the enemy comes within range of the TOW limits the effectiveness of long-range, HE-FRAG munitions.

(b) *Light Armored Vehicles.* Light armored vehicles include reconnaissance vehicles, infantry fighting vehicles, and armored personnel carriers. These vehicles usually are armed with an automatic cannon, gun and or machine guns, and sometimes an ATGM with a 4,000- to 5,500-meter range. Many foreign ATGMs have thermal capability and other improvements, including faster missiles and blast warheads, for use against defensive positions. The BMP-3 100-mm HE-FRAG round can destroy TOW positions from 4,000 meters away. The weapons systems on these vehicles present a threat to TOW launchers. Antiarmor units protect themselves from direct fire through effective camouflage, use of available concealment, and by fighting from prepared fighting positions when possible. Movement to alternate firing positions after initial engagement limits enemy target acquisition capabilities. Antiarmor units may also opt to engage light armored vehicles with M2 or MK19 and mortar and or artillery fires to preserve the TOW weapon system for employment against other enemy armored vehicles.

(3) ***On-board Obscurants.*** On-board obscurants that quickly screen the vehicle include the smoke grenade launcher and the vehicle exhaust smoke system.

(a) *Smoke Grenade Launchers.* To counter the TOW threat, many countries have equipped their combat vehicles with smoke grenade launchers. Smoke grenade launchers provide a rapid means of screening the vehicle. Obscurants launched from these grenade launchers can block the view of the target or interfere with the TOW's guidance system. Grenades available for some of these systems include smoke, antipersonnel, flare, tear gas, and IR decoy. Improved obscurants can degrade thermal sights and ATGM guidance systems. The grenade launchers are activated from inside the vehicle.

(b) *Vehicle Engine Exhaust Smoke System (VEESS).* The VEESS, or similar system, sprays diesel fuel into the exhaust manifold. This system produces obscurants to protect the unit's movement. Obscurants from these systems interfere with direct view optics, image intensifier (I2 or starlight) sights, TOW guidance systems, and lasers. While thermal sights enable the gunner to see through some smoke, the gunner may not be able to maintain control of the missile through the smoke. The gunner may lose the missile unless he is using a TOW 2 family of missiles, a modified missile guidance system, and the thermal sight. In addition to using the TOW 2 capabilities, the dispersal of antiarmor squads around planned engagement areas limits the effectiveness of the enemy's on-board obscurants.

(4) ***Active Protection Systems.*** Active protection systems electronically sense incoming direct-fire ATGMs and high explosive, antitank (HEAT) munitions, and they defeat the incoming munitions before they impact the vehicle. Soft-kill active protection systems cause the munitions to miss. Hard-kill active protection measures fire munitions at the incoming round to destroy, neutralize, or detonate it.

(a) *Laser Warning Receivers.* Many armored vehicles are equipped with laser-warning receivers that alert the crew when their vehicle has been lased by a laser range finder. By using the laser-warning receiver, the crew identifies the type of laser range finder or designator and the direction of the laser. The crew then can take evasive action by either firing its weapons at the laser or by launching smoke. Some tanks have their laser warning receivers linked to the smoke grenade launchers, causing smoke to be employed automatically when lased. To counter this capability, the antiarmor squad limits the use of laser range finders. When laser range finders are used, they select an object at least three-vehicle lengths away from the target. Another potential action is to use the laser against suspected enemy positions to trigger their laser-warning receiver. This action causes the vehicle to launch smoke grenades, which confirms its presence.

(b) *ATGM Jammers.* The ATGM infrared jammers use an infrared signal to jam and then confuse ATGM guidance in flight with erroneous signals, causing the ATGM to miss the target. Counter-countermeasures include use of the TOW 2 family with modified missile guidance systems and thermal sight, or detecting the ATGM jammer with thermal or image intensifier (for example, PVS-7B) before launch and choosing a different attack method.

(c) *Hard-Kill Systems.* There are several hard-kill active protection systems such as the “Drozd” and the “Arena.” These systems have mounted counter munitions that are fired at incoming munitions when detected by the system’s radar. These systems do not protect the vehicle from all directions. The TOW gunners engage targets in vulnerable areas when possible. Use of mortars and artillery may destroy externally mounted sensors and countermeasure dispensers.

c. **Enemy Actions Taken to Reduce the Effectiveness of the TOW When It Hits**. The most effective enemy countermeasure in this category is the use of reactive armor. Reactive armor contains explosives sandwiched between metal plates. The explosive detonates and jettisons the outer metal upon contact with shaped-charge munitions. The rapid motion of the outer metal plate disrupts the shaped-charge, reducing penetration. Newer reactive armor can be developed to counter the ATGMs that were developed to defeat first-generation reactive armor with either tip charges (TOW 2A) or a top attack (TOW 2B).

CHAPTER 2

BATTLE COMMAND AND TROOP-LEADING PROCEDURES

Battle command is the exercise of command in operations against a hostile, thinking enemy. It uses the leadership element of combat power to assimilate thousands of bits of information to visualize the operation, describe it in terms of intent, and direct the military actions of subordinates to achieve victory. Thinking and acting are simultaneous activities for antiarmor leaders in battle. Battle command covers the knowledge, techniques, and procedures necessary to control operations and to motivate soldiers and their organizations into action to accomplish assigned missions. As part of battle command, commanders visualize the current state of the battlefield as well as future states at different points in the operation; they then formulate concepts of operations that allow their units to progress from one state to the other at the least cost. Other elements of battle command include assigning missions, prioritizing and allocating resources, selecting the critical times and places to act, and knowing how and when to make adjustments during the fight.

Section I. COMMAND AND CONTROL

Command and control is the exercise of authority and direction by a properly designated commander over assigned or attached forces in the accomplishment of the mission. The goal of command and control is mission accomplishment.

2-1. DEFINITION OF COMMAND AND CONTROL

Command and control are interrelated.

a. **Command.** Command is the art of assigning missions, prioritizing resources, guiding and directing subordinates, and focusing the unit's energy to accomplish clear objectives. The commander's will to win, morale, and physical presence must be felt by those whom he leads. Leading soldiers and units to successfully accomplish the mission remains a command imperative; safeguarding soldiers is an inherent responsibility of command.

b. **Control.** Control is the regulation of forces and other battlefield operating systems (BOS) to accomplish the mission in accordance with the commander's intent. It is the science of defining limits, computing requirements, allocating resources, monitoring performance, and directing subordinate actions to accomplish the commander's intent.

c. **The Command and Control System.** The command and control (C2) system within an antiarmor unit is the arrangement of personnel, information management, procedures, and equipment and facilities essential to plan, prepare for, execute, and assess operations. The C2 system must be reliable, responsive, and durable. It must withstand crises, even the loss of the leader, and still continue to function. Although it is the most complex system in the unit, C2 must result in clear, concise instructions that focus the entire unit toward the objective.

2-2. CONCEPT OF COMMAND AND CONTROL

Historically, military commanders have employed variations of the two basic command and control concepts: detailed command and mission command.

a. **Detailed Command.** Detailed command centralizes information and decision-making authority. Orders and plans are detailed and explicit, and successful execution depends on strict obedience by subordinates with minimal decision making or initiative on their part. Detailed command emphasizes vertical, linear information flow where information flows up the chain of command and orders flow down.

b. **Mission Command.** Mission command concentrates on the objective of an operation and not on how to achieve that objective. It 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. Today's operational environment emphasizes the need for rapid decision-making and execution to include rapid response to changing situations. It stresses trust and mutual understanding among superiors and subordinates. Mission command accepts the uncertainty of war by reducing the need for complete certainty in order to act. Because mission command decentralizes decision making authority and grants subordinates significant freedom of action, it demands a leader who is thoroughly versed in Army doctrine and who is disciplined, informed, innovative, dynamic, audacious, confident, and competent.

2-3. LEADERSHIP

Leadership is the critical element of both the C2 system (personnel) and combat power. Through leadership, the commander inspires and directs his unit to complete demanding tasks in difficult situations. In addition, the following factors are essential to the company commander's ability to lead his company on the battlefield.

a. **Will.** Often the victor in battle is the unit that refuses to lose. Competent leaders and tough, realistic training are the keys to developing this determination. The leader must develop a "will to win" in his soldiers and his unit.

b. **Trust.** The leader must earn the trust of his soldiers. They must have confidence in his abilities. The leader also must trust his soldiers and develop a climate that allows subordinates to make decisions.

c. **Delegation.** After ensuring his subordinates are well trained, the leader must delegate the proper authority and freedoms to his men. He focuses his time and energy on what he determines as critical, and delegates the remainder to his subordinates.

d. **Discipline.** The leader instills discipline in his soldiers. Discipline ensures that proper standards are maintained in the absence of leader supervision. The decentralized operations conducted by antiarmor companies and platoons require self-discipline of every soldier in the unit.

2-4. FUNDAMENTALS OF COMMAND AND CONTROL

The following fundamentals describe methods of directing military operations that encourage and expect subordinates to take action consistent with the intent and concept of higher headquarters.

a. **Expect Uncertainty.** The leader must understand the environment of combat; the battle will be dynamic and non-linear. Communications will be degraded, and the chaos of battle will often prevent the commander from knowing what is happening beyond his own senses. The situation that exists during planning will likely change before execution.

b. **Reduce Leader Intervention.** The leader plans and directs operations to require the absolute minimum leader intervention during execution. When soldiers expect the leader to make the decision or initiate the action, they are reluctant to take action. When precise control is required for synchronization, such as an on-order task, the leader should also provide the subordinate the criteria for making the decision. Leaders must realize that some loss of precision is better than inactivity.

c. **Increase Subordinate Planning Time.** The commander ensures the effective use of all available planning time. Although the majority of the planning takes place at the battalion and company level, the antiarmor platoons, sections, and squads require extra time to conduct their rehearsals and inspections. A unit standing operating procedure (SOP) is a key tool for managing time well.

d. **Give Subordinates Maximum Freedom of Action.** Given the expected operational environment, leaders at every level avoid placing unnecessary limits on their soldiers' freedom of action. The leader at the point of decision must have the knowledge, the training, and the freedom to make the correct decision that supports the commander's intent.

e. **Lead Well Forward.** The leader locates where he can best fight his unit. This is determined by a number of factors. His leadership is most effective face-to-face when he can see the situation and his soldiers can see him. Since he cannot be everywhere, he focuses on the decisive action that will accomplish his mission. He normally locates with his main effort (the subordinate unit assigned the decisive action) to provide his leadership and to be in a position to shift or re-task the main effort.

2-5. COMMAND AND CONTROL RESPONSIBILITIES

Antiarmor company commanders and platoon leaders train and maintain their units to conduct sustained operations. All leaders must ensure that their soldiers are tactically and technically proficient in the weapons systems found in the unit.

a. **Antiarmor Company Commander.** The commander employs command and control to ensure the antiarmor company accomplishes its missions. He is also responsible for the tactical employment, training, administration, personnel management, and sustainment of his company. He must know the capabilities of his men and weapons systems and how to tactically employ them. The antiarmor commander exercises command through his subordinate leaders. In an airborne and air assault battalion or an SBCT, he serves as an advisor to the higher commander concerning employment of all antiarmor assets.

b. **Antiarmor Company Executive Officer.** The executive officer (XO) is the second in command of the company. He assists the company commander control the fires and movement of the antiarmor platoons. The XO frees the company commander of all distractions to allow the company commander to control the company’s most critical actions. (For example, the XO submits situation reports to the higher headquarters’ main command post, relays information to the company commander such as enemy and friendly situational updates, and communicates with adjacent units.) During preparation for combat operations, the XO serves as the company's primary CSS planner and makes the necessary coordination with the higher headquarters. He provides the company first sergeant with the CSS plan for execution.

c. **Antiarmor Company First Sergeant.** The first sergeant (1SG) is the senior noncommissioned officer (NCO) in the company and is normally the most experienced soldier in the company. He advises the company commander on tactical employment, and he is the expert on individual and NCO skills. He assists the company commander to plan, coordinate, and supervise all activities that support the mission. During execution, the 1SG is the primary CSS executor.

d. **Antiarmor Platoon Leader.** The antiarmor platoon leader (PL) is responsible for training, maintaining, and tactically employing the platoon. His responsibilities include planning, coordinating, and integrating the platoon's fires to fit the supported unit's tactical plan. He knows the abilities of his weapons systems and is skilled in their use. The platoon leader must also be proficient in calling for and adjusting indirect fires. He employs his platoon tactically based on orders from the commander (battalion, antiarmor company, or supported rifle company). In the light infantry battalion, he serves as an advisor to the battalion commander concerning employment of his platoon's weapons systems and all other antiarmor assets.

e. **Antiarmor Platoon Sergeant.** The antiarmor platoon sergeant (PSG) is normally the most experienced soldier in the platoon. He leads the elements of the platoon as directed by the platoon leader; he assumes responsibility of the platoon in the platoon leader's absence. The PSG is responsible for individual training, advising the platoon leader on tactical employment of the platoon's weapons systems, and helping to control the platoon during combat operations. He supervises equipment maintenance, supply, and casualty evacuation.

f. **Antiarmor Section Leader.** The section leader is responsible for the discipline and training of his two antiarmor squads and for the maintenance of his section's equipment. During operations, he selects the location of primary, alternate, and supplementary firing positions. He controls the section's fires and movement, and he ensures mutual support is achieved with other elements with which he is operating. He also serves as the squad leader for one of his squads.

g. **Antiarmor Squad Leader.** The squad leader is responsible for the discipline and training of his squad and the maintenance of his equipment. He is skilled in all aspects of his weapons systems. He employs his squad in accordance with orders from the section leader. He detects and identifies targets, issues fire commands, and controls the fires and movement of his squad.

2-6. COMBAT ORDERS

Combat orders focus on what tasks must be accomplished without dictating in detail how they will be done. Whenever possible, they are oral orders issued face-to-face on the ground where the fight will take place.

a. **Brevity and Clarity.** Combat orders require well-trained subordinates who understand their commanders' intent and concepts (two levels higher). Combat orders address only the required information. They avoid unnecessary detail and redundancy and do not restate doctrine or SOPs.

b. **Tailoring.** The leader determines exactly what he wants his unit to accomplish and clearly communicates these requirements to them. If one of his subordinates has not displayed the tactical competence to operate with a combat order, then the order must be tailored based on the training, experience, and capability of the subordinate leader receiving the order.

(1) This tailoring may include nothing more than providing additional instructions, establishing more restrictive control measures, or directing a specific use for one of his organic assets.

(2) A commander may detail exactly how the platoon leader will employ his entire platoon, clearly state the limits for using his initiative, and collocate himself or the company XO with this platoon. This should be only a short-term solution; leaders must be trained to meet their responsibilities.

Section II. TROOP-LEADING PROCEDURES

Troop-leading procedures (TLP) are a sequence of actions that enable the company commander (or platoon leader) to use available time effectively and efficiently in the planning, preparing, executing, and assessing of combat missions. Collectively, the TLP are a tool to assist leaders in making, issuing, and supervising operation orders. The TLP are integrally coupled with the military decision-making process (MDMP). The company commander and platoon leader must be knowledgeable of their information-gathering resources and must plan operations to maximize the communications that make access to this information possible. Beyond the communications, the need to apply both known and templated enemies in planning processes is paramount.

2-7. APPLICATION OF TROOP-LEADING PROCEDURES

The following discussion of troop-leading procedures (Figure 2-1) assumes that the company commander (or platoon leader) will plan in a time-constrained environment. As such, the suggested techniques are oriented to help him quickly develop and issue a combat order.

RECEIVE THE MISSION
ISSUE A WARNING ORDER
MAKE A TENTATIVE PLAN
INITIATE MOVEMENT
CONDUCT RECONNAISSANCE
COMPLETE THE PLAN
ISSUE THE OPERATIONS ORDER
SUPERVISE AND REFINE

Figure 2-1. Troop-leading procedures.

a. Troop-leading procedures are consistent with the MDMP described in FM 5-0 (FM 101-5). The two are not identical, however, because specific steps of the MDMP are designed and intended to help coordinate staff and commander responsibilities of units with staffs. While the antiarmor company commander and platoon leader have subordinate leaders who assist them with aspects of planning operations, these leaders are not a staff. This fact places the burden of planning on the shoulders of the company commander (or platoon leader). The TLP reflect this reality while incorporating the spirit, language, and general process of the MDMP to assist in the preparation of an operations order (OPORD).

b. The TLP are not a hard and fast set of rules. Rather, they provide a guide that the company commander (or platoon leader) applies in ways that are consistent with the situation, his experience, and the experience of his subordinate leaders. The tasks involved in some steps (such as issue the warning order, initiate movement, and conduct reconnaissance) may recur several times. The last step, the activities of supervising and refining the plan, occur throughout the troop-leading procedures. The following outline of the TLP assumes that the company commander (or platoon leader) will plan in a time-constrained environment. The suggested techniques can help him quickly develop and issue a combat order. The higher headquarters may issue two warning orders before the company commander (or platoon leader) begins his TLP.

(1) In accordance with FM 5-0, the warning order will address the following elements at a minimum: type of operation, general location of operation, any reconnaissance to initiate, any movement to initiate, and an initial timeline. The higher headquarters may issue additional information in the first warning order (for example, products from current staff or commander estimates). The leader will conduct his initial planning-time analysis, which allows him to determine the total amount of time to plan and prepare. This initial planning-time analysis is the basis for the detailed time analysis that will be conducted as planning continues. He analyzes the time his unit has available and prepares an initial time line. He should plan to use no more than one-third of the available planning time, thus leaving his subordinates with two-thirds of the available time. An effective technique to manage the available time is for the leader to issue his operations order in approximately one-fifth of the available planning time. This provides additional time for rehearsals without cutting into subordinate planning time. He should take into account ambient light effects for his timeline.

(2) The anitarmor company commander (or platoon leader) may issue a warning order immediately following the higher headquarters' initial warning order. He addresses the same elements of the higher headquarters' initial warning order in his initial warning order. The most important element of this warning order is his initial planning timeline. He may also pass on any other instructions or information that he thinks will assist his subordinates in preparing for the upcoming mission. If practical, he assembles his subordinate leaders to receive the warning order face-to-face from the actual terrain. If not practical, he may use a terrain model, sketch, or map. He may also use a digital information system (INFOSYS) such as Force XXI Battle Command Brigade and Below (FBCB2), if equipped. By quickly issuing his warning order the leader enables his subordinates to begin their own preparations while he develops the remaining warning orders and the OPORD. Warning orders, though not as detailed as an operations order, should follow the same five-paragraph format, providing as much information as possible with an initial timeline.

(3) The second warning order from the higher headquarters consists of the essential information derived from their mission analysis and the higher commander's guidance. It includes mission analysis results:

- Analysis of terrain.
- Enemy forces (paragraph 1a of the higher headquarters' OPORD to include the enemy situational template [SITEMP]).
- Higher headquarters' restated mission statement.
- Higher commander's intent.
- Area of operations (AO), area of influence, and area of interest.
- Commander's critical information requirements (CCIR).
- Risk guidance.
- Reconnaissance to initiate.
- Security measures.
- Deception guidance.
- Mobility/counter-mobility guidance.
- Specific priorities.
- Timeline.
- Guidance on rehearsals.

The higher headquarters may issue additional information in the second warning order (for example, friendly forces, paragraph 1b of the OPORD). The leader must understand the information given in higher headquarters' second warning order. He can conduct an assessment but will not complete a detailed analysis until he receives the mission. Depending on the situation, he may choose to issue an initial warning order to his subordinates following receipt of the higher headquarters' second warning order.

(4) The company commander (or platoon leader) may determine that he needs to issue a second warning order after receiving the higher headquarters' second warning order or after receiving other pertinent information. Since he does very little analysis with information received in the higher headquarters' second warning order, and depending on his situation, he may not issue the second company and or platoon warning order. He may choose instead to issue this information after receiving the higher headquarters' third warning order.

2-8. RECEIVE THE MISSION

As the title indicates, this step addresses the actions a company commander (or platoon leader) takes as he receives his mission. "Receiving" the mission may occur in one of several ways. It may begin with the receipt of a warning order from the higher headquarters, or it may not begin until he actually receives the higher headquarters' OPORD (which would be the case if the higher headquarters did not use warning orders prior to issuing the OPORD). In the most challenging situation, it may come about as a result of a change in the overall situation during execution. Besides receiving (or deducing) his mission during the first step of the TLP, the company commander (or platoon leader) must also assess the time he has available to prepare for and execute the mission. As a result of his time assessment, he prepares an initial timeline for planning and execution.

a. **Mission Analysis.** Although the focus of the first step of the TLP is on determining the unit mission and assessing the time available to accomplish the mission, this step also begins an activity called *mission analysis.* The company commander (or platoon leader) will not receive his mission until the higher headquarters produces its third warning order or the OPORD. For him, mission analysis is not as detailed as it is in the higher headquarters' MDMP. His mission analysis is essentially an analysis of METT-TC considerations. He does this in as much depth as time and quality of information allows. Analyzing the factors of METT-TC is a continuous process. He constantly receives information from the time that he begins planning through execution. During execution, his continuous analysis enables him to issue well-developed fragmentary orders. He must assess if the new information affects his mission and his plan. If it does, he then must decide how to adjust his plan to meet this new situation. He does not need to analyze the factors of METT-TC in any set order or sequence. How and when he analyzes each factor depends on when information is made available to him, his own experience, and preference. One technique is to parallel the TLP based on the products received from the higher headquarters' MDMP. Using this technique, he analyzes *Mission* first, *Terrain & Weather, Enemy*, *Troops & Support*, *Time,* and finally *Civil Considerations*. This is not a hard and fast set of rules. Different elements of information that come into the unit must be analyzed and assessed.

(1) ***Analysis of Mission*.** Leaders at every echelon must have a clear understanding of the mission, intent, and concept of the operation of the commanders one and two levels higher. This understanding makes it possible to exercise disciplined initiative. The company commander (or platoon leader) captures his understanding of what his unit is to accomplish in his restated mission statement. He takes six steps to write his restated unit mission statement. These steps include analyzing the higher headquarters' (*two levels up*) mission, intent and concept; the immediate higher headquarters' (*one level up*) mission, intent, and concept; and identifying specified, implied, and essential tasks and any constraints.

(a) *Higher Headquarters (Two Levels Up) Mission, Intent, and Concept***.** The antiarmor company commander (or platoon leader) understands this higher headquarters' concept of the operation. He identifies this headquarters' task and purpose and how his immediate higher headquarters is contributing to the fight. He also must understand the commander's intent (*two levels up*).

(b) *Immediate Higher Headquarters (One Level Up) Mission, Intent, and Concept***.** The antiarmor company commander (or platoon leader) understands the immediate headquarters' concept of the operation. He identifies this headquarters' task and purpose as well as his contribution to this fight. The company commander must clearly understand the commander's intent from the OPORD (*one level up*). Additionally, he identifies the task, purpose, and disposition for all adjacent maneuver elements under this headquarters' control.

(c) *Unit Mission.* The antiarmor company commander (or platoon leader) finds his unit's mission in the concept of the operation paragraph in the immediate higher headquarters' OPORD. The purpose of the main effort unit usually matches the purpose of the immediate higher headquarters. Similarly, supporting effort unit's purposes must relate directly to the main effort unit accomplishing its purpose. The company commander (or platoon leader) must understand how his antiarmor unit relates to the purposes of the other units. Finally, he determines his unit's mission essential tactical task. The unit must accomplish this task in order to accomplish the assigned purpose. He must understand why the commander (*one level up*) assigned his unit the particular tactical task and determine how it fits into the immediate higher headquarters' concept of the operation.

(d) *Constraints.* Constraints placed on the leader by a higher command to dictate an action or inaction restricts the freedom of action the subordinate leader has for planning by stating the things that he must or must not do. The company commander (or platoon leader) identifies all constraints the OPORD places on the unit's ability to execute its mission. There are two types of constraints: proscriptive (requirements for action) and prohibitive (requirements for inaction).

(e) *Identify Tasks.* The company commander (or platoon leader) must identify and understand the tasks required to accomplish a given mission. There are three different types of tasks: specified, implied, and essential.

- Specified Tasks. These are tasks specifically assigned to a unit by a higher headquarters. Paragraphs 2 and 3 of a higher headquarters' order or plan state specified tasks. Specified tasks may also be found in annexes and digital overlays (for example, "suppress enemy on OBJ FOX," "reconnoiter Route BLUE," "assist the forward passage of B Company," "send two soldiers to assist in the loading of ammunition").
- Implied Tasks. These are tasks that must be performed to accomplish a specified task but are not stated in a higher headquarters' order. Implied tasks are derived from a detailed analysis of the higher headquarters' order, the enemy situation and courses of action, and the terrain. Analysis of the unit's current location in relation to future areas of operation as well as the doctrinal requirements for each specified task might provide implied tasks. Only those tasks that require allocation of resources should be retained.
- Essential Tasks. These tasks are important for the success of the unit. They are derived from a review of the specified and implied tasks. An essential task that must be executed to accomplish the assigned purpose is the mission essential task.

(f) *Restated Mission Statement*. The leader prepares his restated mission statement expressed around the five W's: *who*, *what*, *when*, *where*, and *why*. The "*who"* is the company and or platoon; the "*what"* is the unit's mission essential task. The "*when"* is given in the higher headquarters' OPORD; the "*where"* is the objective or location taken from the higher headquarters' OPORD; and the "*why"* is the company and or platoon purpose taken from the higher headquarters' concept of the operation. An example of an antiarmor company restated mission statement follows:

> **EXAMPLE:** D/1-52 IN defends from BP D-1 NLT 012000 October__ to destroy enemy MRB in EA FOX to prevent enemy forces from bypassing 2-52 IN, the brigade main effort.

(2) ***Analysis of Terrain and Weather.*** If the higher headquarters has developed a modified combined obstacle overlay (MCOO), the company commander (or platoon leader) can quickly accomplish his analysis of the terrain. From the MCOO he will already have an appreciation for the general nature of the ground and the effects of weather. However, he must conduct his own detailed analysis to determine how terrain and weather will uniquely affect the antiarmor unit's mission and the enemy. He must go beyond merely passing along the MCOO to his subordinate leaders and making a general observation of the terrain (for example, this is high ground). He must arrive at significant

conclusions about how the terrain and weather will affect the enemy and the unit. Most importantly, the company commander (or platoon leader) will apply these conclusions when he develops courses of action for both enemy forces and his unit.

(a) *Classifying Terrain Mobility.* Terrain mobility is classified in one of four categories: unrestricted, restricted, severely restricted, and complex.

- Unrestricted. This terrain is free of any restrictions to movement; no actions are required to enhance mobility. This type of terrain generally allows wide maneuver and offers unlimited travel over well-developed road networks.
- Restricted. This terrain hinders movement to some degree. Little effort is needed to enhance mobility, but units may need to detour frequently. They may have difficulty maintaining optimum speed, moving in some types of combat formations, or transitioning from one formation to another.
- Severely restricted. This terrain severely hinders or slows movement in combat formations unless some effort is made to enhance mobility. It may require commitment of engineer forces to improve mobility, or it may require deviation from doctrinal formations and or deviation from doctrinal rates of march.
- Complex. Complex terrain includes two or more of the traditional classifications of terrain. For example, complex terrain may have an area of forest that is restricted along with an urban area that is severely restricted.

(b) *Prioritizing Terrain Analysis.* Limited available planning time may force the company commander (or platoon leader) to prioritize his terrain analysis. For example, in the conduct of an attack, an antiarmor company commander may prioritize the area immediately around the objective for analysis, followed by the company's specific axis leading to the objective. Given more time, he may then analyze the remainder of his company's area of operation and area of interest.

(c) *Using Visual Aids.* The company commander (or platoon leader) prepares some sort of visual aid to depict and explain the results of his analysis for his subordinates so they can understand his conclusions about the effects that the terrain and weather will have on the mission. This visual aid could be a hand drawn overlay for a map sheet, or it may be a terrain model. The visual aid may also be FBCB2, if available. Whatever the chosen method, he must include graphical depictions of terrain mobility classification, key terrain, inter-visibility (IV) lines, known obstacles, and avenues of approach and mobility corridors.

(d) *Using OAKOC.* The military aspects of terrain (OAKOC), Figure 2-2, are used to analyze the ground. The sequence used to analyze the military aspects of terrain can vary. The leader may prefer to determine *Obstacles* first, *Avenues of Approach* second, *Key Terrain* third, *Observation and Fields of Fire* fourth, and *Cover and Concealment* last. For each aspect of terrain, the company commander (or platoon leader) determines its effect on both friendly and enemy forces. These effects translate directly into conclusions that can be applied to either friendly or enemy courses of action. One technique to analyze terrain is to use a matrix. See Figure 2-3 (Analysis of Terrain Matrix).

OAKOC

OBSERVATION AND FIELDS OF FIRE
AVENUES OF APPROACH
KEY TERRAIN
OBSTACLES
COVER AND CONCEALMENT

Figure 2-2. Military aspects of terrain.

		Effects	Conclusions
Obstacles		Friendly	
		Enemy	
Avenues of Approach		Friendly	
		Enemy	
Key Terrain #1	Observation	Friendly	
		Enemy	
	Fields of Fire	Friendly	
		Enemy	
	Cover	Friendly	
		Enemy	
	Concealment	Friendly	
		Enemy	

Figure 2-3. Analysis of terrain matrix.

(e) *Obstacles*. The leader first identifies existing and reinforcing obstacles in his area of operation that limit mobility with regards to the mission. Existing obstacles include, but are not limited to, the following:

- Ravines.
- Gaps and ditches over 3 meters wide.
- Tree stumps and large rocks over 18 inches high.
- Forests with trees 8 inches or more in diameter with less than 4 meters between trees.
- Man-made existing obstacles (ie. buildings or power and telephone lines).

Reinforcing obstacles include, but are not limited to, the following:

- Minefields (conventional and situational).
- Antitank ditches.
- Wire obstacles.

Figure 2-4, page 2-12, lists several offensive and defensive considerations the antiarmor company commander or platoon leader can include in his analysis of obstacles and restricted terrain.

OFFENSIVE CONSIDERATIONS

- HOW IS THE ENEMY USING OBSTACLES AND RESTRICTED TERRAIN FEATURES? WHERE DOES HE WANT ME TO GO?
- WHAT IS THE COMPOSITION OF THE ENEMY'S REINFORCING OBSTACLES?
- HOW WILL OBSTACLES AND TERRAIN AFFECT MY MOVEMENT AND OR MANEUVER?
- IF NECESSARY, HOW CAN THE COMPANY AVOID SUCH FEATURES?
- HOW DO WE DETECT AND, IF DESIRED, BYPASS THE OBSTACLES?
- WHERE HAS THE ENEMY POSITIONED WEAPONS TO COVER THE OBSTACLES, AND WHAT TYPE OF WEAPONS IS HE USING?
- IF I MUST SUPPORT A BREACH, WHERE IS THE EXPECTED BREACH SITE AND FROM WHERE WILL THE ENEMY OVERWATCH THE OBSTACLE?

DEFENSIVE CONSIDERATIONS

- WHERE DOES THE ENEMY WANT TO GO? WHERE CAN I KILL THE ENEMY?
- HOW WILL EXISTING OBSTACLES AND RESTRICTED TERRAIN AFFECT THE ENEMY?
- HOW CAN I USE THESE FEATURES TO FORCE THE ENEMY INTO MY ENGAGEMENT AREA, DENY HIM AN AVENUE, OR DISRUPT HIS MOVEMENT?
- HOW WILL THE TERRAIN AFFECT THE EMPLOYMENT OF TOW MISSILE, M2, OR MK19?

Figure 2-4. Considerations in analysis of obstacles and restricted terrain.

(f) *Avenues of Approach.* An avenue of approach is an air or ground route of an attacking force leading to an objective or key terrain. Avenues of approach are classified by type (mounted, dismounted, air, or subterranean), formation, and speed of the largest unit that can travel along it. First, the company commander (or platoon leader) must identify mobility corridors, if not provided by the higher headquarters. Mobility corridors are areas where a force can move in a doctrinal formation at a doctrinal rate of march; they are classified by type and size of force and formation employed.

Example 1: A motorized rifle platoon (MRP) moving in column (MRP-Column).
Example 2: An enemy squad moving in a wedge (dismounted SQD-Wedge)

The company commander groups mutually supporting mobility corridors to form an avenue of approach. If mutually supporting mobility corridors do not exist, then a single mobility corridor may become an avenue of approach. Avenues of approach are classified in the same manner as a mobility corridor. After identifying these avenues of approach, he must evaluate each one and reach a conclusion as to its importance to the situation. Figure 2-5 lists several offensive and defensive considerations that an antiarmor company commander (or platoon leader) can include in his evaluation of avenues of approach.

OFFENSIVE CONSIDERATIONS

- HOW CAN I USE EACH AVENUE OF APPROACH TO SUPPORT MY MOVEMENT AND MANEUVER?
- HOW WILL EACH AVENUE SUPPORT MOVEMENT TECHNIQUES, FORMATIONS, AND (ONCE WE MAKE ENEMY CONTACT) MANEUVER?
- WILL VARIATIONS IN TRAFFICABILITY OR LANE WIDTH FORCE CHANGES IN FORMATIONS OR MOVEMENT TECHNIQUES OR REQUIRE CLEARING OF RESTRICTED TERRAIN?
- WHAT ARE THE ADVANTAGES AND DISADVANTAGES OF EACH AVENUE?
- WHAT ARE THE ENEMY'S LIKELY CONUNTERATTACK ROUTES?
- WHAT LATERAL ROUTES COULD WE USE TO SHIFT TO OTHER AXES, AND WHICH ONES COULD THE ENEMY USE TO THREATEN OUR FLANKS?
- HOW WILL EACH AVENUE OF APPROACH AFFECT THE RATE OF MOVEMENT OF EACH TYPE OF FORCE?

DEFENSIVE CONSIDERATIONS

- WHAT ARE ALL LIKELY ENEMY AVENUES INTO MY SECTOR?
- HOW CAN THE ENEMY USE EACH AVENUE OF APPROACH?
- WHAT LATERAL ROUTES COULD THE ENEMY USE TO THREATEN OUR FLANKS?
- WHAT AVENUES WOULD SUPPORT A FRIENDLY COUNTERATTACK OR REPOSITIONING OF FORCES?

Figure 2-5. Considerations in avenue of approach analysis.

(g) *Key Terrain.* The company commander (or platoon leader) must identify key terrain. Key terrain is any location or area of which the seizure, retention, or control affords a marked advantage to either combatant. It is a conclusion rather than an observation; a prominent hilltop overlooking an avenue of approach, for example, may or may not be key terrain. Even if the hill offers clear observation and fields of fire, it is of no marked advantage to the unit that controls it if the opposition can easily bypass it on another avenue of approach. On the other hand, if the hilltop affords cover and concealment, observation, and good fields of fire on multiple avenues of approach or is the only avenue of approach in the area, the terrain offers a definite advantage to whoever controls it. Furthermore, an area where several trails converge may be key terrain for an antiarmor platoon, whereas an area in which several battalion-size avenues of approach join may prove key for an antiarmor company. Figure 2-6, page 2-14, lists several considerations that can be included in his analysis of key terrain.

- He must assess what terrain is key to his mission accomplishment. An example of key terrain for an antiarmor company in the attack could be a small hill or tree line that overlooks the enemy's reverse slope defense. Controlling this area may be critical in establishing a support-by-fire position to protect the breach force.
- He also must determine if any ground is *decisive terrain*. This is key terrain for which the seizure, retention, or control is necessary for mission accomplishment. Decisive terrain is not present in every situation. By determining that terrain is decisive, he recognizes that seizing or retaining it is an absolute requirement for successful accomplishment of the mission.

NOTE: An SBCT antiarmor company must address communications coverage. The ability to develop and share a plan using the available digital INFOSYS

(FBCB2) requires the antiarmor company commander to operate within the ability of that communications system. The decision to operate outside of communications coverage must be a deliberate decision and not random chance.

TACTICAL CONSIDERATIONS

- WHAT TERRAIN IS IMPORTANT FOR FRIENDLY OBSERVATION, BOTH FOR COMMAND AND CONTROL AND FOR CALLING FOR FIRES?
- WHAT TERRAIN IS IMPORTANT TO THE ENEMY AND WHY? IS IT IMPORTANT TO ME?
- WHAT TERRAIN HAS THE HIGHER HEADQUARTERS DETERMINED TO BE KEY TERRAIN? IS THIS TERRAIN IMPORTANT TO THE ENEMY?
- IS THE ENEMY CONTROLLING THIS KEY TERRAIN? AM I CONTROLLING THIS KEY TERRAIN?
- HOW DO I GAIN OR MAINTAIN CONTROL OF KEY TERRAIN?
- WHAT TERRAIN IS IMPORTANT FOR COMMUNICATIONS NODES THAT MAY DICTATE THE EMPLOYMENT OF DIGITAL COMMUNICATIONS EQUIPMENT (PRIMARILY IBCT ANTIARMOR COMPANY?

Figure 2-6. Considerations in key terrain analysis.

(h) *Observation and Fields of Fire.* The company commander (or platoon leader) must identify locations along each avenue of approach that provide clear observation and fields of fire for both the attacker and the defender. He analyzes the area surrounding key terrain, objectives, engagement areas, and obstacles. He locates IV lines (terrain that inhibits observation from one point to another) and assesses the ability of the attacking force to overwatch or support movement (with direct fire). In analyzing fields of fire, he focuses on both the friendly and enemy potential to cover terrain (especially avenues of approach and key terrain) with direct fires. Additionally, he must identify positions that enable artillery observers to call indirect fire. Whenever possible, he conducts a reconnaissance of the ground from both enemy and friendly perspectives. He might conduct this reconnaissance personally, by map, or with his subordinate units. This reconnaissance helps him to see the ground in a more objective manner and to see how the ground affects both enemy and friendly forces (Figure 2-7).

OFFENSIVE CONSIDERATIONS

- ARE THERE CLEAR OBSERVATION AND FIELDS OF FIRE LOCATIONS AVAILABLE ON OR NEAR THE OBJECTIVE FOR ENEMY OBSERVERS AND WEAPON SYSTEMS?
- WHERE CAN I SUPPORT THE MOVEMENT OF A FRIENDLY FORCE WITH DIRECT FIRES (TOW, M2, AND MK19)?
- WHERE CAN THE ENEMY CONCENTRATE FIRES?
- WHERE WILL THE ENEMY BE UNABLE TO CONCENTRATE FIRES?
- WHERE IS THE ENEMY VULNERABLE?
- WHERE CAN FRIENDLY FORCES CONDUCT SUPPORT-BY-FIRE OR ATTACK-BY-FIRE?
- WHERE ARE THE NATURAL TARGET REFERENCE POINTS (TRPS)?
- WHERE DO I POSITION INDIRECT FIRE OBSERVERS?

DEFENSIVE CONSIDERATIONS

- WHAT LOCATIONS AFFORD CLEAR OBSERVATION AND FIELDS OF FIRE ALONG THE ENEMY AVENUES OF APPROACH?
- WHERE DO I WANT TO DESTROY THE ENEMY? CAN I OBSERVE AND FIRE ON THAT LOCATIC WITH 2/3 OF MY COMBAT POWER?
- HOW OBVIOUS ARE THESE POSITIONS TO THE ENEMY?
- WHERE WILL THE ENEMY SET FIRING LINES AND ANTITANK WEAPONS?
- WHERE WILL I BE UNABLE TO MASS FIRES?
- WHERE IS THE DEAD SPACE IN MY SECTOR? WHERE AM I VULNERABLE?
- WHERE ARE THE NATURAL TRPS?
- WHERE DO I POSITION INDIRECT FIRE OBSERVERS?

Figure 2-7. Considerations in analysis of observation and fields of fire.

(i) *Cover and Concealment.* The company commander (or platoon leader) looks at the terrain, foliage, structures, and other features along avenues of approach and on objectives or key terrain to identify sites that offer cover (protection from the effects of direct and indirect fire) and concealment (protection from observation). In the defense, weapon positions must be both lethal and survivable, and effective cover and concealment is just as vital as clear fields of fire (Figure 2-8).

OFFENSIVE CONSIDERATIONS

- WHAT AXES AFFORD BOTH CLEAR FIELDS OF FIRE AND EFFECTIVE COVER AND CONCEALMENT?
- WHICH TERRAIN PROVIDES BOUNDING ELEMENTS WITH COVER AND CONCEALMENT WHILE FACILITATING LETHALITY?

DEFENSIVE CONSIDERATIONS

- WHAT LOCATIONS AFFORD EFFECTIVE COVER AND CONCEALMENT AS WELL AS GOOD OBSERVATION AND FIELDS OF FIRE?
- HOW CAN FRIENDLY AND ENEMY FORCES USE THE AVAILABLE COVER AND CONCEALMENT?

Figure 2-8. Considerations in analysis of cover and concealment.

(j) *Weather Analysis.* There are five military aspects of weather: visibility, winds, precipitation, cloud cover, and temperature and humidity. Consideration of the effects of weather is an essential part of the company commander's mission analysis. The commander must go beyond merely making observations; he must arrive at significant conclusions about how the weather will affect the visibility, mobility, and survivability of his company and the enemy. The company commander (or platoon leader) reviews the conclusions from his higher commander and identifies his own critical conclusions about the five military aspects of weather. He must apply the results of his analysis when he develops friendly and enemy courses of action.

(k) *Visibility.* The company commander (or platoon leader) identifies critical conclusions about visibility factors (such as light data, fog, and smog) and battlefield obscurants (such as smoke and dust). He considers light data and identifies critical conclusions about beginning morning nautical twilight (BMNT), sunrise (SR), sunset (SS), end of evening nautical twilight (EENT), moonrise (MR), moonset (MS), and percentage of illumination. Some additional visibility considerations include--

- Will the sun rise behind my attack? Will I attack toward the sunrise?
- How can I take advantage of the limited illumination?
- How will this affect friendly and enemy target acquisition?
- Will the current weather favor the use of smoke to obscure during breaching?
- Will fog affect friendly and enemy target acquisition?

(l) *Winds.* The company commander (or platoon leader) identifies critical conclusions about wind factors (such as direction and speed) Some wind considerations include--

- Will wind speed cause smoke to dissipate quickly?
- Will wind speed and direction favor enemy use of smoke?
- Will wind speed and direction affect the employment of TOW missiles?

(m) *Precipitation.* The company commander (or platoon leader) identifies critical conclusions about precipitation factors (such as type, amount, and duration). Some precipitation considerations include--

- How will precipitation affect the mobility of the unit?
- How can precipitation add to the unit's ability to achieve surprise?

(n) *Cloud Cover.* The company commander (or platoon leader) identifies critical conclusions about cloud cover (such as limits on illumination and solar heating of targets). Some cloud cover considerations include--

- How will cloud cover affect unit operations at night? How will it affect the enemy?
- How will cloud cover affect the target acquisition?

(o) *Temperature and Humidity.* The company commander (or platoon leader) identifies critical conclusions about temperature factors (such as high and low temperatures and infrared crossover times) and battlefield factors (such as use of smoke or chemicals). Some temperature considerations --

- How will temperature (hot or cold) and humidity affect the rate of march for the unit?
- How will temperature (hot or cold) and humidity affect the soldiers and equipment?
- Will temperatures and humidity favor the use of non-persistent chemicals?

(3) ***Enemy Analysis***. Analyzing the enemy consists of seven steps: doctrinal analysis, composition, disposition, strength, capabilities, company-level enemy SITEMP, and

initial priority intelligence requirements (PIR). The critical outcome of analyzing the enemy is for the company commander (or platoon leader) to identify the enemy's weaknesses so that he might exploit them by applying overwhelming combat power to achieve his purpose. He must know how the enemy will fight and the ground where the fight will occur. He must understand what is actually known of the enemy and what is merely templated. Without this appreciation, it is possible to develop an erroneous plan that is based solely on assumptions and therefore not a reliable prediction of what will occur. The company commander must understand the assumptions the battalion (or SBCT) S2 used to portray the enemy's courses of action. Furthermore, his own assumptions about the enemy must be consistent with those of his higher commander.

NOTE: In analyzing the enemy, the company commander (or platoon leader) must understand the intelligence preparation of the battlefield (IPB). Although he does not prepare IPB products for his subordinates, he must be able to use the products of the higher headquarters' IPB effectively

(a) *Doctrinal Analysis (How the Enemy Will Fight).* It is not enough simply to know the number and types of vehicles, soldiers, and weapons the enemy has. The company commander (or platoon leader) must thoroughly understand when, where, and how the enemy prefers or tends to use the assets he possesses. A doctrinal template is a visual illustration of how the enemy force might look and act without the effects of weather and terrain. He looks at specific enemy actions during a given operation (such as defense out of contact, security zone defense, movement to contact, or asymmetric operations) and uses the appropriate doctrinal template to gain insights into how the enemy may fight. Likewise, he must understand enemy doctrinal objectives. In doctrinal terms, he asks: Is the enemy oriented on the terrain (for example, a forward detachment), on his own force (such as an advance guard), or on friendly forces (as in a security zone)? What effect will this have on the way the enemy fights? As the global situation changes, however, the possibility increases of fighting adversaries with no structured doctrine. Therefore, the process of templating the enemy would be somewhat limited. In such a situation, an antiarmor company commander (or platoon leader) must rely solely on information provided by the battalion or brigade reconnaissance assets. He also may make sound assumptions about the enemy, human nature, and local culture.

(b) *Composition.* His analysis must determine the types of vehicles, soldiers, and equipment the enemy could use against his unit. From the enemy forces paragraph (1a) or the intelligence annex of the higher headquarters' OPORD, he identifies the task and purpose of the enemy elements.

(c) *Disposition.* From higher headquarters' information, he determines how the enemy is (or might be) arrayed. Next, he determines the enemy's form of maneuver or defensive technique. If available, he determines from what echelon force the enemy comes. He determines the disposition for the next two higher enemy elements.

(d) *Strength.* He identifies the enemy's strength by unit. He can obtain this information by translating percentages given from higher headquarters to the actual numbers in each enemy element.

(e) *Capabilities.* Based on the S2's assessment and the enemy's doctrine and current location, the antiarmor company commander (or platoon leader) must determine the enemy's capabilities. This also includes studying the maximum effective range for each weapon system, doctrinal rates of march, and associated timelines to perform certain tasks. One technique is to use the BOS as a checklist to address every significant element the enemy brings to the fight. The antiarmor company commander (or platoon leader) determines the capabilities of the next higher enemy element. These capabilities should include reasonable assets the next higher element, or other higher enemy headquarters, may provide. This should include, but is not limited to, employment of reserves, use of chemical weapons, artillery and or mortar locations and ranges, and employment of reconnaissance assets.

(f) *Enemy Situation Template (SITEMP).* To identify how the enemy will potentially fight, the company commander (or platoon leader) weighs the result of his analysis of terrain and weather against the higher headquarters’ SITEMP. The refined product is a company/platoon SITEMP--a visual/graphic depiction of how the company commander (or platoon leader) believes the enemy will fight under specific battlefield conditions. This SITEMP is portrayed one echelon lower than that developed by the higher headquarters’ S2. For example, if a battalion SITEMP identifies a motorized rifle platoon on the company’s objective, the company commander, using his knowledge of both the enemy’s doctrine and the terrain, develops a SITEMP that positions individual vehicles from the MRP and possibly individual fighting positions or trenches in the platoon’s defense. This SITEMP includes the likely range fan of the enemy’s weapons and any tactical and protective obstacles, either identified or merely templated, which support the defense. Figure 2-9 depicts recommended SITEMP items. It is important to remember that the antiarmor company commander (or platoon leader) must not develop his SITEMP independently of the S2's product. The product must reflect the results of reconnaissance and shared information. Differences between the SITEMPs must be resolved before the antiarmor company commander (or platoon leader) may continue with his analysis of the enemy. Finally, given the scale with which the antiarmor company commander (or platoon leader) often develops his SITEMP, a 1:50,000 scaled map, it is advisable to transfer the SITEMP to a large-scale sketch for briefing purposes when the situation allows. This is not for analysis, but to enable subordinates to see the details of the anticipated enemy course of action (COA). Once he briefs the enemy analysis to his subordinates, the company commander (or platoon leader) must ensure they understand what is known, what is suspected, and what is merely templated (estimated). Unless given the benefit of reconnaissance or other intelligence (or digital enablers), his SITEMP is only an "estimate" of how the enemy may dispose himself. He must not take these as facts. Reconnaissance is critical in developing the best possible enemy scenario.

DEFENSE	OFFENSE
PRIMARY/ALTERNATE/SUBSEQUENT POSITIONS	ATTACK FORMATIONS
ENGAGEMENT AREAS	AXES OF ADVANCE
INDIVIDUAL VEHICLES	FIRING LINES
CREW-SERVED WEAPONS	OBJECTIVES
TACTICAL AND PROTECTIVE OBSTACLES	RESERVE FORCE COMMITMENT
TRENCHES	PLANNED INDIRECT FIRE TARGETS
PLANNED INDIRECT FIRE TARGETS	SITUATIONAL OBSTACLES
OBSERVATION POSTS	RECONNAISSANCE OBJECTIVES
COMMAND AND CONTROL POSITIONS	RECONNAISSANCE FORCE ROUTES
FPF AN FPL	PHASE LINES
LOCATION OF RESERVES	PLANNNED POINT OF PENETRATION
ROUTES FOR RESERVE COMMITMENT	
TRAVEL TIME FOR RESERVE COMMITMENT	
BATTLE POSITIONS/STRONGPOINTS/SECTORS	
SECTORS OF FIRE	

Figure 2-9. Recommended SITEMP items.

(g) *Initial Priority Intelligence Requirements.* The company commander will develop his initial PIR. PIR are defined as information about the enemy that lead to a critical decision by a commander. Answering the PIR will allow the commander to clarify the enemy situation. Although the company commander's PIR will help clarify the enemy situation for him, they usually lead to answering the battalion commander's PIR. The antiarmor platoon leader in a light infantry battalion will typically use the battalion commander's PIR rather than developing his own.

(4) ***Troop Analysis.*** Perhaps the most critical aspect of mission analysis is determining the combat potential of one's own force. The company commander (or platoon leader) must realistically and unemotionally determine all available resources and any new limitations based on level of training or recent fighting. This includes troops who are either attached to or in direct support of his unit. He must know the status of his soldiers' morale, their experience and training, and the strengths and weaknesses of subordinate leaders. The assessment includes knowing the strength and status of his soldiers and their equipment as well as understanding the full array of assets that are in support of the unit. He must know, for example, how much indirect fire, by type, is available and when it will become available.

(5) ***Time Analysis.*** As addressed in the first step of the TLP, time analysis is a critical aspect to planning, preparation, and execution. The company commander (or platoon leader) must not only appreciate how much time is available. He must also be able to appreciate the time-space aspects of preparing, moving, fighting, and sustaining. He must be able to see his own tasks and enemy actions in relation to time. For example, he must be able to assess the impact of limited visibility conditions on the troop-leading procedures. He must know how long it takes under such conditions to prepare for certain tasks--such as order preparation, rehearsals, and backbriefs--and to complete other time-sensitive preparations for subordinate elements. He must understand how long it takes to deploy a support-by-fire element and determine the amount of ammunition that is needed to sustain the support for a specific period of time. He must know how long it takes to assemble a bangalore torpedo and to breach a wire obstacle. Most importantly, as events occur, he must adjust his appreciation of time available to him and assess its impact on

what he wants to accomplish. Finally, he must update previous timelines for his subordinates, listing all events that affect the unit and its subordinate elements. Figure 2-10 provides an example of a company timeline.

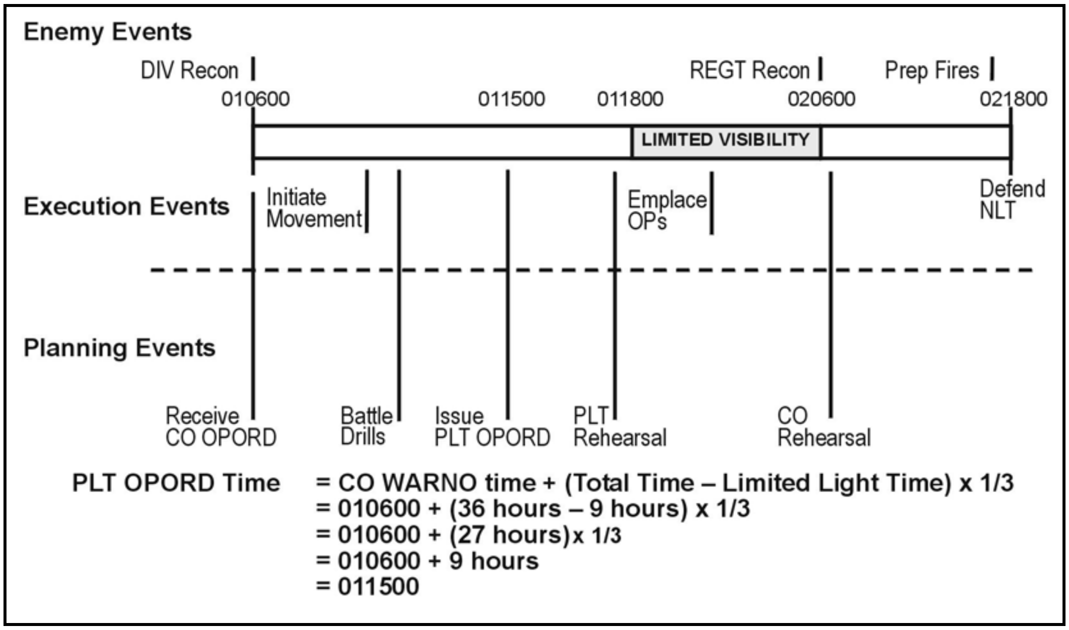


Figure 2-10. Example of a company timeline.

(6) ***Civil Considerations.*** The higher headquarters will provide the company commander (or platoon leader) with civil considerations that may affect the antiarmor company and or platoon missions. The company commander (or platoon leader) must also identify any civil consideration that may affect only his mission. These may include refugee movement, humanitarian assistance requirements, or specific requirements related to the rules of engagement (ROE) or rules of interaction (ROI).

(7) ***Summary of Mission Analysis.*** The end result of mission analysis is the development of a number of insights and conclusions regarding how the factors of METT-TC affect accomplishment of the unit's mission. From these insights and conclusions, the company commander (or platoon leader) derives a restated mission, an initial intent (only for a company commander), an initial risk assessment, and possibly a decisive point. He uses these to develop courses of action, which are possible ways to accomplish his mission.

(a) *Commander's Intent.* The commander's intent is a clear, concise statement of what the force must do to succeed with respect to the enemy, terrain, and desired end state. It provides the link between the mission and the concept of operations by stating the key tasks that, along with the mission, are the basis for subordinates to exercise disciplined initiative when unanticipated opportunities arise or when the original concept of operation no longer applies. Key tasks are those that must be performed by the unit or conditions that must be met to achieve the stated purpose of the operation. Key tasks are not tied to a specific course of action. They are not limited to "tactical tasks." The operation's tempo, duration and effect on the enemy, and the terrain that must be controlled, are examples of key tasks. The commander's intent does not include the method by which the force will get from its current state to the end state. The method is the concept of operations. Nor does the intent contain "acceptable risk." Risk is addressed in courses of action. Figure 2-11 shows an example of key tasks related to enemy, terrain, and desired end state. An example of commander's intent follows.

> **Commander's Intent**: *All enemy forces on OBJ ATLANTA destroyed; company controls west side of Bush Hill; company is in defensive posture NLT 121400XX able to defeat enemy CATK in EA RED; 52nd ID (M) passed through CP2 without significant delay.*

KEY TASKS IN RELATION TO--		
Enemy: • All enemy forces on OBJ ATLANTA destroyed. • Enemy forces fixed in EA DOG. • Enemy reconnaissance forces destroyed prior to reaching PL DOG. • Enemy unable to mass greater than two MRPs against BN ME.	**Terrain**: • Company controls west side of Bush Hill NLT 231000 XX. • Major chokepoints along RT BLUE cleared of obstacles and enemy forces. • Company reaches PL DOG NLT 210600 XX.	**Desired End State**: Company in defensive posture NLT 121400 XX, able to destroy enemy counterattack in EA RED. 52 ID (M) passed through CP2 without significant delay.

Figure 2-11. Example of key tasks.

(b) *Risk Assessment.* Risk assessment is the identification and assessment of hazards that allows a commander to implement measures to control hazards (refer to Appendix B). Identification and assessment are the first two steps of the risk management process. Risk management is conducted to protect the force and increase the chance of mission accomplishment. The leader must consider two types of risk: tactical and accident. Tactical risk is associated with hazards that exist due to the presence of the enemy on the battlefield. The consequences of tactical risk take two major forms:

- Enemy action in an area where the leader has accepted risk (such as an enemy attack where the friendly commander has chosen to conduct economy of force operations).
- Lost opportunity (such as moving across restricted terrain and then being unable to mass effects of combat power because of inability to traverse the terrain rapidly).

Accident risk includes all operational risk considerations other than tactical risk and can include activities associated with hazards concerning friendly personnel, equipment readiness, and environmental considerations. Fratricide and the inability to complete a planned air movement because of weather conditions are two examples of accident risk. The leader must identify risks based on the results of his mission analysis, decide which risks he is willing to accept, and incorporate measures that abolish or mitigate the consequences of the identified risks into his courses of action.

2-9. ISSUE A WARNING ORDER

After the company commander or platoon has determined his unit's mission and assessed the time available for planning, preparing for, and executing the mission, he should immediately issue a warning order to his subordinates. In addition to telling his subordinates of the unit's new mission, the warning order also gives them his planning timeline. He also may communicate any other instructions or information that he thinks will assist them in preparing for the new mission. This includes any information on the enemy and the nature of the higher headquarters' overall plan and any specific instructions or rehearsal tasks for preparing subordinate units for the mission. The most important thing is not to waste any time in issuing the initial warning order. If and when more information becomes available, he can--and should--issue additional warning orders. By issuing the initial warning order as quickly as possible, he enables his subordinates to begin their own planning and preparation (parallel planning) while he begins to develop the OPORD.

2-10. MAKE A TENTATIVE PLAN

In a time-constrained environment, a company commander (or platoon leader) typically will develop only one course of action; however, as time permits, he may develop as many COAs as possible to allow comparison. He will begin this step of the TLP after he issues his warning order and typically after he has received higher headquarters' third warning order. He does not need to wait for a complete OPORD before beginning his own COA development.

a. **COA Development.** The purpose of COA development is to determine one or more ways to accomplish the mission that are consistent with the immediate higher commander's intent. A COA describes how the unit might generate the effects of overwhelming combat power against the enemy at the decisive place with the least friendly casualties. Each COA the company commander (or platoon leader) develops must be detailed enough to clearly describe how he envisions using his antiarmor assets and combat multipliers to achieve the unit's mission-essential task and purpose. To develop a COA, he focuses on the actions the unit must take at the decisive point and works backward to his start point. He should develop several COAs, if time and the situation permit. A legitimate COA must be--

- Suitable. If successfully executed, the COA will accomplish the mission consistent with the higher commander's concept and intent.
- Feasible. The unit has the technical and tactical skills and resources to successfully accomplish the COA.
- Acceptable. The COA minimizes friendly casualties.
- Distinguishable. Each COA must be sufficiently different from the others to justify full development and consideration.
- Complete. The COA must cover the operational factors of *who*, *what*, *when*, *where*, and *how*, and address the mission from its start point to its conclusion.

The COA also must address the doctrinal aspects of the mission. For example, in the attack against a defending enemy, the COA must address the movement to, deployment against, assault of, and consolidation upon, the objective.

(1) ***Analyze Relative Combat Power.*** The purpose of this step is to compare combat power of friendly and enemy forces. It is not merely a calculation and comparison of

friendly and enemy weapons numbers or units with the aim of gaining a numerical advantage. Using the results of all previous analyses done during mission analysis, the company commander (or platoon leader) compares his unit's combat power strengths and weaknesses with those of the enemy. He seeks to calculate the time and manner in which his force (and the enemy) can maximize the effects of maneuver, firepower, protection, leadership, and information, in relation to the specific ground, disposition, and composition of each force. In short, he is trying to determine where, when, and how his unit's combat power (the effects of maneuver, firepower, protection, leadership, and information) can overwhelm the enemy's ability to generate combat power. Where and when this occurs is the decisive point. Using a matrix is one technique to assist in organizing his analysis (Figure 2-12). The matrix allows him to identify conclusions that he can apply to the development of his COA. The conclusions from his analysis of combat power are not COA specific, but rather apply to all COAs he may develop. Once he has completed his relative combat power analysis (RCPA), he attempts to determine a decisive point (if he has not done so already). He does this by considering the unit's mission, the terrain, and the enemy, seeking to find a place in time or space where he can focus overwhelming combat power to accomplish the unit's assigned purpose. He must understand the strengths and vulnerabilities of his unit and the enemy. The RCPA, as a tool, should lead him to a better understanding of when, where, and how to apply his combat power to exploit a weakness or relative weakness of the enemy. This process points the way to a potential decisive point, tactics, or techniques to be used when generating options.

Combat Power	Friendly Strengths	Enemy Weaknesses	Friendly Weaknesses	Enemy Strengths	Conclusions	Tactics Techniques
Maneuver						
Firepower						
Protections						
Leadership						
Information						

Figure 2-12. Relative combat power analysis (RCPA) matrix.

(2) ***Generate Options.*** The company commander (or platoon leader) first determines the doctrinal requirements for his particular operation. These also may include the doctrinal tasks to be assigned to subordinate units. For example, a breach requires an assault force, a support force, a breach force, and possibly a reserve. This doctrinal requirement provides a framework to develop a COA. Next he determines his decisive point. If he has not done so earlier in the TLP, he must determine his decisive point during this step in order to proceed. Once he has determined his decisive point, he identifies the main effort's purpose and the purposes of his supporting efforts. The main effort's purpose is nested to his unit's overall purpose and is achieved at his decisive point. The supporting efforts' purposes are nested to the main effort's purpose by setting

the conditions for success of the main effort. He then determines the mission-essential tactical tasks for the main and supporting efforts. These tasks are those that must be accomplished to achieve the subordinate units' given purposes.

(3) ***Array Initial Forces.*** He must then determine the specific quantity of weapons (by type) and fire support necessary to accomplish each task against the enemy array of forces (refer to Appendix C, Direct Fire Planning and Control). He must ensure that he has sufficient combat power to accomplish the assigned task. He allocates resources required for the main effort's success first and then determines the resources needed for supporting efforts in descending order of importance.

> **EXAMPLE**: As the support force for an air assault infantry battalion attack of a strong point, the antiarmor company main effort (the support-by-fire force) may require eight MK19s and four M2 whereas the supporting efforts (isolating forces) may need four TOWs and four M2s. This array relies on an accurate assessment in step 1 (RCPA).

(4) ***Develop Schemes of Maneuver.*** The scheme of maneuver is a description of how the company commander (or platoon leader) envisions the COA unfolding from its start to its conclusion or end state. He clarifies in his mind the best ways to use the available terrain and to employ the unit's strengths against the enemy's weaknesses. He includes the requirements of indirect fire to support the maneuver. He then develops the maneuver control measures necessary to convey his intent, to enhance the understanding of the schemes of maneuver, to prevent fratricide, and to clarify the tasks and purposes of the main and supporting efforts. He also determines the CS and CSS aspects of the COA. As control measures become necessary, he places them on his maneuver overlay. This now becomes the basis for his COA sketch that he can distribute to his subordinates.

(5) ***Assign Headquarters.*** He assigns specific subordinate elements as the main and supporting efforts. He ensures that he has employed every unit in his command and that he has provided for adequate command and control of each element. He must avoid unnecessarily complicated command and control structures.

(6) ***Prepare COA Statements and Sketches.*** He bases the COA statement on the scheme of maneuver that he has already developed. It focuses on all significant actions from the start of the COA to its finish. His ability to prepare COA sketches and statements depends on the amount of time available as well as his skill and experience with antiarmor weapons systems. He should, whenever possible, prepare a sketch showing each COA. Another useful technique is to show the time it takes to achieve each movement and task in the COA sketch to gain an appreciation for the relative accumulation of time as the course of action is executed. The COA statement should state his decisive point and why it is decisive, the form of maneuver or the defensive technique, the tasks and purposes of his main and supporting efforts, the task and purpose of critical BOS elements, and an end state.

b. **COA Analysis.** After developing the COA, the antiarmor company commander (or platoon leader) analyzes it to determine its strengths and weaknesses; to visualize the flow of the battle; to identify the conditions or requirements necessary to enhance synchronization; and, most significantly, to gain insights into actions at the decisive point and action of the mission. If he has developed more than one COA, he applies this same analysis to each COA developed. He does this analysis through war-gaming or "fighting" the COA against at least one enemy COA.

(1) ***War-Gaming.*** When time permits, he war-games each friendly COA against the most probable enemy COA. War-gaming, depending on how much time is devoted to it, provides the following:

- An appreciation for the time, space, and triggers needed to integrate fire support, smoke, engineers, air defense artillery, and nuclear, biological, and chemical (NBC) with maneuver platoons (antiarmor, infantry, or tank) to support unit tasks and purposes identified in the scheme of maneuver.
- Flexibility built into the plan by gaining insights into possible branches to the basic plan.
- The need for control measures (such as checkpoints, contact points, and TRPs) that facilitate control, flexibility, and synchronization.
- Coordinating instructions to enhance execution and unity of effort and to mitigate confusion between subordinate elements.
- Information needed to complete paragraphs 3, 4, and 5 of the OPORD.
- Assessments regarding on-order and be-prepared missions.
- Projected CSS expenditures, friendly casualties, and resulting medical requirements.

(2) ***War-Gaming Techniques.*** Depending on the time available and his personal preference, he may use any of the following war-gaming techniques--

(a) *Box Technique.* The box technique focuses the war game on a specific area of the battlefield. This may be the objective area, the engagement area, or some other critical location where decisive or critical actions will take place. It should include all of the units, friendly and enemy, that will have a direct impact on those actions. This technique is a good one to use when time is limited and the enemy situation is relatively clear. However, a key disadvantage of the box technique is that, when considering only the actions at the critical or decisive points, the company commander (or platoon leader) may overlook other actions or events that could have a significant impact on the unit's mission.

(b) *Belt Technique.* The belt technique allows him to divide the COA into events or belts. He may do this in several ways, such as from phase line to phase line or by significant event. Each step then is war-gamed in sequence. This approach is most effective for offensive COAs. The company commander (or platoon leader) can modify this technique by dividing the battlefield into belts that are not necessarily adjacent or overlapping but focus on the critical actions throughout the area of operations.

(c) *Avenue-in-Depth Technique.* This method is most effective for a defensive COA, especially when there are several avenues of approach to consider. Using the enemy's most probable COA, he analyzes friendly and enemy actions along one avenue of approach at a time.

(3) ***War-Gaming Guidelines***. To gain the benefits that result from war-gaming a COA, the company commander (or platoon leader) must remain objective and record the results of the war game. He must remember the assumptions he made about the enemy, his unit, and the ground during the development of his tentative plan. He must avoid

letting the enemy or his unit "win" to justify the COA. Additionally, he must avoid drawing premature conclusions about the war game or making changes to his COA until the war game is complete.

c. **COA Comparison and Selection.** If the company commander (or platoon leader) has developed more than one COA, he must compare them by weighing the specific advantages, disadvantages, strengths, and weaknesses of each course as noted during the war game. These attributes may pertain to the accomplishment of the unit purpose, the use of terrain, the destruction of the enemy, or any other aspect of the operation that he believes is important. He uses these factors, gained from his RCPA matrix, as his frame of reference in tentatively selecting the best COA. He makes the final selection of a COA based on his own judgment, the start time of the operation, the area of operations, the scheme of maneuver, and subordinate unit tasks and purposes.

d. **Commander's Critical Information Requirements.** The CCIR identify information needed by a commander to support his visualization and to make critical decisions, especially to determine or validate courses of action. They help him determine what is relevant to mission accomplishment. In one technique, he writes the desired question, the quantified answer, and the reaction (critical decision to make). CCIR also help focus the efforts of his subordinates and assist in the allocation of resources. CCIR should be kept to what is absolutely essential.

(1) ***Priority Intelligence Requirements.*** This is information that a commander needs to know about terrain or enemy in order to make a critical decision. PIR are best expressed in a question that can be answered with a "Yes" or "No."

> **EXAMPLE**: Can wheeled vehicles cross the creek at NU12345678? If yes, the antiarmor company will cross at this location. If no, the antiarmor company will move the vehicles along another route.

(2) ***Friendly Forces Information Requirements (FFIR).*** This is information that a commander needs to know about his unit or adjacent units to make a critical decision.

> **EXAMPLE**: I want to know when we have lost one TOW because I will need to supplement the remaining direct fires weapons systems in the support element with additional mortar fires.

2-11. INITIATE MOVEMENT

The company commander (or platoon leader) initiates any movement necessary to continue mission preparation or to posture the unit for the start of the mission. This step can be executed at any time throughout the sequence of the TLP. This may include movement to an assembly area, a battle position, a new area of operation, or the movement of guides or quartering parties.

2-12. CONDUCT RECONNAISSANCE

In order to exploit the principles of speed and surprise, the company commander (or platoon leader) should weigh the advantage gained by personal reconnaissance versus the combat multiplier received in the form of supplied information. He may have the ability to plan his operation based upon the unprecedented amount of information provided by the other information collection sources. However, if time permits, he should verify higher headquarters' intelligence with visual reconnaissance. His reconnaissance should seek to confirm the PIR that support his tentative plan. These PIR are usually assumptions or critical facts concerning the enemy (his location, especially templated positions, and strength) and the terrain (verification, for example, that a tentative support-by-fire position actually will allow for suppression of the enemy or that an avenue of approach will be useable).

a. If possible, he should include his subordinate leaders in this reconnaissance. This allows them to see as much of the terrain and enemy as possible. The reconnaissance also helps subordinate leaders to gain insight into his visualization of the operation.

b. The leader's reconnaissance may include moving to or beyond the line of departure (LD) or walking from the forward edge of battle area (FEBA) back to and through the company sector or battle position along likely enemy avenues of approach. If possible, the company commander (or platoon leader) should select a vantage point that provides the group with the best possible view of the decisive point.

c. In addition to the leader's reconnaissance, the unit may conduct additional reconnaissance operations. Examples include surveillance of an area by subordinate elements, patrols by attached infantry squads to determine where the enemy is (and is not) located, and establishment of observation posts to gain additional information.

d. The nature of the reconnaissance, including what it covers and how long it lasts, depends on the tactical situation and the time available. The company commander (or platoon leader) should use the results of the COA development process to identify information and security requirements for the unit's reconnaissance operations.

2-13. COMPLETE THE PLAN

During this step, the company commander (or platoon leader) takes his selected COA and expands it into a complete OPORD. He prepares overlays, refines the indirect fire list, completes CSS and C2 requirements and, of course, updates the tentative plan based on the latest reconnaissance or information. He prepares a briefing site and other briefing materials he may need to present the OPORD directly to his subordinates. Finally, he makes final coordination with other units or staff members before issuing the order to his subordinates. The five-paragraph OPORD format helps him paint a complete picture of all aspects of the operation: terrain, enemy, higher and adjacent friendly units, unit mission, execution, support, and command and control. The format also assists him in addressing all relevant details of the operation. It provides subordinates with a smooth flow of information from beginning to end.

2-14. ISSUE THE OPORD

The OPORD precisely and concisely explains both his intent (company commander only) and concept of how he envisions the unit accomplishing the mission. The order does not contain unnecessary information. Nice-to-know information clouds what is essential and important and often causes confusion and uncertainty.

a. When issuing the OPORD, he must ensure his subordinates understand and share his vision of what must be done and when and how it must be done. They must understand how all the unit's elements work together to accomplish the mission. They must also understand how the unit's mission supports the intentions of the immediate higher commander. When he has finished issuing the order, subordinate leaders should leave with a clear understanding of what the company commander expects their elements to do.

b. Additionally, and in many respects more importantly, the company commander (or platoon leader) must issue the order in a manner that imbues his subordinates with confidence in the plan and a commitment to do their best to achieve the plan. Whenever possible, he must issue the order in person, looking into the eyes of his soldiers to ensure each subordinate leader understands his mission and what his element must achieve.

c. Complete the order with an initial backbrief utilizing the initial warning order issued in step 2 of the TLP. Each subordinate leader should be able to backbrief the unit mission (and intent for antiarmor companies), the immediate higher commander's intent, his own task and purpose, and the time of his unit (platoon or section) OPORD.

2-15. SUPERVISE AND OR REFINE

This final step of the TLP is crucial. After issuing the OPORD, the company commander (or platoon leader) and his subordinate leaders must ensure that the required activities and tasks are completed in a timely manner prior to mission execution. Supervision is the primary responsibility of all leadership. It is imperative that both officers and NCOs check everything that is important for successful mission accomplishment. These include, but are not limited to--

- Listening to subordinate operation orders.
- Observing rehearsals of subordinate units.
- Checking load plans to ensure they are carrying only what is necessary for the mission.
- Checking the status and serviceability of weapons.
- Checking on maintenance activities of subordinate units.
- Ensuring local security is maintained.

CHAPTER 3
MOVEMENT

This chapter discusses some of the tools that antiarmor leaders exercise to command and control the movement of antiarmor units on the battlefield. The purpose of tactical movement is to move antiarmor units on the battlefield and prepare them for contact. The various techniques and formations have unique advantages and disadvantages. Some movement techniques are secure but slow, while others are fast but less secure. Some formations work well in certain types of terrain or tactical situations but are less effective in others. The commander must consider the overall movement plan (mounted and dismounted) to include where, when, and how he may transition between the two. None of the movement techniques or formations described in this chapter should be considered inflexible or immutable. The company commander must always be prepared to adapt them to the situation at hand.

3-1. MOVEMENT FUNDAMENTALS

Movement must not be confused with maneuver. Maneuver is conducted while in contact, supported by fire, to gain a position of advantage over the enemy. Tactical movement, however, is conducted in preparation for contact. At the company and platoon level there is considerable overlap between the two, and units transition from one to the other during "actions on contact." Antiarmor units must reduce their exposure to the enemy during movement. They accomplish this by use of the terrain, avoidance of possible kill zones, dispersion, reconnaissance, and the use of measures to counter enemy observation and fires.

NOTE: The antiarmor company commander in an SBCT uses these fundamentals, augmented by the capabilities of FBCB2 and his knowledge of the art of war, to produce his situational understanding.

a. **Use Terrain for Protection.** Terrain offers cover and concealment from observation and fires. Terrain driving techniques can help units use the terrain over which they move to their advantage. Drivers should avoid "skylining." They should not move directly forward from a defilade firing position, and they should cross open areas quickly.

b. **Avoid Possible Kill Zones.** Units should avoid large open areas surrounded by cover and concealment or those dominated by terrain. They watch for the presence of obstacles or any other signs of an engagement area.

c. **Dispersion.** Dispersion between vehicles and units prevents units from becoming fixed by one enemy position or weapons systems. It also prevents enemy artillery or mortar fires from suppressing the entire element.

d. **Observe.** Units assign responsibilities of observation to crews in the formation. Units scan their assigned sectors and assign internal scanning responsibilities to their crews. This observation reduces the chances of the enemy surprising the unit.

e. **Move During Limited Visibility.** Movement during darkness or other limited visibility conditions provides concealment from enemy gunners at long range.

NOTE: This chapter focuses on the movement techniques, formations, and dismounted transition points that, in combination with available FBCB2 technology, provide the company commander with options for moving his unit.

f. **Use Countermeasures.** Units increase their survivability by using countermeasures such as suppressive fires, smoke, and camouflage.

(1) ***Suppressive Fires.*** The antiarmor platoon uses direct and indirect fires to suppress enemy positions. Direct fire is the most responsive means of suppressing enemy weapons systems. Its effectiveness, however, varies according to the weapon being used to provide suppression. The TOW, while the most lethal choice against enemy armor, has a slow rate of fire. The MK19 and M2 (cal. 50 MG) can effectively suppress enemy positions out to 3,000 meters. The combination of TOW, MK19, and M2 may provide the best balance in unclear situations. The most effective means of suppression is indirect fire. Indirect fire can suppress enemy positions at greater ranges and is effective when the enemy is using masking terrain as protection. The battalion's organic mortars are the most responsive indirect fire assets available to antiarmor units in light, airborne, and air assault battalions.

(2) ***Smoke.*** Artillery, the maneuver battalion's organic mortars, smoke pots, and light vehicle obscuration smoke system (LVOSS) provide obscuration in support of maneuvering antiarmor units. The smoke denies the enemy's ability to observe and effectively target the antiarmor unit. Another benefit is the ability of the TOW thermal sight to see and acquire enemy targets through the smoke while concealed. The new thermal weapons sight for the MK19 and M2 make these weapons systems more effective when operating in smoke.

(3) ***Camouflage.*** Properly selected camouflage patterns and the masking of objects that shine complicate the enemy's ability to detect targets. Leaders take precautions to ensure windshields, mirrors, headlights, and other reflective surfaces do not compromise the vehicle's position at long range. For example, use tape or burlap sandbags to cover reflective surfaces or, when appropriate, remove those items not needed in a tactical environment.

3-2. MOVEMENT FORMATIONS

Formations are arrangements of elements, vehicles, and soldiers in relation to one another. Formations are not rigid, and the distances between vehicles, shape, and speed of the formation are determined by the factors of METT-TC. Each vehicle in the formation scans an assigned sector to ensure all-round security while moving. Antiarmor units use formation to--

- Establish the relationship of one subordinate unit to another on the ground.
- Allow the unit to position firepower where it is needed in support of a direct fire plan (see Appendix C, Direct Fire Planning and Control).
- Establish responsibilities for sector security among subordinate units.
- Facilitate the execution of battle drills and directed COAs.

a. **Column.** The column formation (Figure 3-1) is used when speed is critical, when the unit is moving through restricted terrain on a specific route, and when enemy contact is unlikely. Each subordinate unit follows directly behind the one in front of it. If the situation dictates, vehicles can disperse laterally to enhance security. The column formation has the following characteristics, advantages, disadvantages, and limitations:

- It is the easiest formation to control.
- It provides good security by maximizing firepower to the flanks.
- It permits rapid transition into other combat formations.
- It focuses on speed.
- It masks direct fires to the front.
- It provides limited overall security.

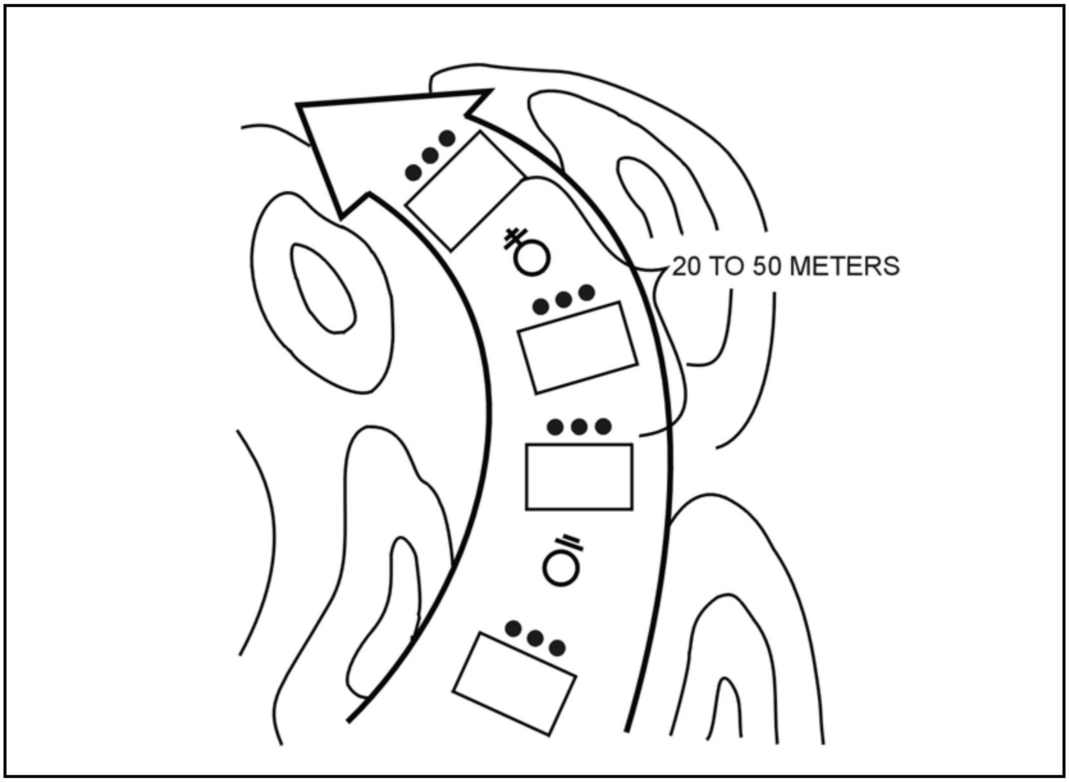


Figure 3-1. Column formation.

b. **Line.** The line formation (Figure 3-2, page 3-4) is used when a unit is crossing large open areas or needs to maximize firepower to the front. In the company line formation, platoons move abreast of one another and are dispersed laterally. The line formation has the following characteristics, advantages, disadvantages, and limitations:

- It provides maximum firepower to the front and rear, but minimum firepower to the flanks.
- It is difficult to control.
- It is less secure than other formations because it lacks depth.
- It is the most difficult formation from which to transition to other formations.

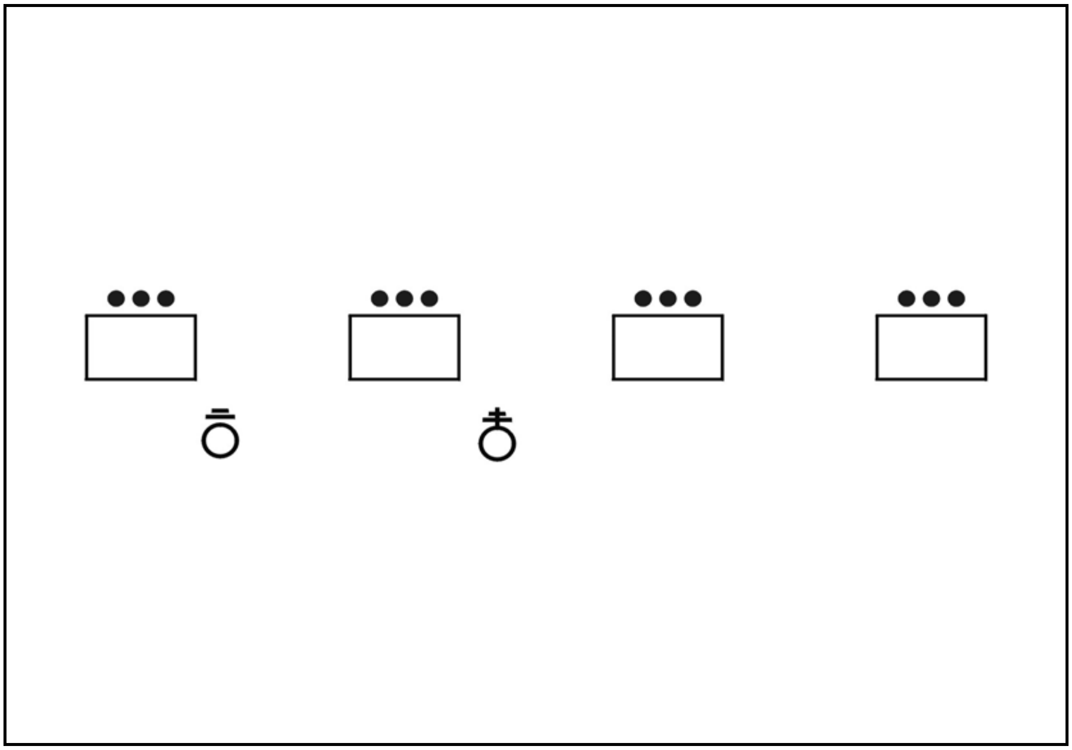


Figure 3-2. Line formation.

c. **Echelon.** The echelon formation (Figure 3-3) is used when the unit wants to maintain security or observation of one flank and enemy contact is unlikely. In the company echelon formation (left or right), the lead platoon positions farthest from the echeloned flank, with each subsequent platoon located to the rear of and outside the platoon in front of it. The echelon formation has the following characteristics, advantages, disadvantages, and limitations:

- It provides excellent security to the higher formation in the direction of the echelon.
- It allows for quick deployment in the direction of the echelon.
- If is difficult to control, especially in restrictive terrain.

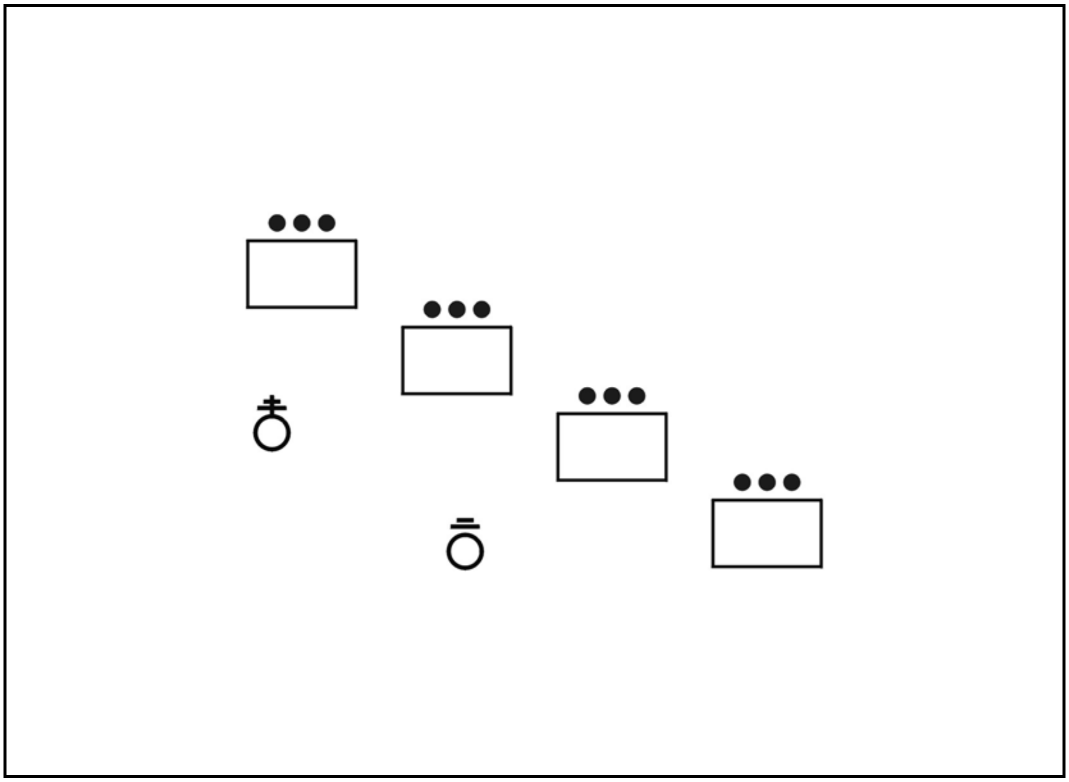


Figure 3-3. Echelon formation.

d. **Wedge.** The wedge formation (Figure 3-4, page 3-6) is used when the enemy situation is vague or contact is possible. In the company wedge, the lead platoon is in the center of the formation with the remaining platoons located to the rear of and outside the lead platoon. The wedge formation has the following characteristics, advantages, disadvantages, and limitations:

- It provides excellent firepower to the front while still maintaining good firepower to the flanks.
- It is easy to control.
- It provides good flank security.
- It can be used with all of the movement techniques.

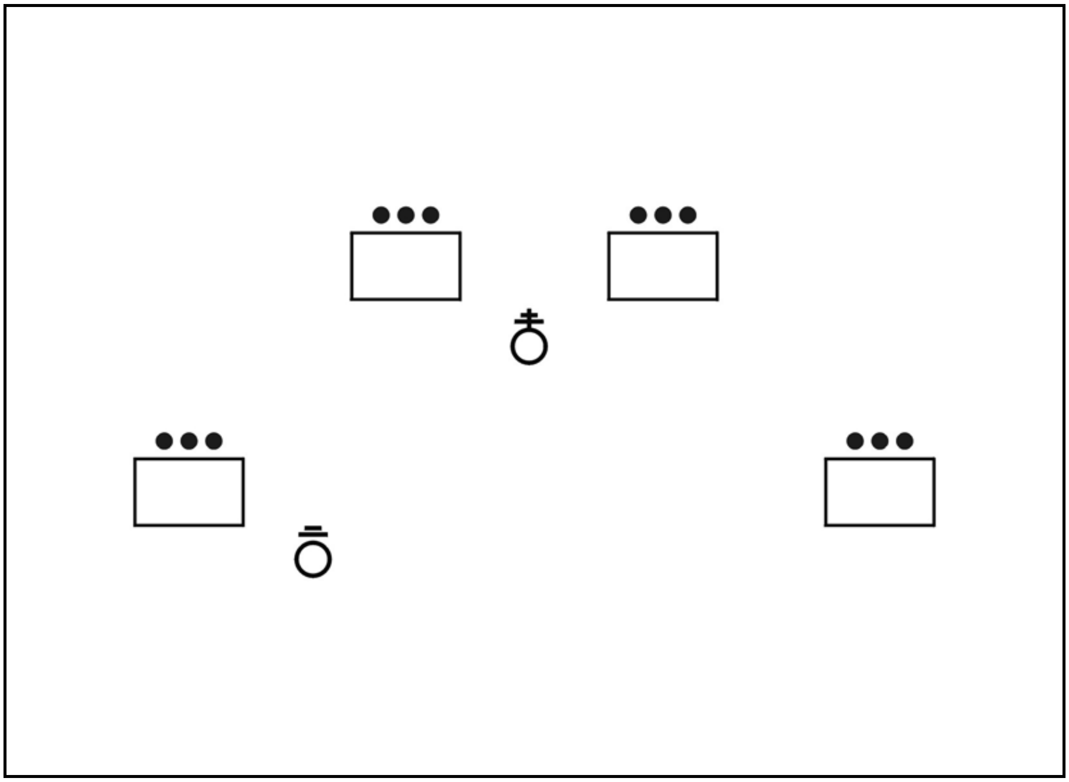


Figure 3-4. Wedge formation.

e. **Vee.** The vee formation (Figure 3-5) is used when enemy contact is possible. In the company vee, the center platoon is located at the rear of the formation, while the remaining platoons are located to the front of and outside the center platoon. The vee formation has the following characteristics, advantages, disadvantages, and limitations:

- It provides more firepower to the front than the wedge formation while still maintaining good firepower to the flanks.
- It allows one subordinate unit in the formation to maintain flexibility when contact occurs.
- It facilitates rapid deployment into other formations.
- It can be used with all of the movement techniques.
- It is more difficult to control than the wedge formation. It is difficult for individual vehicles to maintain proper orientation.

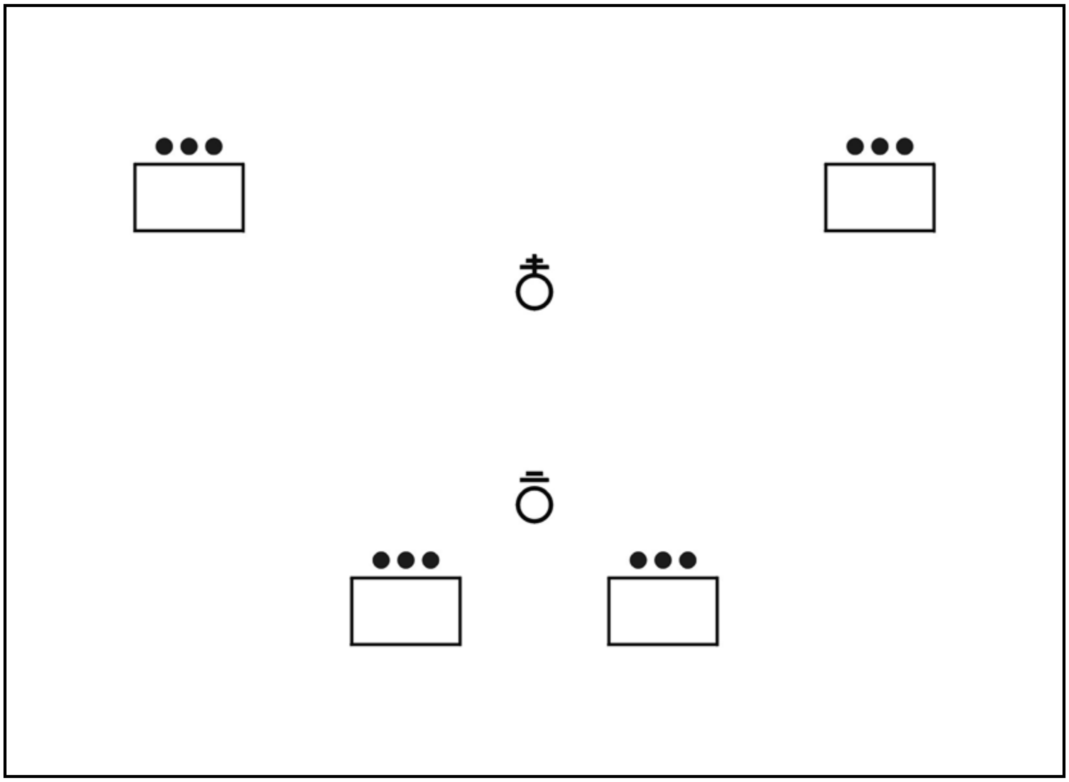


Figure 3-5. Vee formation.

f. **Coil and Herringbone.** The coil (Figure 3-6, page 3-8) and herringbone (Figure 3-7, page 3-8) are platoon-level formations employed when elements of the company are stationary and must maintain all around security.

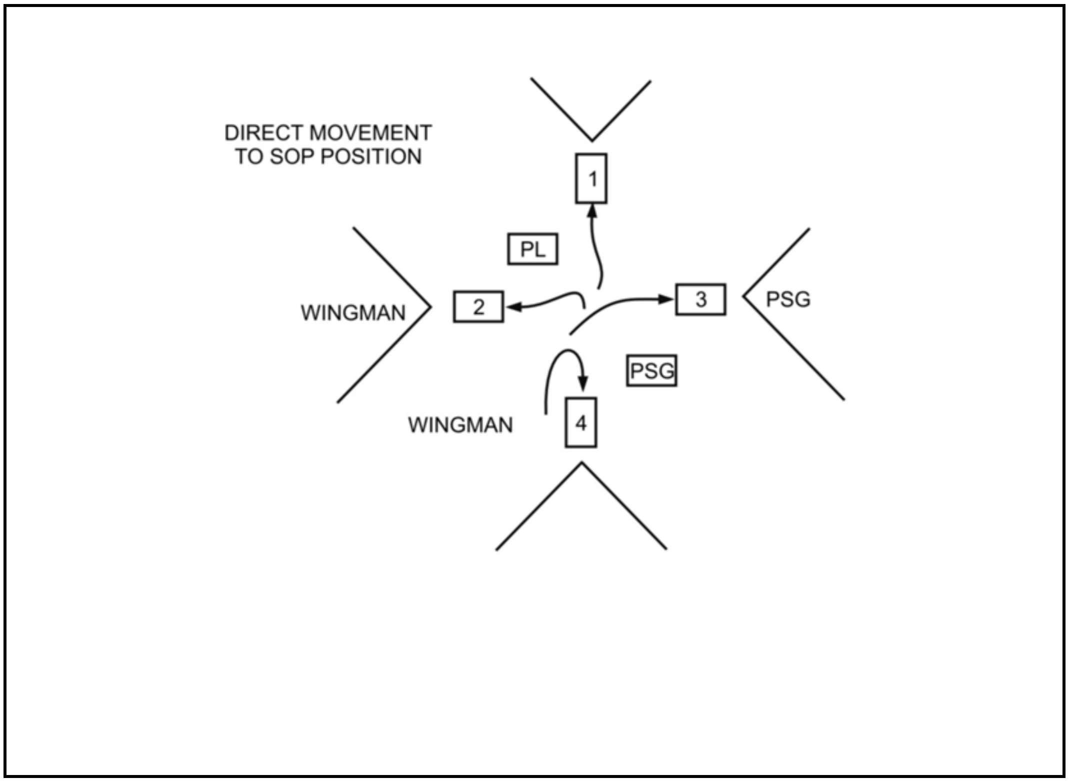


Figure 3-6. Coil formation

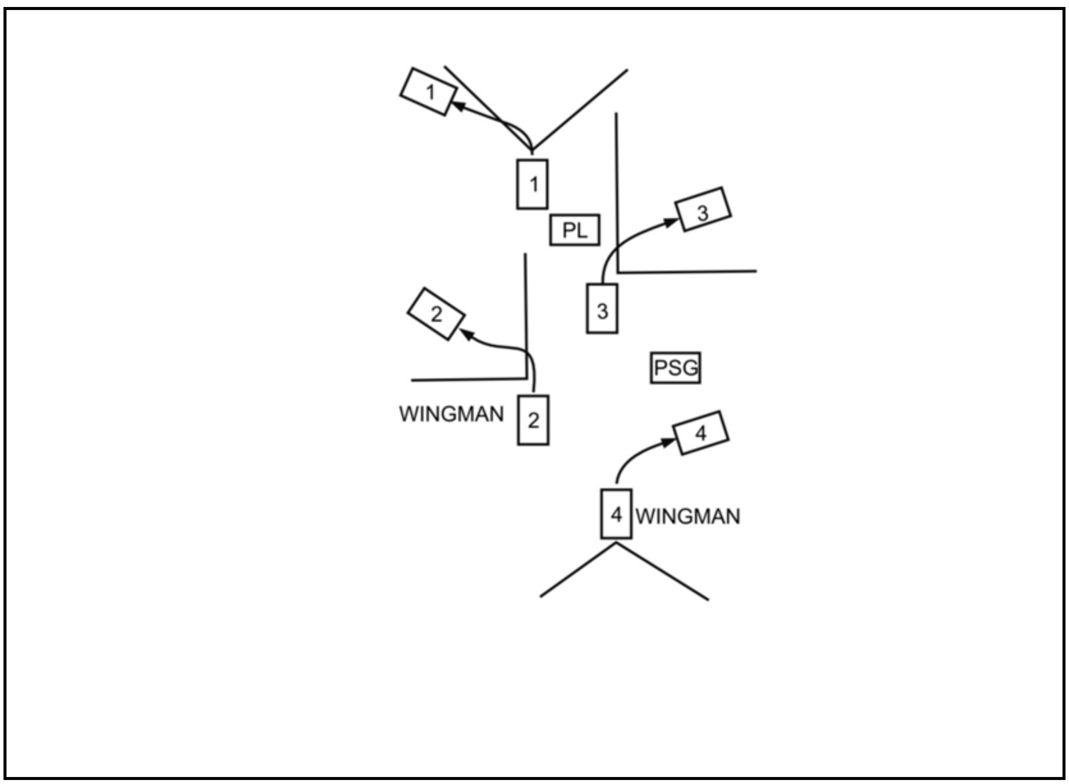


Figure 3-7. Herringbone formation.

3-3. MOVEMENT TECHNIQUES

A movement technique is the manner in which a unit traverses terrain, and it is determined by the likelihood of enemy contact. Antiarmor companies and platoons use the same basic movement techniques used by all ground maneuver units: traveling, traveling overwatch, and bounding overwatch. The antiarmor leader's detailed analysis of the factors of METT-TC (specifically the type of enemy contact expected, the availability of an overwatch element, the terrain over which the moving element will pass, and the balance of speed and security) dictates the movement technique employed.

a. **Traveling.** Continuous movement of all of the unit's elements characterizes the traveling movement technique (Figure 3-8). It is used when enemy contact is unlikely and speed is important.

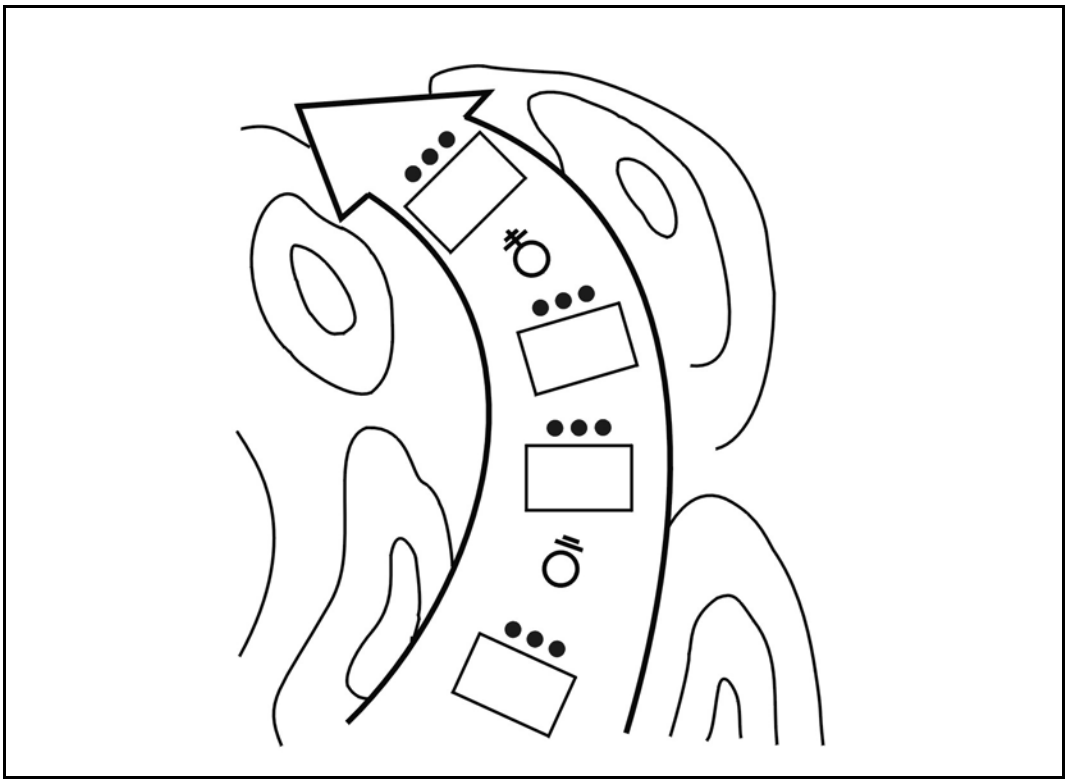


Figure 3-8. Traveling technique.

b. **Traveling Overwatch.** The traveling overwatch technique (Figure 3-9, page 3-10) is an extended form of the traveling technique that provides additional security when speed is desirable but enemy contact is possible. The lead element moves continuously. The trail element moves at various speeds and may halt periodically to overwatch the lead element's movement. The dispersion between the lead and trail elements must be based on the trail element's ability to provide immediate suppressive fires in case the lead element is engaged. The intent of the traveling overwatch technique is to maintain depth, provide flexibility, and maintain the ability to maneuver even if contact occurs.

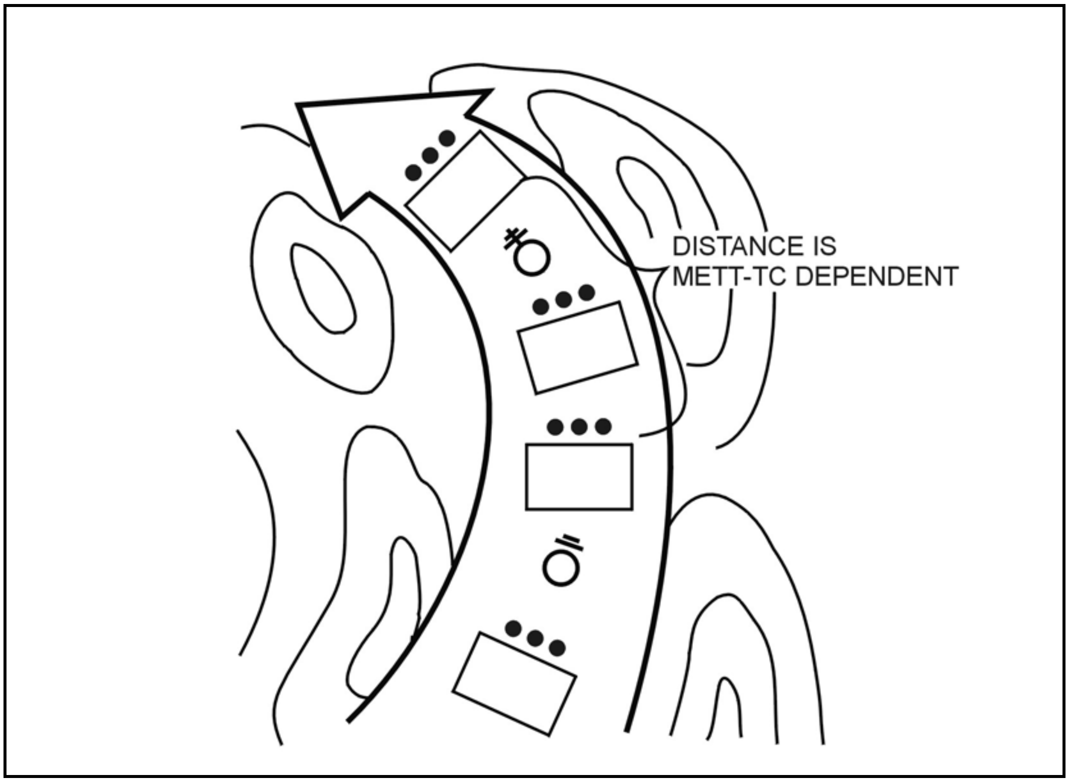


Figure 3-9. Traveling overwatch.

c. **Bounding Overwatch.** The bounding overwatch technique (Figure 3-10) is used when enemy contact is expected. The intent of this technique is for the unit to deploy prior to contact, giving it the ability to protect the bounding element by immediately suppressing an enemy force. When using the bounding overwatch technique, the overwatch element is assigned sectors to scan (see Appendix C, Direct Fire Planning and Control) while the bounding element moves. The bounding element should avoid masking the direct fires of the overwatch element, and it must not move beyond the effective supporting range of the overwatch element. Antiarmor units employ either of the two bounding methods: alternate bounds and successive bounds.

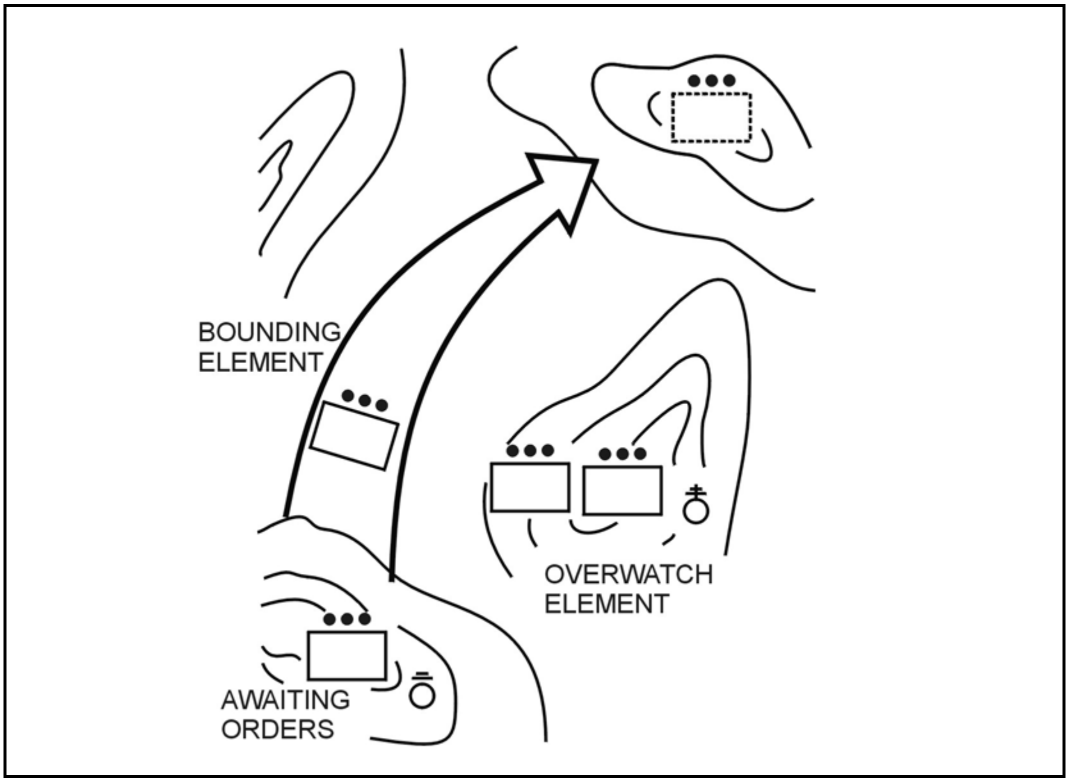


Figure 3-10. Bounding overwatch.

(1) ***Alternate Bounds.*** Covered by the trail element, the lead element moves forward, halts, and assumes an overwatch position. The trail element then advances past the lead element to assume an overwatch position. This sequence continues as necessary with only one element moving at a time. Alternate bounding is the more rapid of the two methods.

(2) ***Successive Bounds.*** The lead element, covered by the trail element, moves forward, halts, and assumes an overwatch position. The trail element then advances to an overwatch position that is roughly abreast of the lead element's position. The lead element then advances to the next position. This sequence continues as necessary with only one element moving at a time. The trail element avoids advancing past the lead element. Successive bounding is the more secure and easier to control of the two methods; however, it is much more deliberate and slower than alternate bounding.

CHAPTER 4
OFFENSIVE OPERATIONS

The offense is the decisive form of war. Offensive operations aim at destroying or defeating an enemy. The offense presents the greatest challenge in the employment of the antiarmor company and platoon. This challenge is compounded because airborne, air assault and light infantry battalions and Stryker brigade combat teams typically will operate in noncontiguous environments. The antiarmor company (or platoon) possesses the greatest firepower (TOW, M2, and MK19) and mobility (HMMWV or ICV) available to the parent organization. In the offense, these units provide tank-killing, bunker-destroying, and suppression capabilities that can influence the outcome of the operations. This chapter describes the tactics and techniques used by antiarmor companies and platoons in the movement to contact and in an attack.

Section I. GENERAL PLANNING CONSIDERATIONS

The outcome of decisive combat derives from offensive actions. All operations are designed to transition to and support the offense. A sound doctrinal foundation during offensive planning assists the antiarmor company commander (or platoon leader) in capitalizing on the increased tactical flexibility of his unit.

4-1. PURPOSE OF THE OFFENSE

Offensive operations seek to seize, retain, and exploit the initiative to decisively defeat the enemy. Additionally, offensive operations accomplish the following:

- Disrupt enemy coherence.
- Secure terrain.
- Deny the enemy of resources.
- Fix the enemy.
- Gain information.
- Deceive the enemy.

4-2. CHARACTERISTICS OF THE OFFENSE

Surprise, concentration, tempo, and audacity characterize the offense. The company commander (or platoon leader) does not use these as a checklist to conduct successful offensive operations; rather, he must ensure that his offensive plan incorporates the spirit of these characteristics.

a. **Surprise.** Units achieve surprise by striking the enemy at a time, at a place, or in a manner for which he is unprepared. Total surprise is rarely essential; simply delaying or disrupting the enemy's reaction is usually effective.

(1) Surprise delays the enemy's reactions, stresses his command and control, and induces psychological shock in his soldiers and leaders. This may allow an attacker to succeed with fewer forces than he might otherwise require.

(2) A unit's abilities to attack during limited visibility, to operate in small units, and to infiltrate are often key to achieving surprise. The company (or platoon) must exploit the

effect of surprise on the enemy before he can recover.

b. **Concentration.** The attacker concentrates combat power at the decisive point to achieve the unit's purpose. Leaders strive to concentrate the effects of their combat power without concentrating forces.

(1) Because the attacker is often moving across terrain the enemy has prepared, he may be exposing himself to the enemy's fires. By concentrating overwhelming combat power, the attacker can reduce both the effectiveness of enemy fires and the amount of time he is exposed to these fires.

(2) The challenge for the company commander (or platoon leader) is to concentrate combat power while reducing the enemy's ability to do the same against his unit. Actions that cause the enemy to shift combat potential away from the decisive point result in a greater advantage in combat power at the decisive point. The company commander (or platoon leader) must consider all of his available weapons systems (such as TOW, M2, and MK19) to achieve overwhelming combat power at the decisive point.

c. **Tempo.** Tempo is the rate of speed of military action. Controlling or altering that rate is essential for maintaining the initiative. Speed promotes surprise, keeps the enemy off balance, contributes to the security of the attacking force, and prevents the defender from taking effective countermeasures.

(1) Properly exploited, speed confuses and immobilizes the defender until the attack becomes unstoppable. Speed is built into operations through careful planning.

(2) The company (or platoon) increases its speed through its ability to transition rapidly from movement to maneuver by using simple plans, decentralized control, and mission orders. Speed of movement depends on reconnaissance, using proper movement formations and techniques, and selecting good routes for mounted movement. Antiarmor units develop SOPs to facilitate their transition from movement to maneuver.

d. **Audacity.** Audacity is the willingness to risk bold action to achieve positive results. The audacious leader develops confidence by conducting a thorough analysis of the factors of METT-TC. His actions, although quick and decisive, are based on a reasoned approach to the tactical situation and on his knowledge of his soldiers, the enemy, and the terrain. He is daring and original, but he is not rash.

(1) Audacious commanders throughout history have used the "indirect approach." They maneuver to maintain a position of advantage over the enemy, seek to attack the enemy on the flank or rear, and exploit success at once, even if this briefly exposes their own flanks.

(2) Boldness and calculated risk have always been the keystones of successful offensive operations. They must, however, be consistent with the higher commander's mission and intent.

4-3. CONSIDERATION OF SELECTED BATTLEFIELD OPERATING SYSTEMS

The following paragraphs describe factors the anitarmor company commander (or platoon leader) must consider for the employment of specific battle operating systems, including fire support, air defense, mobility and survivability, and combat service support.

a. **Fire Support.** As part of the top-down fire planning system, the company commander (or platoon leader) must refine the fire plan from higher headquarters to meet his mission requirements. He incorporates the results of his METT-TC analysis and makes key locations and targets from the fire plan an integral part of his rehearsal. Additionally, he works with the battalion fire support officer (FSO) to develop a corresponding observation plan and triggers for initiating or shifting fires. The SBCT antiarmor company has an organic FIST and will coordinate all fire planning through the company FSO. The company commander (or platoon leader) and the FSO must have a thorough understanding of organic and supporting fire support elements. The majority of the unit's fire support in an airborne, air assault, and light infantry battalion will be from mortar systems organic to the battalion. The company commander (or platoon leader) employs supporting fires in the offense to achieve a variety of operational goals:

- Suppress enemy weapons systems that inhibit movement.
- Fix or neutralize bypassed enemy elements.
- Prepare enemy positions for an assault.
- Obscure enemy observation or screen friendly maneuver. The unit can take advantage of smoke in various maneuver situations, such as during a bypass or in deception operations.
- Illuminate enemy positions. Include illumination fires in contingency plans for limited visibility attacks.

b. **Air Defense.** Mounted Stinger sections may be attached with organic vehicle support to travel with the antiarmor company (or platoon). Their security must be a consideration in planning for offensive operations. The leader must plan for and rehearse internal air security and active air defense measures. SOP normally dictates air defense requirements and procedures. The leader also must anticipate possible contact with enemy air assets by determining likely enemy helicopter and fixed-wing air corridors and avenues of approach.

c. **Mobility and Survivability.** The higher headquarters may task-organize the company with engineers as part of an in-stride breach during the offense. The company commander (or platoon leader) normally receives additional mobility assets, such as engineers. If the antiarmor unit is attached to mechanized forces, it can receive equipment suited for mounted mobility such as a mine clearing line charge (MICLIC), an armored combat earthmover (ACE), or an armored vehicle-launched bridge (AVLB) based on an analysis of the factors of METT-TC. (FM 3-34.2 [90-13-1] and FM 90-7 provide more detailed discussions of mobility and survivability operations and support.).

d. **Combat Service Support.** The main purpose of CSS in the offense is to assist maneuver elements in maintaining the momentum of the attack. Key CSS planning considerations for antiarmor company (or platoon) offensive operations include the following:

- Increased consumption of Class III supplies.
- Vehicle maintenance requirements.
- Casualty evacuation.

In the offense, CSS functions are performed as far forward as the tactical situation permits. The company trains remain one terrain feature (or a relative distance based upon the factors of METT-TC) behind the location of the vehicles (HMMWV or ICV). The company commander must consider the enemy situation and how it relates to the security of the company trains. If the company is conducting decentralized operations, the company trains are located where they can best support the platoons in the accomplishment of the company's mission. CSS functions for the antiarmor platoons (light infantry battalions only) are typically performed by the battalion combat trains command post (CTCP) or the infantry company to which the platoon is attached. If attached to an infantry company, the antiarmor platoon leader must express the importance of the three key CSS planning considerations to that company commander.

4-4. SEQUENCE OF OFFENSIVE OPERATIONS

As the company commander (or platoon leader) plans an offensive mission, he generally considers the following sequence of events that applies to many, but not all, offensive operations.

a. **Assembly Area.** He directs and supervises mission preparations in the assembly area to prepare the unit for the upcoming battle. Preparation time also allows the unit to conduct pre-combat inspections and checks, rehearsals at all levels, and CSS activities.

b. **Reconnaissance.** Reconnaissance should be conducted at all echelons. The enemy situation and available planning time may limit the unit's reconnaissance, but leaders at every level must aggressively seek information about the terrain and enemy. The "on-the-ground" antiarmor company (or platoon) reconnaissance effort reports on enemy activity near the line of departure, attack position (ATK PSN), assault position (ASLT PSN), or the unit's assigned objective (OBJ). This reconnaissance provides the antiarmor leader the information needed to execute the best possible tactical plan.

NOTE: In digitally equipped units, this information may be available via FBCB2; however, leaders must never forget the benefit of having patrols and leaders on the ground to the front of the maneuver force.

c. **Movement to the Line of Departure.** When attacking from positions not in contact, the antiarmor company (or platoon) often stages in rear assembly areas, road marches to attack positions behind friendly units in contact with the enemy, conducts forward passage of lines, and moves to the AO. When necessary, the unit employs indirect fires, close air support (when available), and direct fire to facilitate movement.

d. **Maneuver.** The antiarmor company commander (or platoon leader) plans the approach to the objective to ensure security, speed, and flexibility. He selects the routes, techniques, and formations that best support actions on the objective. All leaders must recognize this portion of the battle as a fight, not a movement. The unit may need to overcome enemy resistance en route to the objective and should plan accordingly. When possible, the company commander (or platoon leader) employs those techniques that avoid the enemy's strength and conceal his unit's true intentions. He deceives the enemy as to the location of the main effort, uses surprise to take advantage of his initiative in determining the time and place of his attack, and uses indirect approaches, when available, to strike the enemy from a flank or the rear.

e. **Deployment.** As a unit deploys and moves toward the ASLT PSN, it begins the final positioning of its forces so it can pass through the ASLT PSN with minimum delay and confusion. This tactical positioning allows units the opportunity to continue to "flow" the force in its best tactical posture through the assault position to begin the attack. Movement should be as rapid as the terrain, force mobility, and enemy situation will permit. The probable line of deployment (PLD) is the next control measure following the ASLT PSN. This is where the force fully commits to the attack.

f. **Assault.** During an offensive operation, the unit's objective may be terrain- or force-oriented. Terrain-oriented objectives require the unit to secure and retain a designated area and often require fighting through enemy forces. If the objective is force-oriented, an objective area may be assigned for orientation, but the unit's effort is focused on the enemy's actual disposition. The enemy may be a stationary or moving force. Actions on the objective start when the unit begins placing fires on the objective. This normally occurs with preparatory indirect fires while the unit approaches the objective. Preparatory fires are normally used during a deliberate attack, with fires placed on key targets before the assault begins. Fires are initiated on call or at a prearranged time. The commander must weigh the benefits of preparatory fires against the potential loss of surprise. The unit reorganizes and consolidates as required by the situation and mission.

g. **Consolidation and Reorganization.** The company (or platoon) executes follow-on missions as directed by the higher commander. Whether a raid, hasty attack, or deliberate attack, the unit must posture itself and prepare for continued offensive operations.

4-5. FORMS OF MANEUVER

In a typical sequence for an offensive operation, the company (or platoon) maneuvers against its adversary in the objective area. Maneuver places the enemy at a disadvantage through the application of friendly fires and movement. Properly executed, maneuver allows units to move on the battlefield while in contact. At the same time, maneuver allows a unit to advance, while in contact, to reach the point on the battlefield from which it executes its next tactical task. Maneuver is an integral part of tactical tasks, all of which require the combination of fire and movement. The five forms of maneuver--penetration, envelopment, turning movement, frontal attack, and infiltration--describe the positional relationships of opposing forces to attacking forces. In every attack, the company commander (or platoon leader) must determine how to maneuver his unit to get overwhelming combat power at the decisive point. He applies the basic forms of maneuver, individually or in combination, to do this. Regardless of the size of the enemy, the forms of maneuver remain unchanged. Reconnaissance is the key to selecting the proper form of maneuver. Once the maneuver is initiated, surprise, speed, and stealth are crucial to the unit's security and to preventing an effective counterattack. FM 3-0 and FM 3-90 provide greater detail on the forms of maneuver.

a. **Penetration.** Penetration is used when enemy flanks are not assailable and when time does not permit some other form of maneuver. Its purpose is to rupture enemy defenses on a narrow front and thereby create both assailable flanks and access to the enemy's rear (Figure 4-1, page 4-6). The company (or platoon) will normally conduct this as part of a larger force. Penetration may be tried at one or several points, depending on the forces available. However, a single unit usually focuses combat power at one breach point.

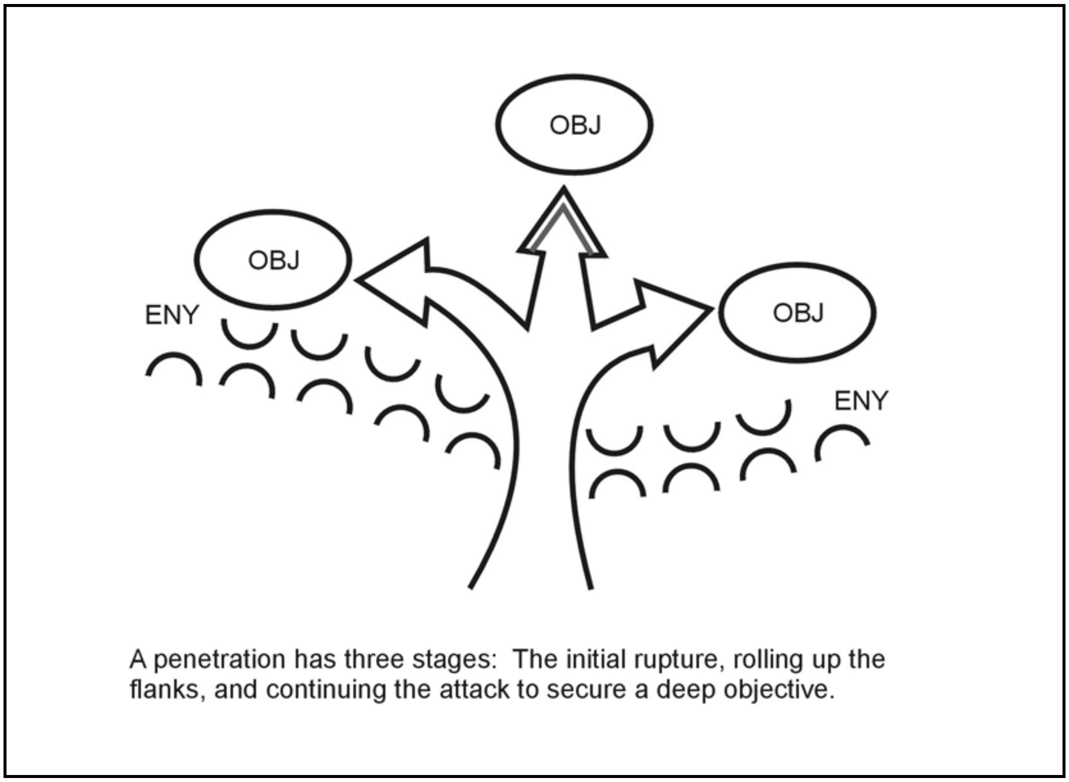


Figure 4-1. Penetration.

b. **Envelopment.** Envelopment avoids the enemy's front, where his forces are more protected and his fires more easily concentrated. Instead, while fixing the defender's attention forward by supporting attacks, the attacker maneuvers his main effort to strike at the enemy's flanks and rear. Flank attacks are a variant of envelopment in which access to the enemy's flank and rear results from the enemy's movement (Figure 4-2). Successful envelopment requires discovery or creation of an assailable flank. In meeting engagements and counterattacks, this may be the actual flank of the enemy force. In less fluid conditions, it may be a gap or weak point in the enemy's defense.

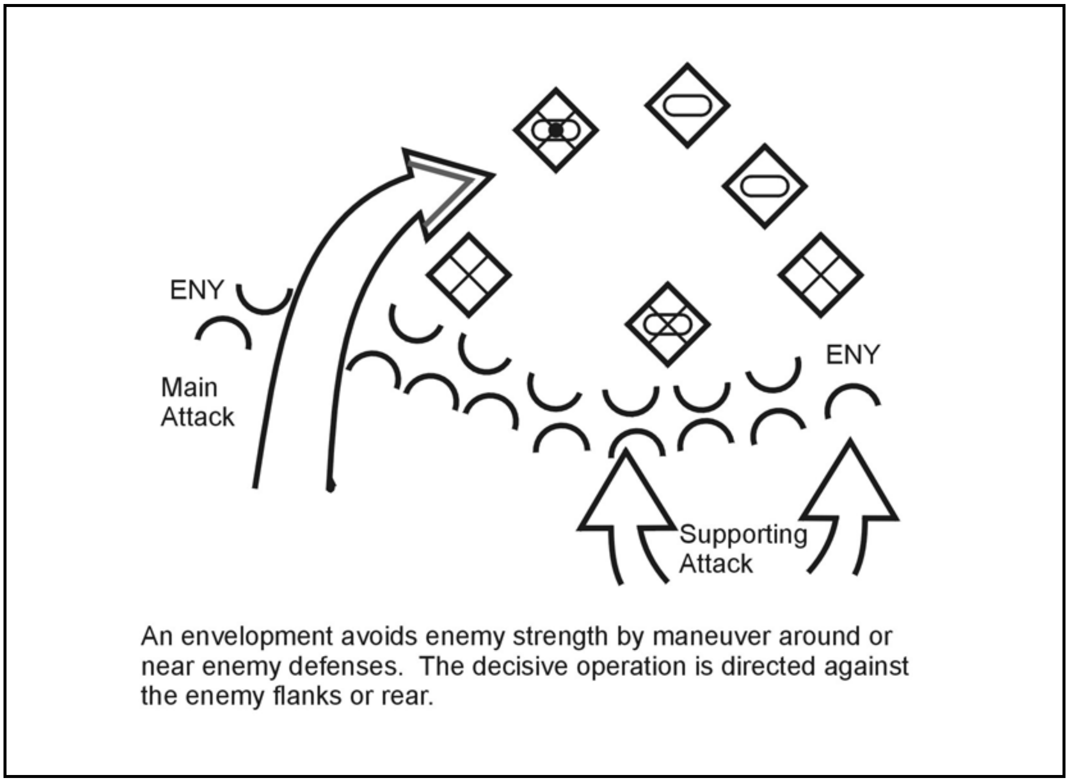


Figure 4-2. Envelopment.

c. **Turning Movement.** The turning movement is a type of envelopment in which the attacker attempts to avoid the defense entirely. Instead, he seeks to secure key terrain deep in the enemy's rear and along his lines of communication. Faced with a major threat to his rear, the enemy is thus "turned" out of his defensive positions and forced to attack rearward. For a turning movement to be successful, the unit trying to turn the enemy must attack something that the enemy will fight to save. For some, it is their supply routes; for others, it may be artillery emplacements or a headquarters. In addition to attacking a decisive target, the turning unit must be strong enough to pose a real threat to the enemy (Figure 4-3, page 4-8).

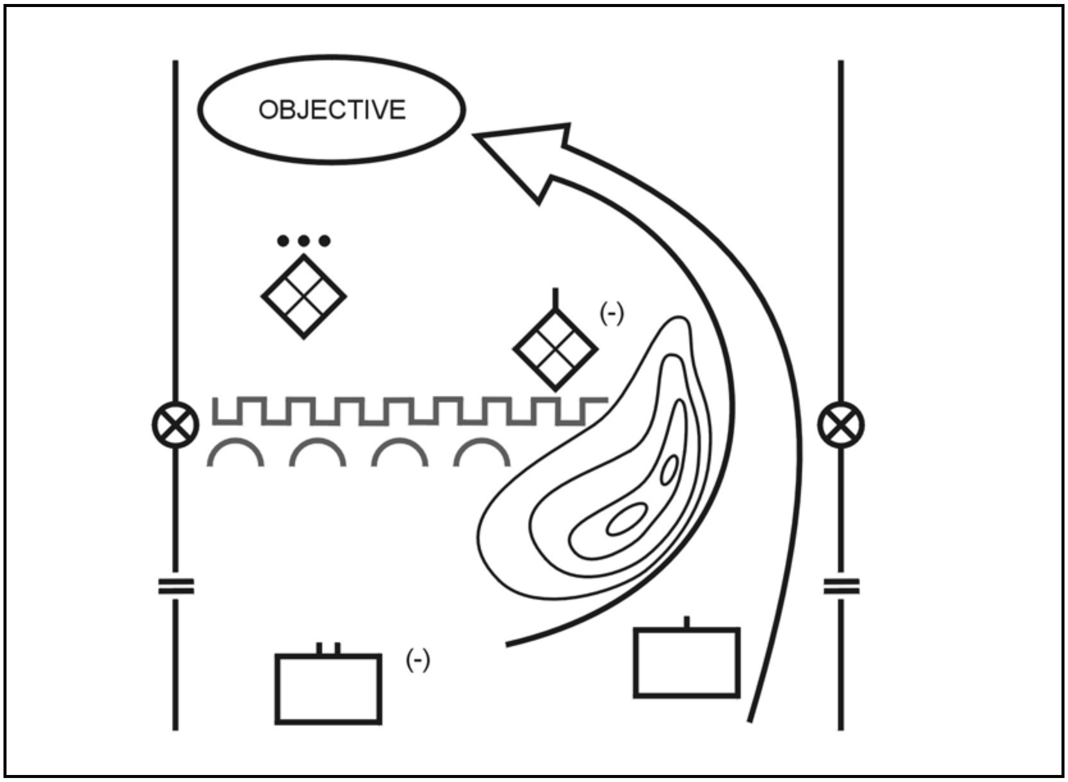


Figure 4-3. Turning movement.

d. **Frontal Attack.** A frontal attack strikes the enemy across a wide front and over the most direct approaches. For deliberate attacks, it is the least desirable form of maneuver since it exposes the attacker to the concentrated fire of the defender while at the same time limiting the effectiveness of the attacker's own fires. As the simplest form of maneuver, however, the frontal attack is useful for overwhelming weak defenses, security outposts, or disorganized enemy forces. It is often the best form of maneuver for an attack or meeting engagement in which speed and simplicity are key.

e. **Infiltration.** Infiltration is a means of reaching the enemy's rear without fighting through prepared defenses (Figure 4-4). It is the covert movement of all or part of the attacking force through enemy lines to a favorable position in their rear. The infiltrating unit avoids detection and engagement.

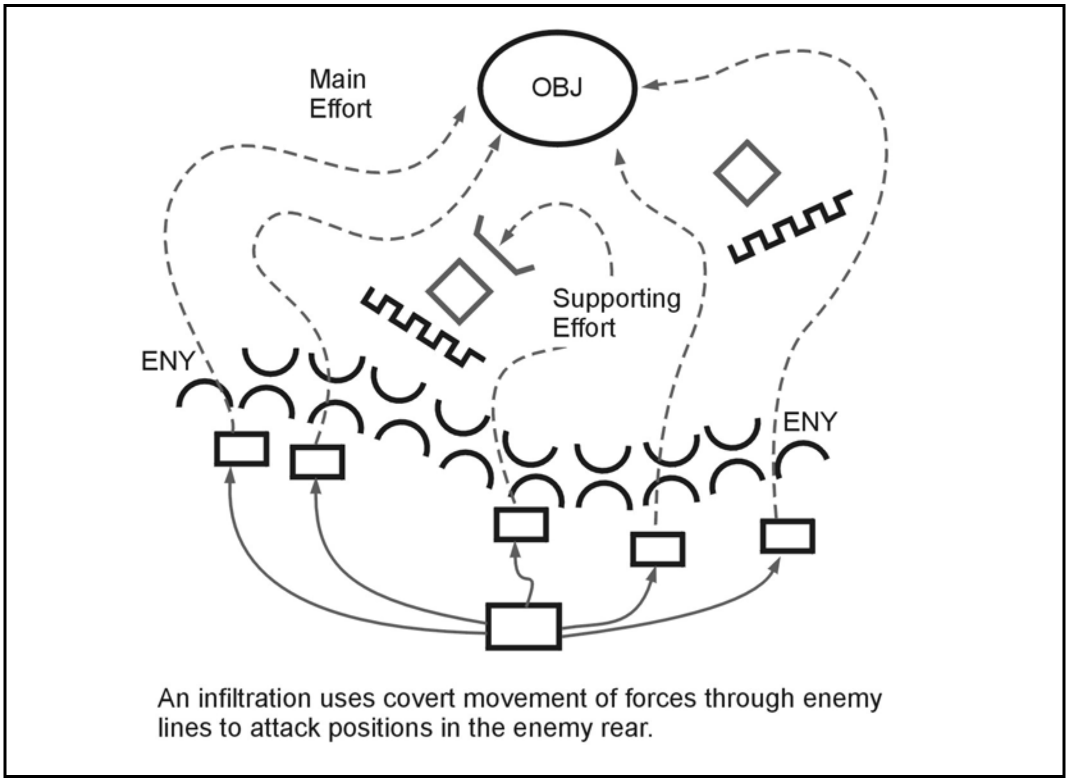


Figure 4-4. Infiltration.

Section II. MANEUVER

Maneuver is the foundation for the employment of forces on the battlefield. At the antiarmor company (or platoon) level, maneuver is the essence of every tactical operation and task. The company commander maneuvers his platoons (platoon leader maneuvers his sections) to close with the enemy, to gain positional advantage over him, and ultimately to destroy his will. Typically, the antiarmor unit will be the base of fire force for a bounding infantry force; however, this should not replace a detailed analysis of the factors of METT-TC to determine what unit will be the base-of-fire force and what unit will be the bounding force.

4-6. BASE-OF-FIRE FORCE

The combination of fire and movement first requires a base of fire, in which the antiarmor unit remains stationary and provides protection for the bounding forces by destroying, suppressing, or fixing enemy forces. The decision on weapon selection is based on a detailed METT-TC analysis. (See Appendix A, Weapon Reference Data.)

a. As the base-of-fire force, the antiarmor company (or platoon) occupies positions that afford effective cover and concealment, unobstructed observation, and clear fields of fire. Once it is in position, the base-of-fire force has the responsibility both for placing the effects of direct fires on known enemy forces and for aggressively scanning assigned sectors of observation; it identifies previously unknown enemy elements and then fires upon them. The protection provided by the base of fire force allows the bounding unit to continue its movement and to retain the initiative even when it is under enemy observation or within range of enemy weapons.

b. Maneuver is decentralized in nature; therefore, decisions on where and when to establish a base of fire must be made at the appropriate level. These decisions normally fall to a leader on a specific part of the battlefield who knows what enemy forces can engage the bounding force and what friendly forces are available to serve as the base of fire. At the antiarmor company level (airborne and air assault battalions and SBCT), these decisions may be made by the company commander with the base of fire provided by one or more platoons. At the antiarmor platoon level (light infantry battalions), these decisions may be made by the battalion commander with the base of fire provided by the four antiarmor squads.

4-7. BOUNDING FORCE

Movement in a maneuver situation is inherently dangerous. It is complicated not only by the obvious potential for harm posed by enemy weapons but also by the uncertainty caused by unknown terrain and other operational factors.

a. The bounding force must take full advantage of whatever cover and concealment are provided by the terrain. If bounding, antiarmor leaders and drivers can enhance security by enforcing or applying the principles of terrain driving such as use of intervening terrain and avoidance of "skylining."

b. All antiarmor squads involved in the maneuver must maintain 360-degree security at all times. Soldiers in the bounding force must continuously scan their assigned sectors of observation.

c. Although the factors of METT-TC ultimately dictate the length of the bounds, the bounding force should never move beyond the range at which the base-of-fire force can effectively suppress known, likely, or suspected enemy positions. This minimizes the bounding force's exposure to enemy fires.

d. In severely restricted terrain, bounds are generally much shorter than in more open areas.

e. The bounding force may need infantry squads or individual crewmen to observe intervening gaps or dead space. Although this usually causes the unit to make a tactical pause, it does not slow the operation as much as the loss of a vehicle and an antiarmor squad to a hidden enemy weapon system.

f. The bounding element must remain focused on its ultimate goal of gaining a positional advantage, which it then can use to destroy the enemy by direct and indirect fires.

Section III. ACTIONS ON CONTACT

In both offensive and defensive operations, contact occurs when a member of an antiarmor company (or platoon) encounters any situation that requires an active or passive response to the enemy or to nonhostile elements, such as civilians. These situations may entail one or more of the following forms of contact:

- Visual contact (friendly elements may or may not be observed by the enemy).
- Physical contact with an enemy force or civilians.
- Indirect fire contact.
- Contact with obstacles of enemy or unknown origin.
- Contact with enemy or unknown aircraft.
- Situations involving NBC conditions.
- Situations involving electronic warfare tactics.

Leaders at all echelons conduct actions on contact when they or a subordinate element recognize one of the forms of contact or receive a report of enemy contact. The unit may conduct actions on contact in response to a variety of circumstances, including--

- Subordinate unit(s) conducting actions on contact.
- Reports from the higher headquarters.
- Reports from or actions of an adjacent unit.

4-8. DEVELOPING ACTIONS ON CONTACT

Company commanders (or platoon leaders) analyze the enemy throughout the troop-leading procedures to identify all likely contact situations that may occur during a mission. Through the planning and rehearsals conducted during troop-leading procedures, leaders develop and refine COAs to deal with probable enemy actions. The COAs eventually become the foundation for the unit's scheme of maneuver. During the troop-leading process, the leader must evaluate a number of factors to determine impacts on the unit's actions on contact.

> **EXAMPLE**: The company commander needs to consider how the likelihood of contact affects his choice of movement techniques and formations during the attack. In doing this, he can begin preparing the unit for actions on contact. He may outline procedures for the transition to more secure movement techniques before a contact situation.

4-9. TIME REQUIREMENTS FOR ACTIONS ON CONTACT

Company commanders (or platoon leaders) must understand that properly executed actions on contact require time at section, platoon, and company levels. To develop the situation fully, a subordinate unit may need to execute extensive lateral movement, conduct reconnaissance-by-fire, and call for and adjust indirect fires. Each of these activities requires time. The commander (or platoon leader) must balance the time required for subordinate elements to conduct actions on contact with the need of his organization or the higher headquarters to maintain tempo and momentum. In terms of slowing the tempo of an operation, however, the loss of a platoon or team is normally much more costly than the additional time required to allow the subordinate element to properly develop the situation.

4-10. THE FOUR STEPS OF ACTIONS ON CONTACT

The antiarmor company (or platoon) should execute actions on contact using a logical, well-organized process of decision-making and action entailing these four steps:

- Deploy and report.
- Evaluate and develop the situation.
- Choose a COA.
- Execute the selected COA.

The four-step process is not intended to generate a rigid, lockstep response to the enemy. Rather, the goal is to provide an orderly framework that enables the unit and its subordinate elements to survive the initial contact and then to apply sound decision-making and timely actions to complete the operation. Ideally, the unit will acquire the enemy before being sighted by the enemy. It then can initiate physical contact on its own terms by executing the designated COA.

a. **Step 1, Deploy and Report.** Events that occur during the first step of actions on contact depend in great measure on whether the contact is expected or unexpected. Whether contact is expected or unexpected. In either event, the first step of actions on contact concludes with the unit deployed (into base-of-fire and bounding forces), the enemy suppressed or destroyed, and the commander (or platoon leader) sending a contact report to the higher headquarters. The following discussion examines some of the variables a company commander faces in expected and unexpected contact situations and discusses the roles of platoon battle drills, SOPs, and reports.

(1) ***Expected Contact.*** If the company commander expects contact, he will already have deployed the company by transitioning to the bounding overwatch movement technique. If the company is alert to the likely presence of the enemy, it has a better chance of establishing visual contact, and then physical contact, on its own terms before being detected by the enemy. Contact, either visual or physical, usually is made by an overwatching or bounding platoon, which initiates the company's actions on contact. In a worst-case scenario, the platoon may be engaged by a previously undetected (but expected) enemy element. If so, the platoon in contact conducts a battle drill for its own survival and then initiates actions on contact.

(2) ***Unexpected Contact***. In some cases, the antiarmor company will make unexpected contact with the enemy while using traveling or traveling overwatch. The element in contact, or if necessary the entire company, may have to deploy using battle drills to survive the initial contact.

(3) ***Battle Drills***. Battle drills provide virtually automatic responses to contact situations in which immediate and, in many cases, violent execution of an action is critical both to the unit's initial survival and to its ultimate success in combat. Drills are not a substitute for carefully planned COAs; rather, they buy time for the unit in contact and provide a framework for development of the situation. When contact occurs, the antiarmor company's platoons deploy immediately, executing the appropriate battle drills under the direction of the commander. (For additional information on antiarmor platoon battle drills, refer to ARTEP 7-91-DRILL.)

(4) ***Maneuver SOP***. An effectively written, well-rehearsed maneuver SOP helps to ensure quick, predictable actions by all members of the company. The SOP, unlike platoon battle drills, allows leaders to take into account the friendly task organization, a specific enemy, and a specific type of terrain. Therefore, the SOP can assist the company in conducting actions on contact and maintaining the initiative in a number of battlefield situations.

(5) ***Reports.*** Timely, accurate, and complete reports are essential throughout actions on contact. As part of the first step of the process, the company commander must send a contact report to his higher headquarters (airborne and air assault battalion or SBCT) as soon as possible after contact occurs. He provides subsequent reports to update the situation as necessary.

b. **Step 2, Evaluate and Develop the Situation.** While the antiarmor company is deploying, the commander must evaluate the situation and, as necessary, continue to maneuver to develop it.

(1) He quickly gathers as much information as possible, either visually or, more often, through reports from the platoon(s) in contact. He analyzes the information to determine critical operational considerations, including--

- Size, location, composition, activity, orientation, and capabilities of the enemy force.
- Effects of obstacles and terrain.
- Probable enemy intentions.
- How to gain positional advantage over the enemy.
- Friendly situation (location, strength, and capabilities).
- Possible friendly COAs to achieve the specified end state.

(2) After evaluating the situation, the commander may discover that he does not have enough information to identify the necessary operational considerations. To make this determination, he must further develop the situation in accordance with the higher commander's intent, using a combination of these techniques:

- Dismounted antiarmor squad members conducting surveillance (using binoculars and other optical aids).
- Mounted maneuver to gain additional information by viewing the enemy from another perspective.
- Indirect fire.
- Reconnaissance by fire.

(3) Once the commander determines the size of the enemy force the company has encountered, he sends a report to his higher headquarters.

c. **Step 3, Choose a COA.** After developing the situation and determining that he has enough information to make a decision, the company commander selects a COA that both meets the requirements of his higher commander's intent and is within the company's capabilities.

(1) ***Nature of Contact.*** The nature of the contact (expected or unexpected) may have a significant impact on how long it takes a commander to develop and select a COA.

EXAMPLE: In preparing to conduct an attack, the company commander determines that the company will encounter an enemy security force along its axis of advance. During the TLP, he develops a scheme of maneuver to defeat the security force. When the company's lead platoon makes contact with the enemy, the commander quickly assesses that this is the anticipated contact and directs the company to execute his plan. On the other hand, unexpected contact with a well-concealed enemy force may require time for development of the situation at the platoon and section levels. The company commander employs several techniques for developing the situation as his subordinate elements fight for critical information that will eventually allow him to make a sound decision.

(2) ***COA Procedures.*** The company commander has several options for selecting a COA.

(a) If his development of the situation reveals no need for change, he directs the company to execute the original plan.

(b) If his analysis shows that the original plan is still valid but that some refinement is necessary, he informs his higher commander (prior to execution, if possible) and issues a FRAGO to refine the plan.

(c) If his analysis shows that the original plan needs to be changed but that the selected COA will still comply with his higher commander's intent, the company commander informs the higher commander (prior to execution, if possible) and issues a FRAGO to re-task his subordinate elements.

(d) If his analysis shows that the original plan deviates from the higher commander's intent and needs to be changed, the company commander must report the situation and, based on known information in response to an unforeseen enemy or battlefield situation, recommend an alternative COA to his higher commander.

(e) If the battlefield picture is still vague, the company commander must direct the company or a platoon to continue to develop the situation. This will allow him to gather the information needed to clarify a vague battlefield picture. He then uses one of the first four options to report the situation, choose a COA, and direct further action.

d. **Step 4, Execute the Selected COA.** In executing a COA, the antiarmor company transitions to maneuver. It then continues to maneuver throughout execution, either as part of a tactical task or as an advance while in contact to reach the point on the battlefield from which it executes its tactical task. The company can employ a number of tactical tasks as COAs, any of which may be preceded and followed by additional maneuver. As execution continues, more information will become available to the company commander. Based on the emerging details of the enemy situation, he may have to alter his COA during execution.

Section IV. TYPES OF OFFENSIVE OPERATIONS

This section focuses on offensive operations that the antiarmor company (or platoon) normally conducts as part of a larger element: attack, movement to contact, exploitation, and pursuit. The section examines the various roles the antiarmor company (or platoon) may hold in these operations and the tactics for conducting--

- Force-oriented attacks against a stationary enemy force.
- Force-oriented attacks against a moving enemy force.
- Terrain-oriented attacks.

4-11. ATTACK CHARACTERISTICS

An attack is a type of offensive operation characterized by movement supported by fire. The purpose of an attack is to defeat an enemy force or to seize terrain. The antiarmor company (or platoon) can attack independently or as part of a larger element. The two basic types of attack are the hasty attack and the deliberate attack (see paragraph 4-12). Figure 4-5, page 4-16, illustrates the situations under which a unit conducts an attack, compares them to the amount of planning and preparation time, and provides options for the commander (or platoon leader) to accomplish his purpose and support the higher commander's intent. (For more information on the attack options, see paragraph 4-13). All attacks, both hasty and deliberate, depend on synchronization for success. They require planning, coordination, and time to prepare.

a. The company commander (or platoon leader) translates the mission assigned by the higher headquarters, through analyzing the task and purpose, into specific missions for subordinate units. To facilitate parallel planning, he immediately forwards these, along with the appropriate portions of the higher headquarters' plan and order, to subordinate units. Commanders and platoon leaders must work together to develop the best plan. This requires sharing information freely between the command posts. The goal is not simply to reduce the time required to produce and distribute the plans, but, more importantly, to produce a better plan by including input from adjacent, higher, and lower elements. Additionally, this collaboration promotes understanding of the plan, thereby enhancing preparation and execution.

b. As the antiarmor company (or platoon) plans, the enemy also has time to improve his defenses, disengage, or conduct spoiling attacks of his own. Clearly, planning must be accomplished in the shortest time possible and must accommodate the changes driven by what the enemy does.

NOTE: The information systems available to the SBCT antiarmor company facilitate detailed planning. By properly leveraging digital INFOSYS and sensors, the SBCT antiarmor company commander can obtain near-real-time knowledge of enemy composition, locations, activity, and probable intentions. Thus, modern technology improves the company commander's ability to develop his COA and plan his actions against an enemy force from either stationary or moving C2 platforms.

	Attack Situations		
	Force-Oriented Moving Enemy	Force-Oriented Stationary Enemy	Terrain-Oriented
Planning Time	Attack Options		
Less Time Available	• Hasty attack to [destroy, disrupt, or block] • Counterattack • Spoiling attack • Ambush	• Hasty attack to [destroy, disrupt, block] • Counterattack • Feint • Demonstration	• Hasty attack to [seize, clear, or secure] • Counterattack
More Time Available	• Deliberate attack to [destroy, disrupt, or block] • Counterattack • Spoiling attack • Ambush • Feint • Demonstration	• Deliberate attack to destroy • Raid • Counterattack • Feint • Demonstration	• Deliberate attack to [seize, clear, or secure] • Counterattack

Figure 4-5. Continuum of attacks.

4-12. HASTY AND DELIBERATE ATTACKS

In addition to having different forms based on their purposes, attacks are characterized as hasty or deliberate. The primary difference between them is the extent of planning and preparation conducted by the attacking force, but no clear distinction exists between deliberate and hasty attacks. Attacks range along a continuum. At one end of this continuum the company commander (or platoon leader) issues a FRAGO that directs a hasty attack with rapid execution of battle drills by forces immediately available. These attacks rely on an implicit understanding and FM radio (or digital) communication with detailed orders and appropriate branches or sequels that make understanding explicit. Information on the general enemy situation may come from a movement to contact, and the unit launches a hasty attack as a continuation of the meeting engagement. The hasty attack capitalizes on a temporary advantage in relative combat power and may preempt enemy actions. At the other end of the continuum, the unit moves into a deliberate attack from a reserve position or assembly area with detailed knowledge of the enemy, a task organization designed specifically for the attack, and a fully rehearsed plan. Most attacks fall somewhere between these two ends of the continuum.

a. **Hasty Attack.** The antiarmor company commander (or platoon leader) may conduct a hasty attack during a movement to contact, as part of a defense, or whenever he determines that the enemy is in a vulnerable position and can be quickly defeated by immediate offensive action. A hasty attack is used to--

- Exploit a tactical opportunity.
- Maintain the momentum.
- Regain the initiative.
- Prevent the enemy from regaining organization or balance.
- Gain a favorable position that may be lost with time.

Because its primary purpose is to maintain momentum or take advantage of the enemy situation, the hasty attack is normally conducted with only the resources that are immediately available. Maintaining unrelenting pressure through hasty attacks keeps the enemy off balance and makes it difficult for him to react effectively. Rapidly attacking before the enemy can act often results in success even when the combat power ratio is not as favorable as desired. With its emphasis on agility and surprise, however, this type of attack may cause the attacking force to lose a degree of synchronization. To minimize this risk, the commander (or platoon leader) should maximize use of standard formations and well-rehearsed and thoroughly understood battle drills and SOPs. By maintaining situational understanding and assigning on-order and be-prepared missions to subordinate units as the situation warrants, the antiarmor company (or platoon) is better able to transition into hasty attacks. The hasty attack is often the preferred option during continuous operations. It allows the commander (or platoon leader) to maintain the momentum of friendly operations while denying the enemy the time needed to prepare his defenses and to recover from losses suffered during previous action. Hasty attacks normally result from a movement to contact, successful defense, or continuation of a previous attack.

(1) ***Task Organization.*** The hasty attack is conducted using the principles of fire and movement. The controlling headquarters normally designates a base-of-fire force and a bounding force. This may be within the antiarmor company (or platoon) or as part of a larger force. As part of a larger force, the company (or platoon) typically will be designated as the base-of-fire force, while an infantry unit will be designated as the bounding force.

(2) ***Conduct of the Hasty Attack.*** The unit must first conduct actions on contact, allowing the commander (or platoon leader) to gather the information he needs to make an informed decision. The term "hasty" refers to trading available planning and preparation time for speed of execution. The commander (or platoon leader) bases his decisions on his current knowledge of the enemy situation, his own forces, and the terrain. He makes this choice in an environment of uncertainty, which may entail some risk.

(a) Execution begins with establishment of a base of fire, which then suppresses the enemy force. The bounding force uses a combination of techniques to maintain its security as it advances in contact to a position of advantage. These techniques include, but are not limited to, the following:

- Use of internal base-of-fire and bounding elements.
- Use of covered and concealed routes.
- Use of indirect fires to suppress or obscure the enemy or to screen friendly movement.
- Execution of bold maneuver that initially takes the bounding force out of enemy direct fire range.

(b) Once the bounding force has gained the positional advantage, it can execute a tactical task, such as assault, to destroy the remaining enemy.

b. **Deliberate Attack.** The antiarmor company (or platoon) typically will conduct a deliberate attack as part of a larger force. It conducts a deliberate attack by itself only when the enemy's strength prevents it from conducting a hasty attack. A deliberate attack normally is conducted against a strong enemy defense. As the company (or platoon) prepares for the attack, the enemy will continue to strengthen his position. Deliberate attacks follow a distinct period of preparation, which is used for extensive intelligence, surveillance, and reconnaissance (ISR) operations, detailed planning, task organization of forces, preparation of troops and equipment, coordination, rehearsals, and plan refinement. The deliberate attack is a fully synchronized operation that employs every available asset against the defending enemy. It is characterized by a high volume of planned fires (direct and indirect), use of major supporting attacks, forward positioning of resources needed to maintain momentum, and operations throughout the depth of enemy positions. Thorough preparation allows the attacking force to stage a combined-arms and fully integrated attack. Likewise, however, the enemy will have more time to prepare his defensive positions and integrate fires and obstacles. The factors of METT-TC dictate how thoroughly these activities are accomplished. A unit normally conducts a deliberate attack when enemy positions are too strong to be overcome by a hasty attack. In weighing his decision to take the time required to prepare for and conduct the deliberate attack, the commander (or platoon leader) must consider the advantages that may be gained by both friendly and enemy forces.

(1) ***Task Organization.*** Typically, antiarmor companies and platoons will be task-organized by the higher headquarters as the support force for the conduct of a deliberate attack. However, the higher headquarters may give other assets (such as infantry or engineers) to an antiarmor company to perform the duties of the assault or breach forces.

(2) ***Conduct of the Deliberate Attack.*** A deliberate attack is normally broken into the following steps:

(a) *Attack in Zone.* The attacking unit advances to within assault distance of the enemy position under supporting fires and using any combination of movement techniques. Subordinate units advance to successive positions using available cover and concealment. The company commander (or platoon leader) may designate support-by-fire positions to protect friendly forces with suppressive direct fires. As the unit maneuvers in zone, it employs indirect fires to suppress or obscure enemy positions.

(b) *Actions at the Probable Line of Deployment.* The PLD is normally a phase line or checkpoint where elements of the attacking unit transition to secure movement techniques in preparation for contact with the enemy. Subordinate units may maneuver from the PLD to designated support-by-fire positions or to breach or bypass sites. The PLD may be collocated with the assault position.

(c) *Actions on the Objective.* The final assault combines the effects of overwhelming combat power and suppressive fires with the use of maneuver to gain positional advantage over the defending enemy. Fires from support forces and from supporting indirect fire assets isolate the objective area and suppress the enemy. These fires protect the assault force as it closes with the enemy. Other measures the unit may use to set the conditions for the final assault include, but are not limited to, the following:

- Employment of mortar, artillery, or direct fires (or a combination of these) from support-by-fire positions, to destroy enemy forces on the objective or to isolate enemy forces on the objective and create favorable force ratios.
- Use of obscuring smoke.

Once the conditions are set, the assault forces maneuver to close with and destroy the enemy. Other elements continue to provide support as necessary throughout the assault.

4-13. ATTACK OPTIONS

The forms of attack an antiarmor company (or platoon) is most likely to conduct are raid, ambush, spoiling attack, counterattack, feint, and demonstration. The following paragraphs describe the company's role in accomplishing these forms of attack. The commander (or platoon leader) selects weapons based on a detailed analysis of the factors of METT-TC. (See Appendix A, Weapon Reference Data.)

a. **Raid.** This is a limited-objective form of attack entailing swift penetration of hostile terrain. A raid operation always ends with a planned withdrawal to a friendly location upon the completion of the assigned mission. A raid is not intended to hold territory. The antiarmor company (or platoon) can conduct an independent raid or it can participate in a higher unit offensive operation that encompasses several related raids or other related operations.

(1) ***Role.*** The antiarmor company (or platoon) conducts raids to accomplish a number of missions, including the following:

- Destroy specific command and control locations.
- Destroy logistical areas.
- Destroy vehicle laager areas.
- Confuse the enemy or disrupt his plans.
- Obtain information concerning enemy locations, dispositions, strength, intentions, or methods of operation.

(2) ***Task Organization.*** Task organization of a raiding force is based on the factors of METT-TC and the purpose of the operation. It normally consists of the following elements:

- Support force.
- Assault force.
- Breach force (if required).

(3) ***Conduct of the Raid.*** The main differences between a raid and other attack forms are the limited objectives of the raid and the associated withdrawal following completion. Raids may be conducted in daylight or darkness, within or beyond supporting distance of the parent unit. When the area to be raided is beyond supporting distance of friendly lines, the raiding party operates as a separate force. An objective, usually very specific in nature, normally is assigned to orient the raiding unit. During the withdrawal, the attacking force normally takes a route or axis different from that used to conduct the raid itself.

b. **Ambush.** An ambush is a surprise attack, from concealed positions, on a moving or temporarily halted enemy. It may take the form of an assault to close with and destroy the enemy, or it may be an attack by fire only, executed from concealed positions. An ambush does not require that ground be seized or held. Although the execution of an ambush is offensive in nature, the unit may be directed to conduct an ambush in a wide variety of situations. It may stage the ambush during offensive or defensive operations, as part of the higher unit’s sustaining operations, or during retrograde operations. The commander (or platoon leader) in his METT-TC analysis must consider the capabilities of his unit in the mounted and dismounted role. Operational security (OPSEC) is critical to the success of an ambush. The unit must take all necessary precautions to ensure that it is not detected during movement to or preparation of the ambush site. The unit must also have a secure route of withdrawal following the ambush.

(1) ***Role.*** The antiarmor company (or platoon) generally conducts an ambush to reduce the enemy force's overall combat effectiveness. Destruction is the primary reason for conducting an ambush. Other reasons for an antiarmor company (or platoon) to conduct ambushes are--

- To confuse the enemy or disrupt his plans.
- To harass the enemy.
- To capture the enemy.

(2) ***Task Organization.*** The unit is normally task-organized into assault, support, and security forces for the execution of the ambush.

(a) The assault force executes the ambush. It may employ an attack by fire, an assault, or a combination of those techniques to destroy the ambushed force.

(b) The support force fixes the enemy force and prevents it from moving out of the kill zone, allowing the assault force to conduct the ambush. The support force generally uses direct fires in this role; however, it may also be responsible for calling for and adjusting indirect fires to assist in fixing the ambushed force.

(c) The security force provides protection and early warning to the ambush patrol and secures the objective rally point (ORP) or assault position. It isolates the ambush area both to prevent the ambushed enemy force from moving out of the ambush site and to keep enemy rescue elements from reaching the site. The security force may also be responsible for securing the unit's withdrawal route.

(3) ***Conduct of the Ambush.*** An ambush normally consists of the following actions:

- Tactical movement to the ORP or assault position.
- Reconnaissance of the ambush site.
- Establishment of ambush site security.
- Preparation of the ambush site.
- Execution of the ambush.
- Withdrawal.

(4) ***Types of Ambushes.*** Once the unit receives an order to conduct an ambush, the commander (or platoon leader) must determine which of the two types of ambush operations is best suited to the situation and the capabilities of his company. In a *point ambush*, the unit deploys to attack an enemy force in a single kill zone. In an *area ambush*, the unit is deployed to conduct several related point ambushes throughout an ambush area.

c. **Spoiling Attack.** This is a limited-objective attack to delay, disrupt, or destroy the enemy's capability to attack. Units mount spoiling attacks from defensive postures to disrupt expected enemy attacks. A spoiling attack attempts to strike the enemy while he is most vulnerable--during his preparations for attack in assembly areas and attack positions or while he is on the move prior to crossing his line of departure. In most respects, units conduct spoiling attacks like any other attack. They may be hasty (when planning time is short) or deliberate (when the unit has obtained adequate forewarning). When the situation permits, commanders (or platoon leaders) exploit a spoiling attack like any other attack.

d. **Counterattack.** This is an attack by defensive forces to regain the initiative or to deny the enemy success with his attack. Commanders conduct counterattacks either with a reserve or with lightly committed forward elements. They counterattack after the enemy launches his attack, reveals his main effort, or creates an assailable flank. The antiarmor company commander (or platoon leader) conducts a counterattack much like other attacks, but synchronizing them within the overall defensive effort requires careful timing.

(1) Counterattacks afford the defender the opportunity to create favorable conditions for the commitment of combat power. If it is possible to fix the enemy, then counterattacks can be rehearsed, their timing can be controlled, and the ground to be traveled can be prepared. Counterattacks are most useful when they are anticipated, planned, and executed in coordination with other defending, delaying, or attacking forces and in conjunction with a higher commander's plan.

(2) As in spoiling attacks, company commanders (or platoon leaders) prepare to seize the opportunity to exploit success by the entire force. However, counterattacks may be limited to movement to better terrain in order to bring fires (TOW, M2, or MK19) on the enemy. Given the same forces on both sides, counterattacks can achieve greater effects than other attacks because the defender can create more favorable conditions through rehearsal and control of the timing.

e. **Feint.** The feint is in many ways identical to other forms of the attack. Its purpose is to cause the enemy to react in a particular way, such as by repositioning forces, committing its reserve, or shifting fires. The key difference between the feint and other attack forms is that it is much more limited in scope, with an extremely specific objective. The scale of the operation, however, usually is apparent only to the controlling headquarters. For the element actually conducting the feint, such as an antiarmor company, platoon, or section, execution is just as rapid and as violent as in a full-scale attack.

(1) ***Role.*** The unit normally participates in a feint as part of a larger element. Among the planning considerations that the anitarmor company commander (or platoon leader) must keep in mind are the following:

- The higher commander’s intent regarding force preservation.
- Disengagement criteria and plans.
- Assignment of limited depth and attainable objectives.
- Clear and concise “follow-on” orders ensure the unit conducting the feint is prepared to exploit the success of the decisive operation, if necessary.

(2) ***Making Feints Believable.*** Feints are successful only if the enemy believes that a full-scale attack operation is underway. To be believable, the unit must be task-organized to appear as a credible threat, and the unit must conduct the feint with the same violence and the same level of precision as any other attack. The controlling headquarters must issue a clear task and purpose to the unit conducting the feint. This should include identification of the specific enemy action the feint is supposed to trigger or deny (purpose), such as forcing the commitment of an enemy reserve force or preventing an enemy element from repositioning against the main effort attack. Feints are most effective under the following conditions:

- When they reinforce the enemy’s expectations.
- When the attack appears to present a credible threat to the enemy.
- When the enemy retains a large reserve and consistently commits it early in a battle.
- When the attacker has several feasible COAs, any of which the enemy could mistake for the main effort.

f. **Demonstration.** The demonstration is an attack whose purpose is to deceive the enemy about the location of the decisive operation. The purpose of a demonstration is similar to that of a feint, but the friendly force does not make contact with the enemy.

> **EXAMPLE**: A light infantry battalion antiarmor platoon's role might entail establishing an attack-by-fire (ABF) position beyond the enemy's direct fire engagement range. This will cause the enemy commander to commit his tank platoon reserve away from the light infantry battalion's decisive operation simply by virtue of the positioning of the antiarmor platoon.

In preparing to participate in a demonstration as part of a larger force, the antiarmor company commander (or platoon leader) should keep in mind these planning considerations:

(1) The limit of advance must be carefully planned so the enemy can observe the demonstration force but cannot effectively engage it with direct fires. The force must also take any other security measures necessary to prevent engagement by the enemy.

(2) The demonstration force must develop plans so it can respond effectively to enemy direct or indirect fires, avoiding decisive engagement.

(3) Clear and concise "follow-on" orders must be issued to ensure that the demonstration force is prepared to exploit the success of the decisive operation, if necessary.

4-14. MOVEMENT TO CONTACT

Movement to contact is designed to gain or regain contact with the enemy. It is normally used when the enemy situation is vague and there is not time to reconnoiter extensively to locate the enemy. Movement to contact ends when contact is made. (Contact results in initiation of another operation such as attack against a stationary or moving enemy force, defense, delay, or withdrawal.) The antiarmor company (or platoon) normally conducts movements to contact as part of a larger force. Based on the factors of METT-TC, however, an antiarmor company might conduct the operation independently.

> **EXAMPLE:** An airborne infantry battalion antiarmor company may conduct movement to contact prior to occupation of a screen line. Because the enemy situation is not clear, the company moves in a way that provides security and supports a rapid buildup of combat power against enemy units once they are identified.

Two techniques for conducting a movement to contact are the approach-march technique and the search-and-attack technique. If no contact occurs, the company may be directed to conduct consolidation on the objective. The following paragraphs examine the role of the antiarmor company (or platoon) in a higher unit's movement to contact.

a. **Fundamentals.** The antiarmor company commander (or platoon leader) analyzes the situation and selects the proper techniques to conduct the mission. He reports all information rapidly and accurately and strives to gain and maintain contact with the enemy. He retains freedom of maneuver by moving the unit in a manner that--

- Makes enemy contact with the smallest element possible.
- Rapidly develops combat power upon enemy contact.
- Provides all-round security for the unit.
- Supports the higher commander’s concept and intent.

b. **Considerations.** The higher unit may direct the antiarmor company's technique. If not, the antiarmor company commander considers his mission and the higher unit concept as he conducts his estimate to select the best technique. Normally, when operating as part of a higher unit’s movement to contact, the company employs the same technique as that unit. The company commander must consider the mounted capabilities of his company during both techniques. The following considerations also may assist the commander in developing his concept.

(1) ***Time Available.*** The time available for planning, coordinating, and rehearsing may affect the decision. The approach-march technique generally requires much less time for preparation. The company may require only a brief FRAGO assigning the movement formation or technique and some simple graphic control measures to begin movement. The search-and-attack technique may require more preparation time because the subordinate units have more planning responsibilities (such as patrol base, linkups, and casualty evacuations [CASEVACs]).

(2) ***Speed of Movement.*** The speed at which the antiarmor company is required to move is a major factor. With either technique, the faster the company moves, the less effective are the reconnaissance efforts. Thus, it becomes more likely that the enemy will initiate fires at the time and place he selects. The approach-march technique normally is more effective for quickly reacting to enemy contacts.

(3) ***Enemy.*** The company commander considers the clarity of the enemy situation. Although the enemy situation is vague in every movement to contact, the company commander should have some information. Knowing where the enemy will probably locate and in what strength is key. The company commander considers the enemy's probable locations to plan the company's movement and their probable strength to determine his security needs and analyze the risks for each technique. The company commander also considers the expected enemy action upon contact. If he expects the enemy to fight, then the approach march may be the more effective technique. If the enemy will attempt to avoid detection or quickly disengage, the search-and-attack technique may be the better method.

(4) ***Security.*** The amount of preparation time, the required movement speed, and the enemy situation all directly impact on the company's security requirements. The company commander also considers the terrain, the adjacent units, the available combat support, and the present status of his unit to determine how to provide security for his company. Successful movements to contact depend on locating the enemy without being detected. This provides the company commander the initiative to develop the situation by fully coordinating and supporting the attack with all available resources.

c. **The Approach-March Technique.** An approach march (a method of troop movement) is the advance of a combat unit when direct contact with the enemy is intended. The antiarmor company (or platoon) normally uses this technique when it is conducting a movement to contact as part of the larger force. The company (or platoon) can be tasked to act as the advance guard, to move as part of the higher unit main body, or to provide flank or rear guards for the higher unit, depending on its location in the formation and its assigned mission. The antiarmor company (airborne or air assault battalion or SBCT) is capable of conducting a movement to contact by itself using this technique.

(1) ***Planning.*** When planning for a movement to contact (approach-march), the antiarmor company commander needs certain information from the higher commander. With this information, he develops his scheme of maneuver and fire support plan. He provides this same information to the platoon leaders. As a minimum, he needs to know--

- The company's mission.
- The friendly and enemy situations.
- The route (axis of advance) and the desired rate of movement.
- The control measures to be used.
- The company's actions on contact.
- The fire support plan.
- The company's actions upon reaching the march objective, if one is used.

(2) ***Lead Company Responsibilities.*** The higher unit may conduct a movement to contact on a single axis or on multiple axes. If the antiarmor company is the lead company on an axis, it is responsible for--

- Protecting the higher unit from a surprise attack by providing early warning of enemy positions and obstacles.
- Assisting the forward movement of the higher unit by removing obstacles or finding routes around them.
- Destroying enemy forces (within its capability).
- Rapidly developing the situation once contact is made.

(3) ***Lead Company Movement.*** The lead company or advance guard on an axis moves using traveling overwatch or bounding overwatch, depending on the situation. It is normally assigned an axis of advance or a zone of action and a march objective on which to orient its movement. Phase lines and checkpoints also may be used to help control movement.

(a) The company commander selects the movement technique and formation based on the likelihood of enemy contact and the speed of movement desired by the higher commander. Bounding overwatch provides the best security, but traveling overwatch is faster. If the company uses traveling overwatch, the lead platoon may use bounding overwatch for added security.

(b) The company commander must retain the freedom to maneuver his platoons and weapons systems. He analyzes the terrain, anticipates where he might make contact, and plans fires on those locations. He should avoid terrain that restricts maneuver such as draws, ravines, narrow trails, and steep slopes.

(4) ***Other Companies.*** A company not in the lead uses traveling or traveling overwatch. It must be ready to fire or maneuver in support of the lead company or to assume the lead company's mission.

(5) ***Contact.*** Once contact is made with the enemy, the company commander maintains that contact until ordered to do otherwise by the higher commander. The following actions must take place immediately:

(a) When there is an unexpected contact as a result of inadequate information, the platoon in contact returns fire immediately and seeks cover. If the enemy is unaware, the platoon making contact reports and deploys to prevent detection. The maneuver to a position of advantage by this platoon (or other units) should maintain the element of surprise until preparation for the hasty attack is completed. If detected, or once the decision is made to initiate the hasty attack, the platoon leader attempts to fight through, destroying the enemy with the resources that are immediately available. He should begin calling for fire. He then reports to the company commander and develops the situation. The overwatch element immediately fires at the enemy position. Trail platoons that are not able to fire take cover and wait for orders.

(b) The antiarmor squad or platoon that initially received direct fire immediately executes the react to contact battle drill (ARTEP 7-91-DRILL). The intent is to use aggressive small-unit actions to seize the initiative rapidly and at the lowest echelon possible. The unit in contact attempts to achieve fire superiority to fix or suppress the enemy with the resources that are immediately available. The unit then executes a flank attack directed against an identified enemy weakness. If this is not possible, the unit develops the situation to identify the enemy's flanks, any covered and concealed routes around the enemy position, possible supporting positions (both friendly and enemy), and any protective obstacles that the enemy has constructed. It then reports this information to the company commander.

(c) Upon receipt of this information, the company commander determines the proper action to take. The XO reports the situation to battalion. The company commander may conduct, or direct his units to conduct, additional reconnaissance. The company FSO requests and coordinates indirect fires to support the company's maneuver. Possible actions include--

- Conduct a hasty attack. If the company commander feels he can defeat the enemy force and an attack supports the higher commander's concept, he conducts a hasty attack immediately, before the enemy can react.
- Bypass the enemy. The company commander, with higher unit permission, may bypass an enemy force. He may bypass the enemy with one platoon at a time or with the entire company at once. He also may be directed to fix or suppress the enemy while the higher unit bypasses. Indirect fires also are used to suppress the enemy. When the company has suppressed the enemy, the higher commander may order the company to disengage and rejoin the formation or to hand the enemy off to a trailing unit.
- Establish a hasty defense. Although this gives the initiative to the enemy force, it might provide a needed advantage, which might be required in a meeting engagement with a superior force. The company may establish a hasty defense to protect itself while the remainder of the higher unit is maneuvering against the enemy.
- Disengage. This is not a preferred option unless disengaging is the only way to ensure preservation of the force. Use of indirect fires and bounding and overwatch elements is essential in disengaging from a superior force. The company may disengage while another unit maintains contact, or the company may disengage by moving back through the higher unit to draw the enemy into an ambush.

d. **The Search-and-Attack Technique.** This decentralized technique uses multiple, coordinated, small-unit (squad, section, or platoon) actions to find, fix, and finish the enemy. If the unit makes contact without being detected by the enemy, the unit gains the initiative and has three options:

- Destroy the enemy with the immediately available combat potential.
- Maneuver the remainder of the unit to destroy the enemy
- Follow the enemy back to his base camp and destroy him there.

Antiarmor units will conduct the search-and-attack as part of a larger force. The antiarmor platoon in a light infantry battalion will typically isolate the search area or reinforce a rifle company. The antiarmor companies from airborne or air assault battalions or SBCTs can isolate the area or be task-organized by the higher headquarters to effectively conduct a search-and-attack in an assigned AO. During his planning, the antiarmor company commander decides how to find the enemy, how to fix or follow him, and then how to finish him.

(1) ***Concept Development.*** Initially, the decisive point is identified as the most likely enemy location. Once the enemy location has been confirmed, a concept can be developed for generating overwhelming combat power at that location. The initial concept must include the actions to finish the enemy force once it is located. At times, this part of the plan may be very general or consist only of control measures and be-prepared missions to provide flexibility and support the rapid issuance of fragmentary orders (FRAGOs).

(a) The company commander must understand the higher commander's concept and what freedom of action the company has to engage the enemy. At times, the company must engage and destroy all enemy forces within their capabilities. In other cases, the company is expected to locate, follow, and report small enemy units to allow other companies to concentrate and destroy these enemy forces.

(b) The company commander must focus his platoons on the likely enemy locations. He assigns missions in accordance with (IAW) the higher commander's concept. Possible operations include a zone or area reconnaissance, an ambush, and surveillance. Small unit leaders (for example, antiarmor squad leaders or attached rifle squad leaders) must know what actions to take when they locate the enemy either with or without being detected. The platoon most likely to make contact is normally designated the company's main effort.

(2) ***Considerations.*** The company commander usually determines the number and size of the units that will conduct reconnaissance and combat actions against the enemy. The size of the area, the duration of the mission, and the probable size of the enemy force are key to this decision.

(a) A detailed METT-TC analysis is essential to the success of a search-and-attack. The size of the AO is considered in relation to how much time is available to search the area. When allocating terrain, the company commander considers how the subordinate units will conduct the reconnaissance, how to provide security, and how to provide control. One technique is to assign a small AO that keeps the subordinate units more concentrated, helping to maintain control. On order, the subordinate units are directed to move into the next AO. Another technique is to divide the area into zones. The company commander concentrates most of the company in one zone and uses small team or rifle squad patrols to reconnoiter the next zone. Once the antiarmor company has completed the reconnaissance in the initial zone, it moves into the area that has been reconnoitered by the small units. This technique is effective when a detailed reconnaissance is required, but it also supports the seizure of the initiative through speed, stealth, and surprise. The small, dispersed units have a better chance of locating the enemy and remaining undetected. The company commander focuses the remainder of the company's reconnaissance efforts based upon the information gathered during the initial reconnaissance.

(b) The company commander must consider how the duration of the mission affects the company. If the mission will continue for days or longer, the commander must develop a concept that allows his subordinates to maintain combat effectiveness. The concept must address operations during limited visibility. He must ensure that the concept provides sufficient rest to maintain his soldiers' stealth, alertness, and security.

(c) The duration of the mission also affects the need to resupply. This has a tremendous impact on a search-and-attack mission. The longer the mission is expected to last, the more often the need for resupply. Resupply operations hinder the ability to move with stealth and security while close to the enemy and allow the enemy to locate the unit by following or observing the resupply vehicles. The company commander must determine the essential supplies required for the operation. If this results in excessive amount of supplies, he plans for resupply operations that avoid enemy detection and maintain the security of the company. Another technique is to identify platoon ORPs or company patrol bases throughout the AO. The company moves between these locations using the approach-march technique to provide greater control and security. After securing and occupying the next ORP or patrol base, the unit receives the necessary supplies.

(d) Knowing the size of the enemy units with which the company is likely to make contact assists the company commander in determining the risk to the company. The company commander also must consider the enemy's capabilities, likely COAs, and specific weapons capabilities in order to understand the threat and ensure the security of his company, even when conducting decentralized operations. The company commander may direct specific force protection restraints such as "no patrols smaller than a rifle squad or antiarmor section," "platoons must be able to consolidate within 20 minutes," or "platoons will depart their patrol bases NLT 60 minutes prior to BMNT."

(3) ***Find the Enemy.*** During this step, the focus is on reconnaissance to locate the enemy. Generally, small units able to move quickly and with stealth are more likely to locate the enemy without detection. The company commander's concept may restrict the platoon's authority to destroy the enemy once located. It may be more important to locate and follow enemy units to identify their base camps. When not restricted, however, the unit making contact takes immediate action to destroy the enemy. If it is not within this unit's capabilities, the platoon conducts linkups to mass sufficient combat potential and to coordinate the attack.

(a) Platoons do not receive a mission with the vague requirement to search-and-attack. The company commander must be more specific in stating his concept. His concept also must address the likely actions to destroy the enemy once it is located. Specific taskings may include route, area, and zone reconnaissance or surveillance tasks. Platoons may also be tasked to conduct ambushes, to be prepared to conduct an attack to destroy enemy forces, to provide security for another force such as the command post (CP) or the mortars, or to perform duties as the company reserve.

(b) During limited visibility, reconnaissance is more difficult and potentially more dangerous. If a unit makes contact with the enemy in the dark, a hasty attack is very risky. Reconnaissance is also less effective in the dark because the unit covers less area and is unable to detect many signs of enemy activity. Route and small-area reconnaissance tasks are more effective for limited visibility.

(c) Ambushes are also very effective during limited visibility. The enemy may avoid daylight movements if aware of the company's presence in the AO. Ambushes should be set up on the enemy's likely routes or near their sources of supply. Patrol bases should integrate ambushes and observation posts (with thermal sights and NVDs) into their security plans.

(4) ***Fix and Finish the Enemy.*** These steps of a search and attack are closely related. An initial attempt to finish the enemy by the platoon in contact quickly may become the fixing effort for the company's attack if the enemy is too strong for the platoon or if the platoon is unable to achieve surprise. When the authority to conduct offensive actions to destroy the enemy has been decentralized to the lowest level, the fundamentals of an attack apply at every echelon.

(a) *Achieve Surprise.* Locate the enemy without being detected. This allows more time to plan and coordinate the attack. Once detected, speed and violence in the assault may also achieve surprise, but this is rarely true against a prepared enemy defense.

(b) *Limit the Enemy's Freedom of Action.* Fix the enemy in position. Block his routes of escape with indirect fires, maneuver forces, or both. Suppress his weapons systems, obscure his vision, and disrupt his command and control. Reconnaissance is continuous; leaders at every echelon are seeking out the enemy's dispositions, strengths, and weaknesses. Initially, these actions are directed toward supporting an attack by the lowest echelon. At some point, the leader of this unit must determine if he is able to achieve fire superiority and conduct the assault. If it is determined that the unit in contact has insufficient combat power to complete the destruction of the enemy, the leader focuses on fixing the enemy and reconnoitering to support the attack by the next higher echelon.

(c) *Maintain Security.* While attempting to take these actions against the enemy, the enemy is attempting to do the same. Do not assume the enemy that has been identified is alone; there may be mutually supporting positions or units. The planned envelopment or flank attack of one enemy position may move through the kill zone of another unit, or this maneuver may expose the flank of the assault force to fires from undetected positions.

(d) *Concentrate Combat Power.* Once contact is made, the plan must support the rapid concentration of combat power to fix and finish (destroy) the enemy. Leaders at each echelon plan to destroy the enemy within their capabilities. The combat potential of small units may be increased by ensuring each has the ability to request fire support. The company commander may retain a portion of the company as a mobile reserve to react quickly to enemy contact by one of the small units. If the unit or platoon cannot finish the enemy, the company commander determines how to fix or contain the enemy while concentrating his dispersed combat potential. He then develops an attack plan to destroy the enemy force. He may use the fixing force to support by fire and assault with another platoon(s), or he may use artillery and mortars to destroy the enemy. Each leader must report the results of his reconnaissance to support the company commander's planning. Leaders recommend effective support positions, good assault positions or directions of attack, and likely enemy weak points. The leader of the unit in contact should also identify good linkup points in case the preplanned points are not effective. In most cases, this leader should coordinate face to face with the company commander or the leader of the assault element before initiating the assault.

(5) ***Follow the Enemy.*** When the purpose of the operation is to locate the enemy's base camps or other fixed sites, the company commander’s concept must avoid non-decisive

fights between small units. When friendly units locate small enemy units, they report and attempt to follow or track these units back to their base camps. The company commander must ensure that his concept does not risk the security of his force in the attempt to make undetected contact and track enemy units. Units following the enemy must be ready to react to enemy contact and avoid likely ambush situations. It may also be possible to track the enemy's movement through the AO by using stationary OPs as trail watchers to report enemy activity.

(6) ***Enter the Area of Operations.*** The company commander also decides how the company will enter its zone or area of operations, how to move once in the area, where to locate certain units or facilities, and what the requirements for contingency plans are. This includes establishing the proper graphic control measures to control the movement of the units, to provide for linkups between units, and to support the rapid concentration of the company's combat power. It also includes synchronizing the actions of the company and providing specific tasks or constraints to ensure subordinates understand what actions to take once they make contact with the enemy. The company may enter the area or zone by moving as a company then splitting up (Figure 4-6), by infiltrating platoon and section (Figure 4-7,page 4-30), or by air assault.

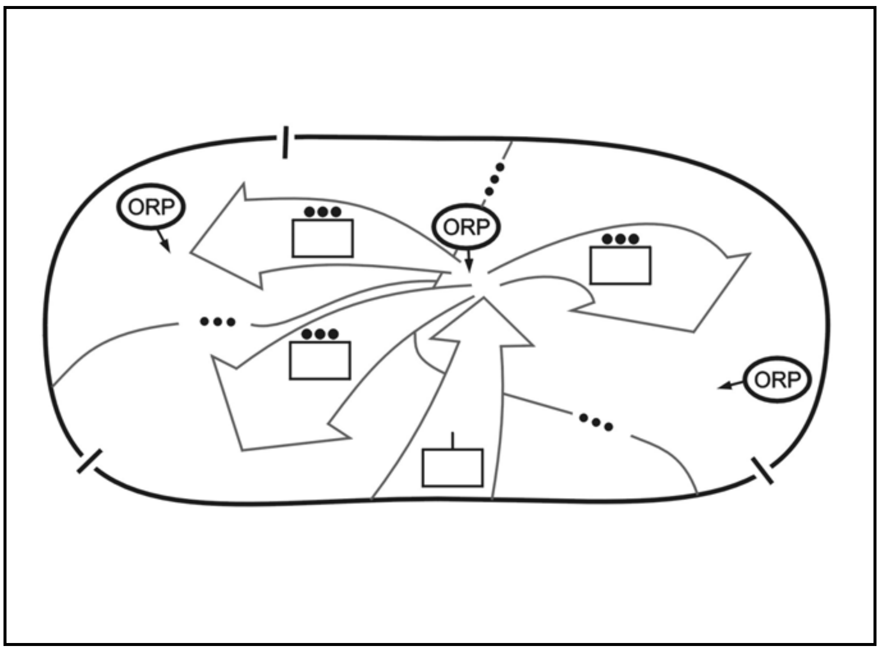


Figure 4-6. Infiltration by a company.

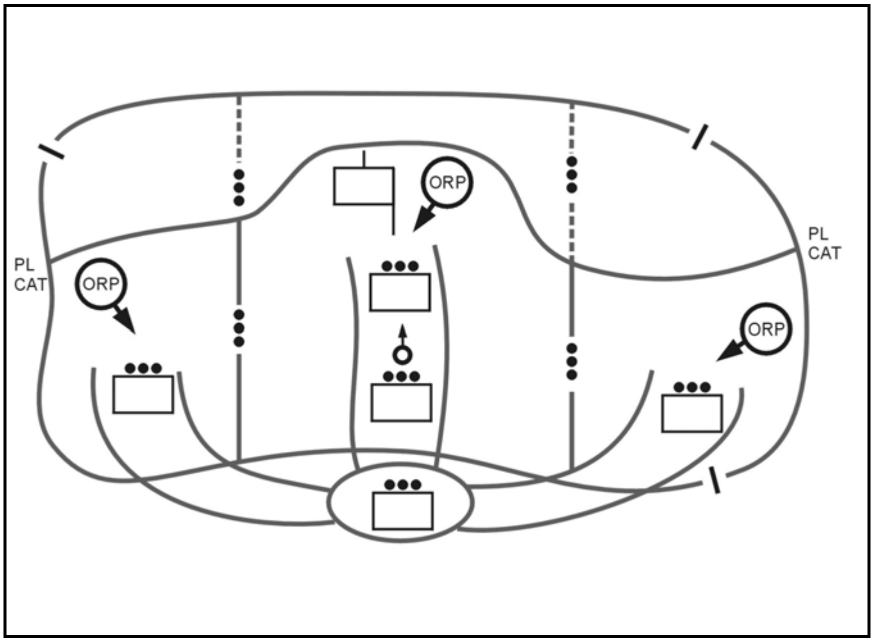


Figure 4-7. Infiltration by platoon and section.

(a) Movement within the area or through the zone of attack may be conducted by the entire company or by individual platoons. Figure 4-8 shows a concept sketch for a search and attack conducted without a company linkup.

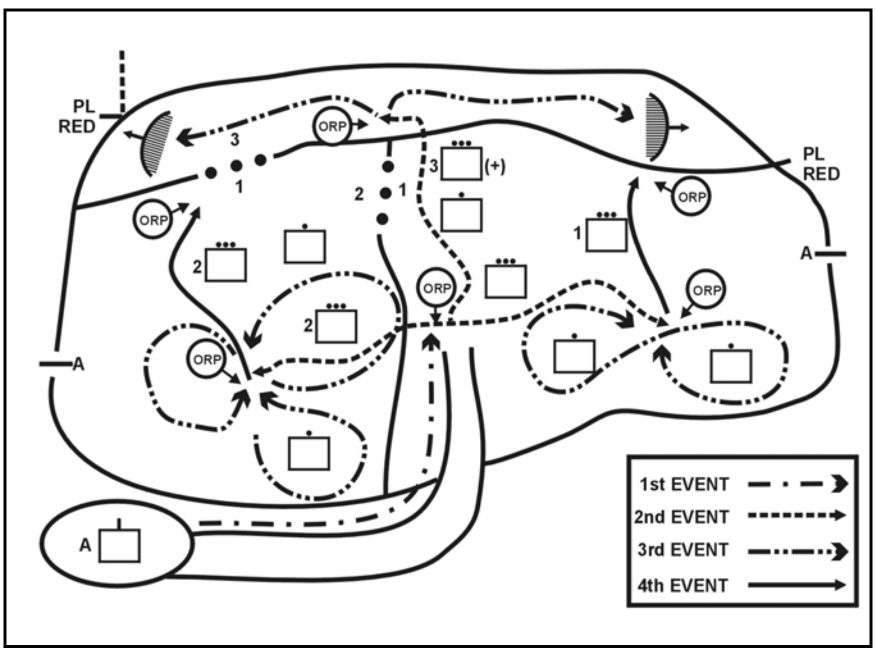


Figure 4-8. Antiarmor company search-and-attack concept sketch.

(b) The company commander must decide where to locate the company CP. He may collocate it with the main effort platoon, or he may position the CP in a central location where it can communicate with and move quickly to each platoon's location. A technique is to rotate a platoon each day to provide security for the CP. Each platoon spends only 48 hours actively searching for the enemy and then rotates into this security role. This should prevent a serious degradation in effectiveness due to sleep loss. This platoon may be the company's reserve.

4-15. EXPLOITATION

A company normally takes part in exploitations as part of a larger force; however, all company commanders should prepare to exploit tactical success at the local level. Any action must be within the higher commanders' intent and concept of the operation.

4-16. PURSUIT

The objective of the pursuit is the total destruction of the enemy force. The antiarmor company (or platoon) may take part in a pursuit as part of a larger force or, because of its organic transportation, may task-organize a pursuit force that can close with and destroy the remnants of the enemy force.

CHAPTER 5
DEFENSIVE OPERATIONS

As the Army enters the 21st century and transforms to meet the ever-changing enemy, the antiarmor company and platoon must assume a greater role in the conduct of warfare on the modern battlefield. The antiarmor company (or platoon) contributes to success in the defense by employing long-range direct fires to destroy enemy armor and infantry forces with the TOW, M2 and MK19 fire. The antiarmor unit's mobility, heavy weaponry, and thermal observation devices define it as a key part of a larger unit's defense. The antiarmor unit can perform several missions in the defense. These missions include defend from a battle position(s) in the main battle area (MBA), participate in security operations, or serve as the reserve. The defense is a time management challenge for any unit and is continuously improved until the unit is attacked or receives a change of mission. The effectiveness of the defense depends on the efficiency of time management during planning, ISR operations, occupation, and preparation. This chapter describes the tactics and techniques used by antiarmor units in the defense and related security operations.

Section I. GENERAL PLANNING CONSIDERATIONS

Military forces conduct defensive operations only until they gain sufficient strength to attack. Though the outcome of decisive combat derives from offensive actions, commanders often find that it is necessary, even advisable, to defend. Once they make this choice, they must set the conditions for the defense in a way that allows friendly forces to withstand and hold the enemy while they prepare to seize the initiative and return to the offense. A thorough understanding of the commander's intent is especially critical in defensive operations, which demand precise integration of combat, combat support, and combat service support elements.

5-1. PURPOSE OF THE DEFENSE

The immediate purposes of all defensive operations are to defeat an enemy attack and gain the initiative for offensive operations. The antiarmor company (or platoon) may also conduct the defense to achieve one or more of the following purposes:

- Gain time.
- Retain key terrain.
- Support other operations.
- Preoccupy the enemy in one area while friendly forces attack him in another.
- Erode enemy forces at a rapid rate while reinforcing friendly operations.

5-2. CHARACTERISTICS OF THE DEFENSE

The characteristics of the defense--preparation, security, disruption, mass, concentration, and flexibility--are planning fundamentals for the antiarmor company (or platoon). There are two types of defensive operations: area and mobile. Traditionally, the light infantry applies the area defense pattern. Light infantry rarely applies a mobile defense pattern because it is less mobile than the enemy and lacks the ability to significantly maximize the combat power available in a single credible force. Airborne and air assault battalions and SBCTs, with the enhanced mobility of the antiarmor company, have the capability to apply area or mobile defenses. All (or a portion) of the antiarmor company can be employed as the striking force within a mobile defense. The characteristics of the defense should be considered when planning or conducting company defensive operations. (See Chapters 9 and 10 in FM 3-90 for further discussion on mobile and area defenses.) These considerations, as they apply to the antiarmor company (or platoon), are as follows:

a. **Preparation.** The defender arrives in the battle area before the attacker. He must take advantage of this by making the most thorough preparations for combat that time allows. By analyzing the factors of METT-TC, the defender gains an understanding of the tactical situation and identifies potential friendly and enemy weaknesses. He then war-games friendly and enemy options and synchronizes his concept of the operation with all available combat multipliers.

b. **Security.** The goals of the antiarmor company (or platoon) security effort normally include providing early warning, destroying enemy reconnaissance units, and impeding and harassing enemy main body elements. The company (or platoon) continues its mission until directed to displace.

(1) Since the enemy (attacker) decides the time and place of the attack, the defender uses security measures to provide early warning. ISR and security operations must begin immediately upon transitioning to the defense and continue throughout the operation.

(2) Security forces protect friendly forces and allow them to continue their preparations. The defender may also use security forces in his deception effort to give the illusion of strength in one area while positioning his true combat power in another. While conducting this type of security operation, the antiarmor company (or platoon) may simultaneously need to prepare deception and real battle positions, creating a challenging time management problem for all of the leaders.

c. **Disruption.** Defensive plans vary with the circumstances, but all defensive concepts of operation aim at disrupting the attacker's synchronization. Counterattacks, indirect fires, obstacles, and retention of key or decisive terrain prevent the enemy from concentrating his strength against portions of the defense. Destroying enemy command and control vehicles disrupts enemy synchronization and flexibility.

d. **Mass and Concentration.** The defender must concentrate combat power at the decisive time and place if he is to succeed. He must obtain a local advantage at points of decision. Offensive action and the use of surprise and deception are often the means of gaining this advantage. The defender must remember that this concentration refers to combat power and its effects--not just numbers of soldiers and weapons systems. To concentrate combat power, the defender normally must economize in some areas, retain a reserve, and maneuver to gain local superiority. Local counterattacks may be needed to maintain the integrity of the defense. Indirect fire can be shifted to critical points to concentrate destructive effects rapidly.

e. **Flexibility.** Flexibility is derived from sound preparation and effective command and control. The defender must be agile enough to counter or avoid the attacker's blow and then strike back effectively. Flexibility results from a detailed mission analysis, an understanding of the unit's purpose, aggressive reconnaissance and security, and, when applicable, organization in depth and retention or reconstitution of a reserve. Supplementary positions on secondary avenues of approach may provide additional flexibility to the unit. After a good analysis of the terrain and enemy, reserves can be positioned to allow the unit to react to unanticipated events.

Section II. SEQUENCE OF THE DEFENSE

As part of a larger element, the antiarmor company (or platoon), when augmented with additional combat support and combat service support elements, conducts defensive operations in a sequence of integrated and overlapping steps. The following paragraphs focus on the tactical considerations and procedures involved in each step. This discussion illustrates an attacking enemy that uses depth in its operations, but there will be situations where a company must defend against an enemy that does not have a doctrinal operational foundation. This requires a more flexible plan that allows for more centralized combat power rather than spreading it throughout the company's area of operations.

5-3. RECONNAISSANCE AND SECURITY OPERATIONS AND ENEMY PREPARATORY FIRES

Security forces must protect friendly forces in the MBA and allow them to continue their defensive preparations. The enemy will attempt to discover the defensive scheme of maneuver using reconnaissance elements or attacks by forward detachments and advance guard elements. He will also attempt to breach the higher unit's tactical obstacles.

a. The goals of the security force normally include providing early warning, destroying enemy reconnaissance units, and impeding and harassing enemy main body elements. The security force continues its mission until directed to displace. The higher commander may also use security forces in his deception effort to give the illusion of strength in one area while positioning his true combat power in another. While conducting this type of security operation, the antiarmor company (or platoon) may also prepare battle positions, creating a challenging time management problem.

b. During this step, the antiarmor company (or platoon) may need to provide guides to a passing force and may be tasked to close passage lanes. The unit may also play a role in shaping the battlefield. The battalion or brigade (or SBCT) commander may position the unit to deny likely enemy attack corridors, enhancing flexibility and forcing enemy elements into friendly engagement areas. When it is not conducting security or preparation tasks, the company (or platoon) may occupy hide positions to avoid possible enemy artillery preparation. The unit's efforts must reinforce and complement the higher unit's ISR and security plans.

5-4. OCCUPATION AND PREPARATION

During this step, the company reconnoiters and occupies its positions. This usually includes movement from tactical assembly areas to the actual defensive sector, led by a quartering party that clears the defensive positions. The higher units establish security forces during this step, and remaining forces begin to develop engagement areas and prepare battle positions. Security is critical during the occupation to ensure the unit can avoid detection and maintain combat power for the actual defense. Soldiers at all levels must thoroughly understand their duties and responsibilities related to the occupation; they must be able to execute the occupation quickly and efficiently to maximize the time available for planning and preparation of the defense. (See Appendix D, Firing Positions.)

5-5. APPROACH OF THE ENEMY MAIN ATTACK

As this step begins, the brigade (or SBCT) engages the enemy at long ranges using indirect fires, electronic warfare, and close air support (CAS) (deep fight). The goal is to use these assets, along with disrupting obstacles, to shape the battlefield and to slow the enemy's advance and disrupt his formations. As the enemy's main body echelon approaches the company or battalion engagement area, it may initiate indirect fires and CAS to further weaken the enemy; at the same time, the brigade's (or SBCT's) shaping operation normally shifts to second-echelon forces. Friendly forces occupy their actual defensive positions before the enemy reaches direct fire range; they may shift positions in response to enemy actions or other tactical factors.

5-6. ENEMY ASSAULT

During this step, the enemy deploys to achieve mass at a designated point, normally employing both assault and support forces. This may leave him vulnerable to the combined effects of indirect and direct fires integrated with obstacles. He may employ additional forces to fix friendly elements and prevent their repositioning. Friendly counterattack forces may be committed against the enemy flank or rear, while other friendly forces may displace to alternate, supplementary, or successive positions in support of the higher commander's scheme of maneuver. All friendly forces should be prepared for the enemy to maximize employment of combat multipliers, such as dismounted infantry operations, to create vulnerability. The enemy is also likely to set the conditions for the assault with artillery, CAS, and chemical weapons.

5-7. COUNTERATTACK

As the enemy's momentum is slowed or stopped, friendly forces may conduct a counterattack. The counterattack may be conducted purely for offensive purposes to seize the initiative from the enemy. In some cases, however, the purpose of the counterattack is mainly defensive, such as reestablishing a position or restoring control of the sector. The antiarmor company (or platoon) may participate in the counterattack by providing support by fire for the counterattack force or as the actual counterattack force.

5-8. CONSOLIDATION AND REORGANIZATION

The antiarmor company (or platoon) must secure its sector by repositioning forces, destroying remaining enemy elements, processing enemy prisoners of war (EPWs), and reestablishing obstacles. The unit conducts all necessary CSS functions as it prepares to continue the defense. Even when enemy forces are not actively engaging it, the unit must maintain local security at all times during consolidation and reorganization. The unit then must prepare itself for possible follow-on missions.

Section III. BOS PLANNING CONSIDERATIONS

The BOS are a listing of critical tactical activities and provide a means of reviewing preparations or execution. The synchronization and coordination of activities within and among the various BOS are critical to the success of the antiarmor company (or platoon).

5-9. MANEUVER

The goal of effective weapons positioning is to enable the antiarmor company (or platoon) to mass direct fires at critical points on the battlefield and to enhance its survivability. To do this, the commander (or platoon leader) must maximize the strengths of his weapons systems (TOW, M2, and MK19) while minimizing the company's exposure to enemy observation and fires. The following paragraphs focus on tactical considerations for weapons positioning.

a. **Depth and Dispersion.** Dispersing positions laterally and in depth helps to protect the force from enemy observation and fires. If the terrain allows for the development of an engagement area (EA), the positions are established in depth, allowing sufficient maneuver space within each position to establish in-depth placement of vehicles and weapons systems. Fighting positions should be positioned to allow the massing of direct fires at critical points on the battlefield.

b. **Flank Positions.** Flank positions enable a defending force to bring fires to bear on an attacking force moving parallel to the defender’s forces. An effective flank position provides the defender with a larger and more vulnerable target while leaving the attacker unsure of the location of the defense. Major considerations for successful employment of a flank position are the defender’s ability to secure the flank and his ability to achieve surprise by remaining undetected. Effective fire control (refer to Appendix C) and fratricide avoidance measures (refer to Appendix B) are critical considerations in the employment of flank positions.

c. **Displacement Planning.** Disengagement and displacement allow the company to retain its operational flexibility and tactical agility in the defense. The ultimate goals of disengagement and displacement are to enable the antiarmor company (or platoon) to maintain standoff ranges and to avoid being fixed or decisively engaged by the enemy. The commander (or platoon leader) must consider several important factors in displacement planning. These include, but are not limited to, the following:

- The enemy situation (for example, an attack with two battalion-size enemy units may prevent the unit from disengaging).
- Disengagement criteria.
- Availability of indirect fires that can support disengagement by suppressing or disrupting the enemy.
- Availability of cover and concealment and smoke to assist disengagement.
- Obstacle integration (including situational obstacles).
- Positioning of forces on terrain that provides an advantage to the disengaging elements (such as reverse slopes or natural obstacles).
- Identification of displacement routes and times when disengagement or displacement will take place. Routes and times are rehearsed.
- The size and composition of a friendly force that must be available to engage the enemy in support of the displacing unit.

While disengagement and displacement are valuable tactical tools, they can be extremely difficult to execute in the face of a rapidly moving enemy force. In fact, displacement in contact poses such great problems that the antiarmor company commander (or platoon leader) must plan for it thoroughly and rehearse displacement before the conduct of the defense. Then he must carefully evaluate the situation at the time displacement in contact becomes necessary to ensure that it is feasible and will not result in unacceptable loss of personnel or equipment.

d. **Disengagement Criteria.** Disengagement criteria dictate to subordinate elements the circumstances under which they will displace to an alternate, supplementary, or successive battle position (BP). The criteria are tied to an enemy action (for example, disengage when greater than five enemy armored vehicles advance past PL DOG) and are linked to the friendly situation (for example, they may depend on whether artillery or an overwatch element can engage the enemy). Disengagement criteria are developed during the planning process based on the unique conditions of a specific situation; they should never be part of the unit's SOP.

e. **Direct Fire Suppression.** The attacking enemy force must not be allowed to bring effective direct and indirect fires to bear on a disengaging friendly force. Direct fires from the supporting element, employed to suppress or disrupt the enemy, are the most effective way to facilitate disengagement. The company (or platoon) may receive supporting fires from another element. In most cases, however, the antiarmor company (or platoon) establishes its own supporting element. Having an internal element requires the company commander (or platoon leader) to carefully sequence the displacement of his forces.

f. **Cover and Concealment.** Ideally, the company (or platoon) and subordinate units should use covered and concealed routes when moving to alternate, supplementary, or successive BPs. Regardless of the degree of protection the route itself affords, all of the units should rehearse the movement. Rehearsals increase the speed at which the unit can conduct the move, providing an added measure of security. The commander or leader must make a concerted effort to allocate available time to rehearse movement in limited visibility and degraded conditions.

g. **Indirect Fires and Smoke.** Artillery or mortar fires can assist the unit during disengagement. Suppressive fires, placed on an enemy force as it is closing inside the defender's standoff range, slow the enemy and cause him to button up. The defending force engages the enemy with long-range precision direct fires and then disengages and moves to new positions. Smoke can obscure the enemy's vision, slow his progress, or screen the defender's movement out of the BP or along his displacement route.

h. **Obstacle Integration.** Obstacles must be integrated with direct and indirect fires. By slowing and disrupting enemy movement, obstacles provide the defender with the time necessary for displacement and allow friendly forces to employ direct and indirect fires effectively against the enemy. The modular pack mine system (MOPMS) can also be employed in support of the disengagement, either to block a key displacement route once the displacing unit has passed through it or to close a lane through a tactical obstacle. The location of obstacles in support of disengagement depends in large measure on an analysis of the factors of METT-TC. A major consideration for employing an obstacle is that it should be positioned far enough away from the defender that he can effectively engage the enemy on the far side of the obstacle while remaining out of range of the enemy's direct fires.

5-10. FIRE SUPPORT

For the indirect fire plan to be effective in the defense, the unit must plan and execute fires in a manner that achieves the intended task and purpose of each target. Indirect fires serve a variety of purposes in the defense, including the following:

- Slow or disrupt enemy movement.
- Prevent the enemy from executing breaching.
- Destroy or delay enemy forces at obstacles using massed fires or pinpoint munitions.
- Disrupt enemy support-by-fire elements.
- Defeat attacks along infantry avenues of approach with the use of final protective fire (FPF).
- Allow friendly elements to disengage or conduct counterattacks.
- Use smoke to screen friendly displacement or to silhouette enemy formations, facilitating direct fire engagement.
- Deliver scatterable mines to close lanes and gaps in obstacles, to disrupt or prevent enemy breaching operations, to disrupt enemy movement at choke points, or to separate or isolate enemy echelons.
- Execute suppression of enemy air defense (SEAD) missions to support CAS, attack aviation, and high-payoff targets.
- Provide illumination (if necessary).

a. **Fire Support Assets.** In developing the indirect fire plan, the antiarmor company commander (or platoon leader) must evaluate the indirect fire systems available. Considerations include tactical capabilities, weapons ranges, and available munitions. These factors help him and the battalion or company (SBCT) FSO to determine the best method for achieving the task and purpose of each target in the fire plan.

b. **FIST Positioning.** The SBCT antiarmor company's FIST contributes significantly to the fight; its effective positioning is critical. The company commander and his company FSO must select positions that provide fire support personnel with unobstructed observation of the area of operations. In addition, the fire support vehicle should receive high priority for a position with enhanced survivability. The airborne, air assault companies, and antiarmor platoon (light infantry battalion) do not have a FIST and must rely on the battalion FSO for support.

5-11. AIR DEFENSE

The focus of the air defense plan is on likely air avenues of approach for enemy fixed-wing aircraft, rotary-wing aircraft, and unmanned aerial vehicle (UAV); these may or may not correspond with the enemy's ground avenues of approach. Air defense assets that are available to the antiarmor company (or platoon) are positioned based on the results of an analysis of the factors of METT-TC and the higher commander's scheme of maneuver.

a. Air defense assets, for example, are usually positioned about 2 kilometers apart to maximize the Stinger's capabilities in the defense. The Stinger then becomes the primary killer of rotary-wing and fixed-wing aircraft, with combined-arms air defense (small arms and vehicle-mounted weapons systems) for close-in defense.

b. In another situation, the higher headquarters S2 and air defense officer (ADO) may determine that the air defense systems should be positioned independent of the friendly ground maneuver elements. These systems also are used frequently to protect friendly counterattack forces against aerial observation or attack.

c. Another factor in air defense planning is the resupply of Stinger missiles, which places unique demands on the antiarmor company (or platoon) and requires detailed planning and consideration. It may be necessary to pre-position Stingers in the company (or platoon) AO to facilitate timely resupply.

5-12. MOBILITY, COUNTERMOBILITY, AND SURVIVABILITY

Mobility focuses on preserving the freedom of maneuver of friendly forces. Countermobility limits the maneuver of enemy forces and enhances the effectiveness of fires. Survivability focuses on protecting friendly forces from the effects of enemy weapon systems.

a. **Mobility.** During defensive preparations, mobility operations initially focus on the ability to resupply, reposition, and conduct rearward and forward passage of forces, material, and equipment. Once defensive preparations are complete, the focus normally shifts to supporting the unit’s reserve, local counterattacks, and the higher HQ counterattack or reserve. Priorities set by the higher HQ may specify routes for improvement in support of such operations. Normally, all or most of the available engineer assets are allocated to the survivability and countermobility efforts until defensive preparations are complete. Then, at a designated time (or trigger) engineers disengage from obstacle and survivability position construction and begin preparing for focused mobility operations.

b. **Survivability.** Light, airborne, air assault, and SBCT engineer companies are limited in organic earthmoving equipment. They are capable of preparing hasty fighting positions and improving reverse-slope positions during the transition to a hasty defense, but to construct survivability positions for a deliberate defense, the engineer company requires equipment augmentation. Thus, it is critical that these units maximize the effects of terrain when selecting positions for key weapons and vehicles.

(1) Survivability positions are prepared in BPs or strongpoints to protect weapons systems and vehicles. Positions can be constructed and reinforced with overhead cover to provide crew-served weapons with protection against shrapnel from airbursts. The antiarmor company commander (or platoon leader) prepares the area of operation for the arrival of the earthmoving equipment by marking positions and designating guides for the engineer vehicles. If time is available, vehicle positions are constructed with both hull-defilade firing positions and full-defilade positions.

(2) In addition, the unit may use digging assets for ammunition caches at alternate, supplementary, or successive BPs or in individual vehicle positions. If the unit is defending as part of a larger force, the process of digging in all the assets requires many "blade hours." With this limited available time, the higher headquarters allocates specific equipment, by type and time, to its subordinate units. The antiarmor company commander (or platoon leader) has the following responsibilities:

- Know the number of blade hours and positions (vehicle and individual) he requires.
- Understand the number of blade hours and positions allocated to him.
- Prepare a prioritized plan based on his analysis of "required" versus "available."

The company commander (or platoon leader) may have time to dig in only those 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. However, supporting the direct fire plan must be the main consideration. It is critical that all leaders within the unit understand the following:

- The survivability plan and priorities.
- One leader within the company is specifically designated to enforce the plan and priorities.
- Completion status is accurately reported and tracked.

c. **Countermobility.** To be successful in the defense, the antiarmor company commander (or platoon leader) must integrate individual obstacles into both direct and indirect fire plans, taking into account the intent of each obstacle group. At the brigade (or SBCT) 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, each obstacle emplaced must have a clear task and purpose. The purpose influences many aspects of the operation, from selection and design of obstacle sites to actual conduct of the defense. Normally, the battalion or brigade (or SBCT) designates the purpose of an obstacle group. (Refer to FM 90-7 for additional information on obstacle planning, siting, and turnover.)

(1) ***Tactical Obstacles.*** The higher HQ designs and resources tactical obstacle groups and assigns them to subordinate units. The higher commander provides obstacle-planning guidance, in terms of obstacle intent, to commanders, selected leaders, and the engineer. Obstacle intent includes the target (enemy force), the desired effect (on the target), and the relative location (relative to terrain, enemy, and friendly) of the unit's assigned obstacle group.

> **EXAMPLE**: An air assault infantry battalion commander might specify this purpose: "We must deny the enemy access to our flank by turning the northern, first-echelon motorized rifle battalion (MRB) into our engagement area, allowing Companies B and D to mass their fires to destroy it".

Table 5-1, page 5-10, shows the symbology for each obstacle effect and describes the purpose and characteristics inherent in each.

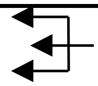
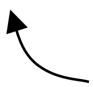
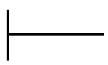
OBSTACLE EFFECT	PURPOSE	FIRES AND OBSTACLES MUST:	OBSTACLE CHARACTERISTICS
 DISRUPT ❶	Breakup enemy formations. Interrupt the enemy's timetable and C2. Cause premature commitment of breach assets. Cause the enemy to piecemeal his attack.	Cause the enemy to deploy early. Slow part of his formation while allowing part to advance unimpeded.	Do not require extensive resources. Difficult to detect at long range.
 FIX ❷	Slow an attacker within an area so he can be destroyed. Generate the time necessary for the friendly force to disengage.	Cause the enemy to deploy into attack formation before encountering the obstacles. Allow the enemy to advance slowly in an EA or AO. Make the enemy fight in multiple directions once he is in the EA or AO.	Arrayed in depth. Span the entire width of the avenue of approach. Must not make the terrain appear impenetrable.
 TURN ❸	Force the enemy to move in the direction desired by the friendly commander.	Prevent the enemy from bypassing or breaching the obstacle belt. Maintain pressure on the enemy force throughout the turn. Mass direct and indirect fires at the anchor point of the turn.	Tie into impassable terrain at the anchor point. Consist of obstacles in depth. Provide a subtle orientation relative to the enemy's approach.
 BLOCK ❹	Stop an attacker along a specific avenue of approach. Prevent an attacker from passing through an AO or EA. Stop the enemy from using an avenue of approach and force him to use another avenue of approach.	Prevent the enemy from bypassing or penetrating through the belt. Stop the enemy's advance. Destroy all enemy breach efforts.	Must tie into impassable terrain. Consist of complex obstacles. Defeat the enemy's mounted and dismounted breaching effort.

Table 5-1. Obstacle effects.

(2) ***Protective Obstacles***. Individual units are responsible for planning and constructing protective obstacles. To be most effective, a unit should tie these into the terrain and into existing tactical obstacles. It may use mines and wire from its basic load or receive additional materiel (including MOPMS, if available) from the higher unit Class IV or V supply point. It may also be responsible for any other required coordination (such as that needed in a relief in place), for recovery of the obstacle, or for its destruction (as in the case of MOPMS). FM 90-7 provides detailed information on protective obstacle emplacement.

(a) In planning for protective obstacles, the commander (or platoon leader) must evaluate the potential threat to the unit's position and then employ the appropriate system to counter that threat. For example, MOPMS is predominantly an antitank system best used on mounted avenues of approach, but it does have some antipersonnel applications. Wire obstacles, on the other hand, may be most effective when employed on dismounted avenues.

(b) Protective obstacles are usually located beyond hand grenade distance (40 to 100 meters) from the fighting position and may extend out 300 to 500 meters to tie into tactical obstacles and existing restricted (or severely restricted) terrain. As with tactical obstacles, the commander (or platoon leader) should plan protective obstacles in depth and attempt to maximize the effective range of his weapons systems.

(c) When planning protective obstacles, the company commander (or platoon leader) should consider the amount of time required to prepare them, the burden on the logistical system, and the risk of the enemy detecting the obstacles and the resulting loss of surprise.

(3) ***Wire Obstacles.*** There are three types of wire obstacles (Figure 5-1): protective wire, tactical wire, and supplementary wire.

(a) Protective wire may be a complex obstacle providing all-round protection of a platoon perimeter, or it may be a simple wire obstacle on the likely dismounted avenue of approach into an antiarmor ambush position. Command-detonated M18 Claymore mines may be integrated into the protective wire or used separately.

(b) Tactical wire is positioned to increase the effectiveness of the company's direct fires and supporting indirect fires. Tactical minefields may also be integrated into these wire obstacles or be used separately.

(c) Supplementary wire obstacles are used to break up the line of tactical wire to prevent the enemy from locating friendly weapons systems by following the tactical wire.

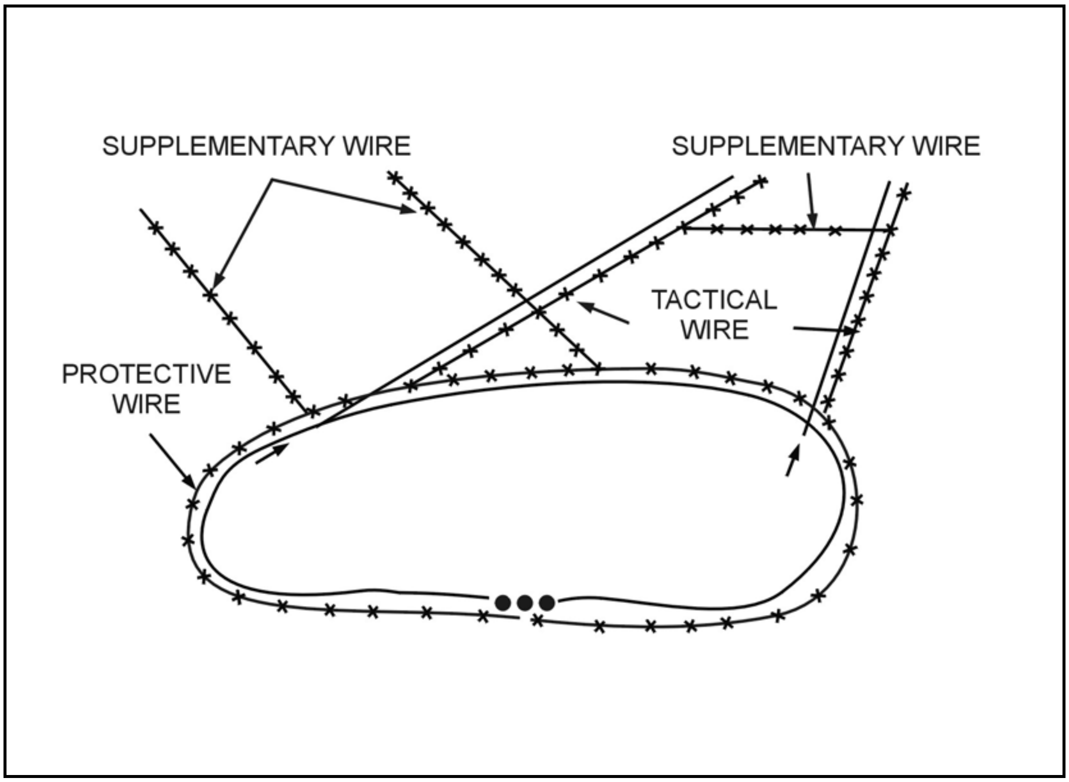


Figure 5-1. Wire obstacles.

(4) ***Obstacle Lanes.*** The unit 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.

5-13. COMBAT SERVICE SUPPORT

In addition to the CSS functions required for all operations (Chapter 11), the antiarmor company commander's (or platoon leader's) planning process should include the considerations highlighted in the following paragraphs.

a. **Pre-Positioning and Caches.** His mission analysis may reveal that the unit's ammunition needs during an upcoming operation exceed its basic load. This requires the unit to pre-position ammunition (caches). The caches, which may be positioned either at an alternate or successive BP or in the vehicles firing position, should be both dug in and guarded.

b. **Position of Trains.** The antiarmor company trains normally operate one terrain feature to the rear of the company or positioned, based upon the factors of METT-TC, to provide immediate recovery, medical, and maintenance support. The commander must also ensure that all subordinate elements know the locations of the higher HQ forward and main aid stations and that the elements plan and rehearse casualty evacuation procedures. The antiarmor platoon from a light infantry battalion will receive support from the CTCP or from the company to which it is attached.

Section IV. PREPARATION AND INTEGRATION

The antiarmor company commander's (or platoon leader's) analysis determines the most effective control measures for every mission. This section describes the techniques and planning considerations available to the company commander (or platoon leader) as he prepares his defense.

5-14. DEFENSIVE TECHNIQUES

The antiarmor company (or platoon) typically defends using one of these basic defensive techniques:

- Defend in sector.
- Defend from a battle position.
- Defend on a reverse slope.

The control measures for the defense are sectors, battle positions, or a combination of these. There are no set criteria for selecting the control measures, but Table 5-2 provides some basic considerations.

BATTLE POSITION				SECTOR
WELL-DEFENDED; ENEMY CAN BE CANALIZED	←	AVENUES OF APPROACH	→	NOT EASILY DEFINED
DOMINATES AVENUES OF APPROACH	←	TERRAIN	→	DOMINATING TERRAIN NOT AVAILABLE
NARROW/SMALL	←	UNIT AREA OF OPERATIONS	→	WIDE/LARGE
ACHIEVABLE	←	MUTUAL SUPPORT	→	CANNOT EASILY BE ACHIEVED
GOOD	←	COMMANDERS' ABILITY TO SEE/CONTROL	→	DEGRADED
RETAIN, BLOCK	←	ASSIGNED TASK	→	DISRUPT, CONTAIN

Table 5-2. Selecting control measures.

a. **Defend in Sector.** A sector is the control measure that provides the most freedom of action to a subordinate unit. It provides flexibility by allowing the subordinate unit to operate in a decentralized manner while still maintaining sufficient control to prevent confusion and to synchronize the higher unit's operation.

(1) An antiarmor company's disposition may consist of platoon sectors, a series of mutually supporting battle positions on restricted terrain, or a combination of the two. Figure 5-2, page 5-14, depicts an SBCT antiarmor company defending in sector with two platoons defending in sector and one platoon defending from a battle position. Positions are arrayed in depth. The strength of this defense comes from its flexibility. This defense normally orients on the enemy force and not on retaining terrain. It is effective because it forces the enemy to expose his flanks and critical C2 and CS assets through his own maneuver into the depth of the defense.

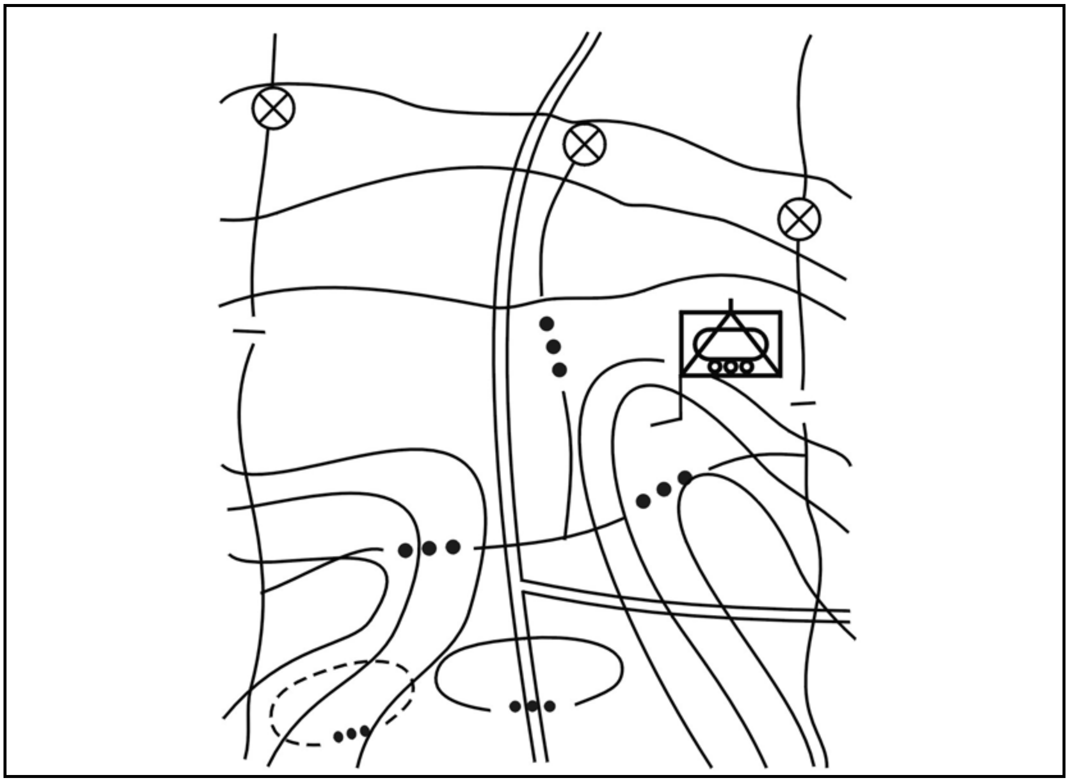


Figure 5-2. SBCT antiarmor company defense in sector, with a platoon in a battle position.

(2) By assigning platoon sectors, the company may fight a defense in sector very similar to a nonlinear defense (see FM 7-10). This decentralized defense requires greater initiative and delegates more of the control to subordinate leaders. When required, subordinate units may disengage independently and move to another location within the sector to continue the fight. Considerations for an antiarmor company reconnaissance and security plan and employment of a reserve are also very similar to the nonlinear defense.

(3) When fighting an antiarmor company defense in sector from platoon BPs, the goal is to defeat the attacker through the depth of his formation by confronting him with effective fires from mutually supporting battle positions as he attempts to maneuver around them. Observation posts, indirect fire targets, mines, and other obstacles cover gaps that, because of terrain masking or heavy woods, cannot be covered effectively by direct fire. Units remain in place except for local or internal movement to alternate or supplementary positions. If certain platoon positions become untenable during the battle, the antiarmor company commander may withdraw the platoons to successive positions according to prepared plans and rehearsals.

(a) One technique is to allow the enemy to move into the engagement area and destroy him with massed fires.

(b) Another technique is to engage the attacker at maximum range with fires from attack helicopters, field artillery, and mortars and then to engage with organic weapons systems positioned to deliver fires at maximum effective ranges from the flanks and rear. As the enemy closes, weapons systems may move to alternate or supplementary firing positions within the BP to continue firing and avoid being bypassed.

(4) The antiarmor company defense in sector, with platoons in battle position, generally requires the company commander to be able to see and control the battle. It also requires good fields of fire to allow mutual support. If the terrain or the expected enemy course of action prevents this, the defense may be more effective if control is more decentralized and the platoons fight in sector.

(5) A significant concern, particularly when fighting with platoon(s) in battle position within the company defense in sector, is the enemy's ability to isolate a part of the antiarmor company and then fix, destroy, or bypass it. Without effective mutual support between the battle positions, this is likely to occur. Even with mutual support, responsive and effective indirect fire support may be critical to defending the battle positions. Without immediately available fire support, a capable enemy will quickly concentrate combat power against any battle position that is identified.

b. **Defend from a Battle Position.** A battle position is a general location and orientation of forces on the ground from which units defend. The unit is located within the general area of the battle position. Security elements may be located forward and to the flanks of the battle position. Units defending from a battle position may not be tied in with adjacent units; thus, the requirement for all-round security is increased. When assigning battle positions, the company commander assigns sectors of fire and primary positions to his platoons to defend. Each position must contribute to the accomplishment of the company's assigned task and purpose within the higher commander's concept of the operation. A commander may also assign alternate, supplementary, and successive positions to platoons, depending on the situation.

(1) An alternate position is a position to the front, flank, or slightly to the rear of the primary position. Figure 5-3, page 5-16, depicts a platoon alternate position to the rear of its primary position. The alternate position must allow the unit to cover the same sector of fire as the primary position. If it is to be occupied during limited visibility, it may be forward of the primary position. The alternate position may be occupied if the unit is driven out of the primary position by enemy fire or by assault, or it may be occupied to begin the fight to deceive the enemy of the unit's primary position.

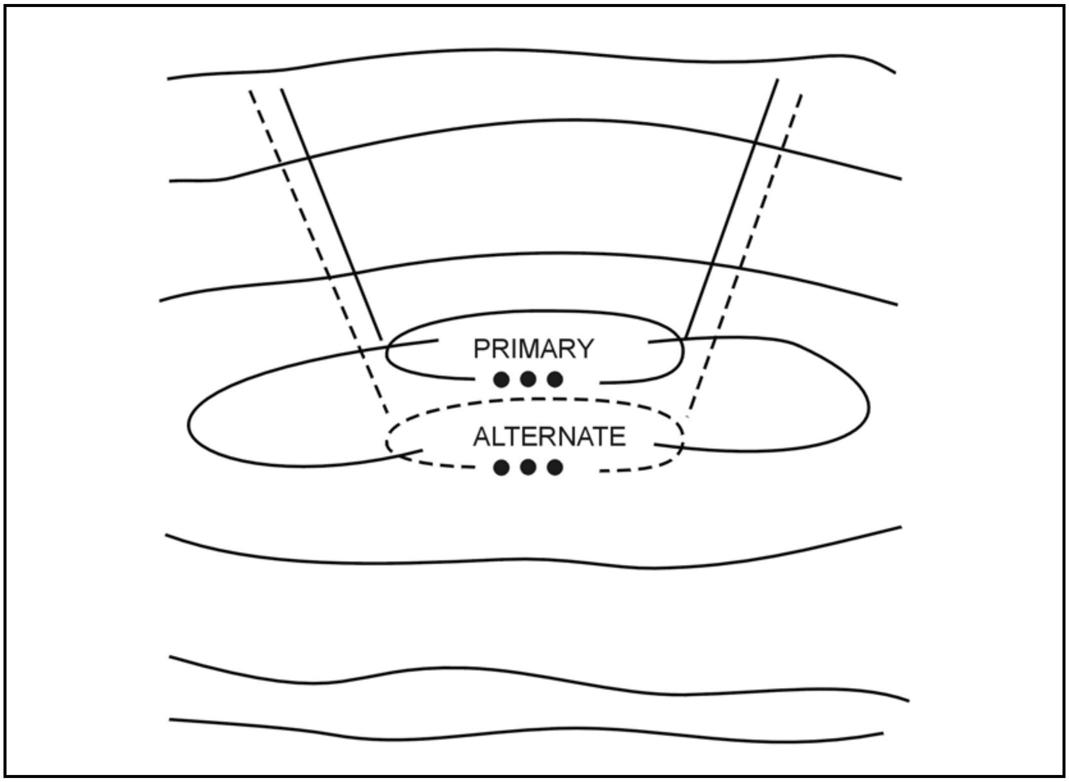


Figure 5-3. Alternate position.

(2) A supplementary position is to the flank or the rear of the primary position. It allows the unit to defend against an attack on an avenue of approach not covered by the primary position (Figure 5-4). It can be assigned when the unit must cover more than one avenue of approach. A unit moves from its primary, alternate, or supplementary position only with the higher commander's approval or when a condition exists that the higher commander has prescribed as a reason to move.

Figure 5-4. Supplementary position.

(3) Fighting from a battle position is a more centralized technique and also may be more linear at the company level. Even so, it should not be a static defense. Battle positions should be positioned to achieve surprise and to allow maneuver within and between battle positions. Figure 5-5, page 5-18, depicts an SBCT antiarmor company defending from mutually supporting battle positions. A defense from battle positions is effective in concentrating combat power into an engagement area. It prevents the enemy from isolating one part of the company and concentrating his combat power in this area.

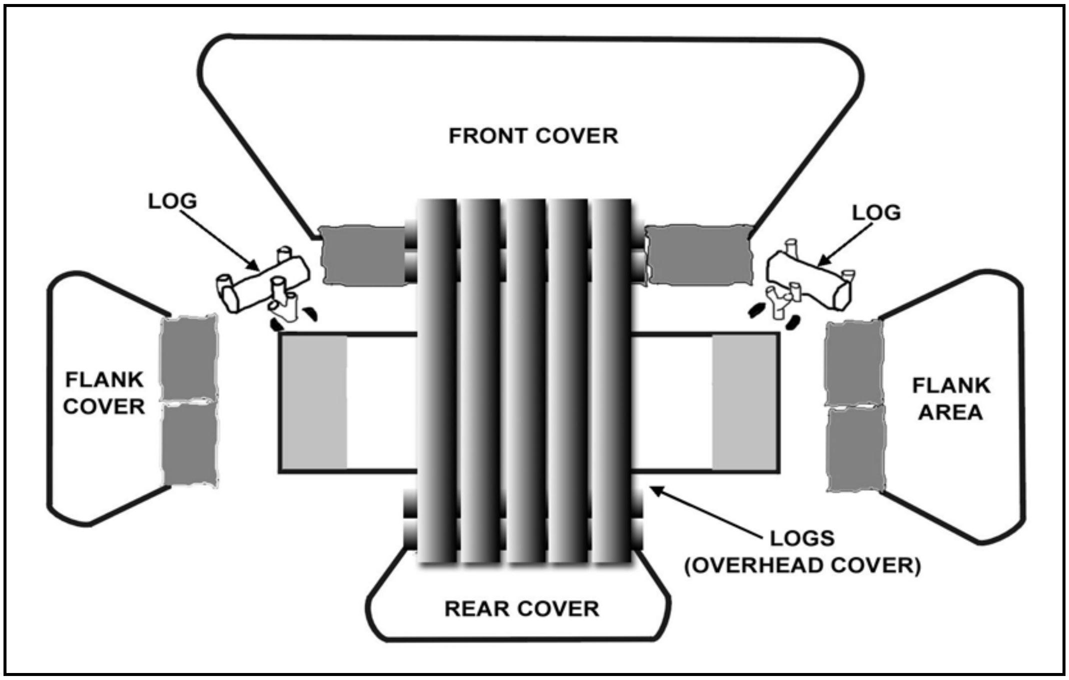


Figure D-14. Stage 4, Preparation of a fighting position.

(3) ***Leaders Inspect All Positions.*** Leaders must ensure their soldiers build fighting positions that are both effective and safe. An improperly sited position cannot be used and an improperly constructed one is a danger to its occupants.

D-8. M2 (CALIBER .50) AND MK 19 MACHINE GUN FIRING POSITIONS

Mounted positions for the MK19 and M2 are identical to those of the TOW. The use of hull-defilade firing platforms and full-defilade hide positions are critical. The following paragraphs provide information peculiar to the construction of MK19 and M2 dismounted firing positions.

a. **M2 Position.** The primary sector of fire is usually to the oblique so the gun can fire across the platoon's front. The tripod is used on the side covering the primary sector of fire. The bipod legs are used on the side covering the secondary sector of fire. When changing from primary to secondary sectors, the gunner moves only the machine gun. Occasionally a sector of fire that allows firing directly to the front is assigned, but this can reduce the frontal cover for the crew when firing to the oblique (Figure D-15, page D-18).

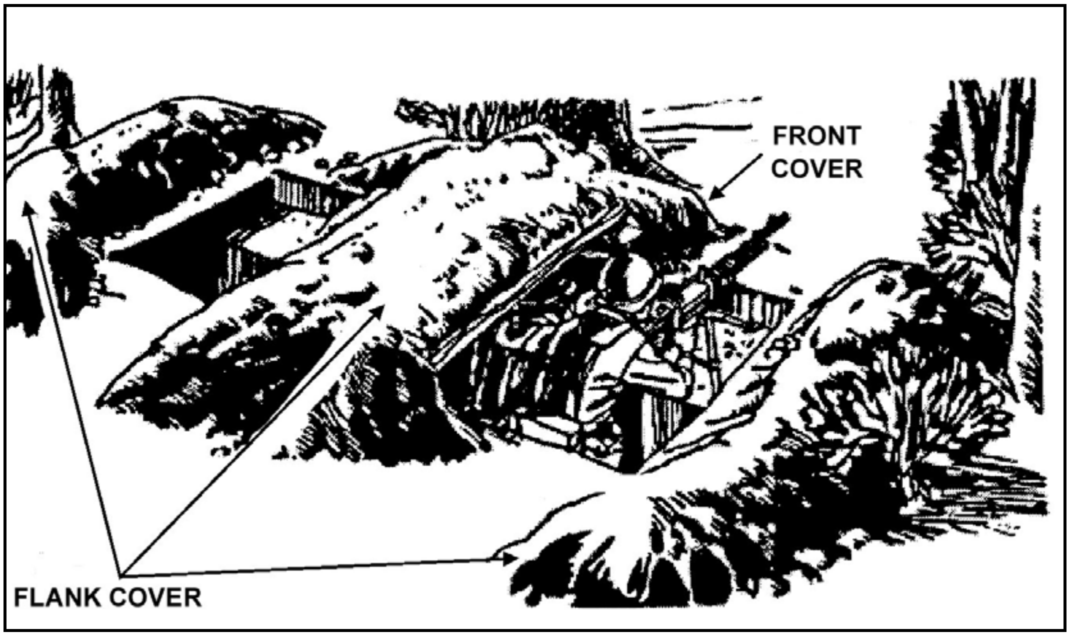


Figure D-15. Machine gun position.

(1) After the platoon leader positions the machine gun, he marks the position of the tripod legs and the limits of the sectors of fire. The crew then traces the outline of the hole and the frontal cover (if it must be improved).

(2) The crew digs firing platforms first to lessen their exposure in case they must fire before they complete the position. The platforms must not be so low that the gun cannot be traversed across its entire sector of fire, reducing the profile of the gunner when firing and reducing the frontal cover height.

(3) After digging the firing platforms, the crew digs the hole. They first place the dirt where frontal cover is needed, digging the hole deep enough to protect them and still allow the gunner to fire with comfort (usually about armpit deep). When the frontal cover is high enough and thick enough, the crew uses the rest of the dirt to build flank and rear cover. Trench-shaped grenade sumps are dug at various points so either soldier can kick a grenade into one if needed. Overhead cover for a machine gun position is built the same as for a two-soldier position.

NOTE: In some positions, a machine gun might not have a secondary sector of fire. In this case, dig only half the position.

(4) When there is a three-soldier crew for a machine gun, the ammunition bearer digs a one-soldier fighting position to the flank that is connected to the gun position by a crawl trench. From his position, the ammunition bearer can see and fire to the front and to the oblique. The ammunition bearer usually is on the same side as the FPL or PDF. This allows him to see and fire his rifle into the machine gun's secondary sector and to see the gunner and assistant gunner.

b. **MK 19**. The MK19 position is constructed similar to the machine gun position (Figure D-15) and is constructed after the weapon is positioned so that it is oriented on the center of the assigned sector of fire. The tripod legs are outlined to ensure the firing platform is properly constructed. The position is dug in an L-shape around the firing position. It should be approximately chest-deep (tallest soldier) and wide enough to allow the squad to load, operate, and place fire on the assigned sector of fire. In constructing the over head protection for the position, allowance must be made for elevation of the gun during firing.

c. Three-Soldier Fighting Position. A three-soldier position has several advantages. A leader can be in each position, making command and control easier. It supports continuous security operations better than other positions. One soldier can provide security; one can do priority work; and one can rest, eat, or perform maintenance. This allows the priority of work to be completed more quickly than in a one- or two-soldier position. This position allows the platoon to maintain combat power and security without shifting personnel or leaving positions unmanned. It provides 360-degree observation and fire, and it is more difficult for the enemy to destroy because he must kill or suppress three soldiers.

(1) When using three-soldier positions, the leader must consider several things. Either the distance between positions must be increased or the size of the squad's sector must be reduced. The choice depends mainly on visibility and fields of fire. Because the squad leader is in a fighting position that will most likely be engaged during the battle, he cannot exert personal control over the other two positions. The squad leader controls the battle by--

- Clearly communicating his plans and intent to his squad to include control measures and fire plans.
- Using prearranged signals like flares, whistles, or tracers.
- Positioning key weapons in his fighting position.
- Placing his fighting position so it covers key or decisive terrain.
- Placing his fighting position where his team might be able to act as a reserve.

(2) The three-soldier emplacement is a T-position. This basic design can be changed by adding or deleting berms, changing the orientation of the T, or shifting the position of the third soldier to form an L instead of a T (Figure D-16, page D-20). The layout of the position can be oriented to fire on expected enemy avenues of approach from any direction. Berms must not block observation or fire into assigned primary or alternate sectors. Care must be taken to properly support the overhead cover.

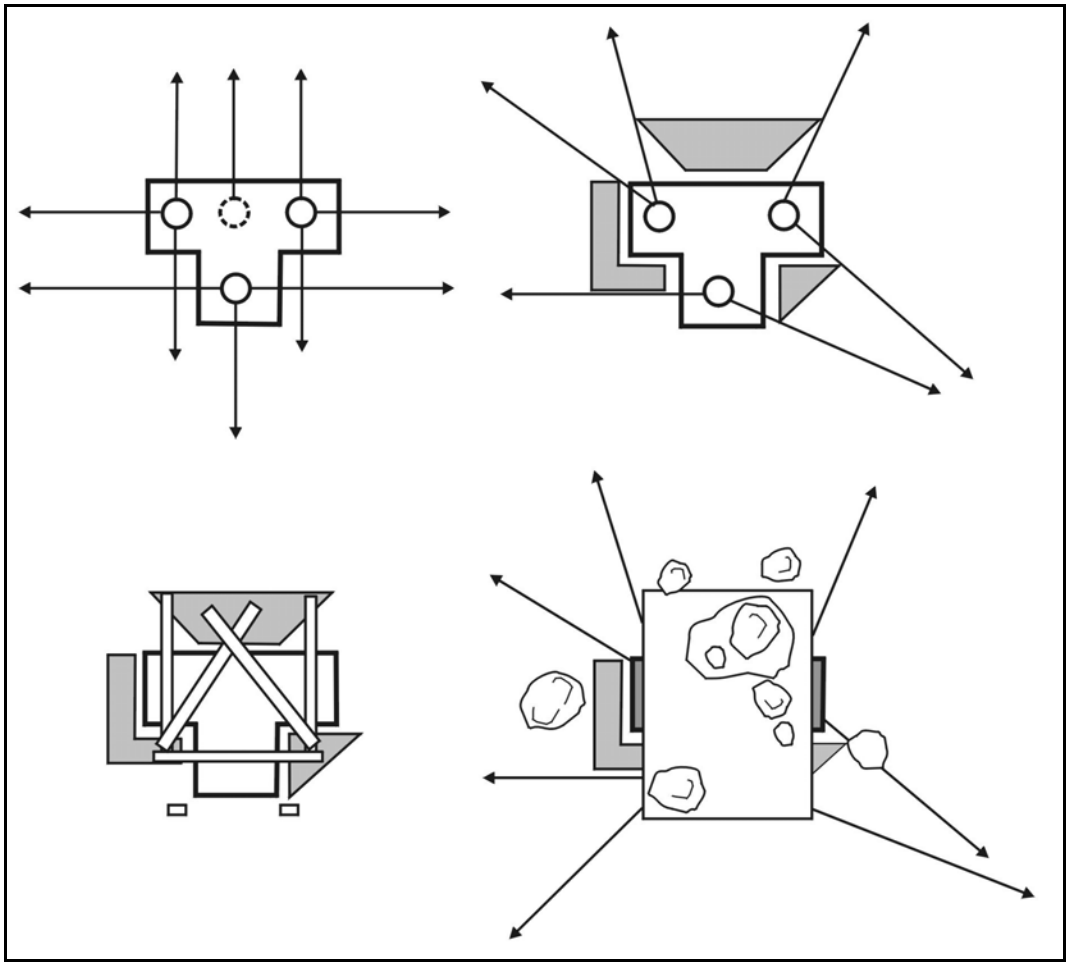


Figure D-16. Three-soldier T-position.

D-9. RANGE CARD

A range card is a sketch or diagram of the terrain that a weapon must cover by direct fire. It shows planned target areas and terrain features, each of which is plotted relative to that weapon's firing position. The information on a range card is used to plan and control fire, to rapidly detect and engage targets, and to orient replacement personnel and units. Instructions for completing a range card are found in FM 23-34.

D-10. SECTOR SKETCH

Individual soldiers and gunners prepare range cards. Squad leaders (or vehicle commanders), section leaders, platoon leaders, and company commanders prepare sector sketches for their echelon. Accurate and detailed sketches aid in direct fire planning and in direct fire control and distribution.

a. **Platoon Sector Sketch.** The antiarmor platoon leader reviews his squads' and sections' sector sketches and ensures that the sketches are accurate. If he finds any gaps of coverage or flaws, the platoon leader adjusts weapons locations or sectors. Once the platoon leader approves the squad and section sector sketches, he prepares a consolidated report for the company commander and incorporates this into a consolidated platoon sector sketch. The platoon leader or platoon sergeant prepares the platoon sector sketch. The sector sketch may be on acetate taped to a map or it can be a hand drawn sketch.

b. **Company Sector Sketch.** The company commander incorporates all of the platoon sector sketches and any separate key weapon system range cards into a consolidated company sector sketch. If he finds any gaps of coverage or flaws, he immediately corrects the deficiency by repositioning units or key weapon systems or by covering gaps with observation, obstacles, and indirect fires.

NOTE: FBCB2-equipped ICVs within the SBCT antiarmor company provide leaders with a more accurate means of recording and sharing sector sketch and range card data. If the company commander finds any gaps or other flaws, he adjusts weapons locations or the graphic control measures within the FBCB2 system. He can then quickly disseminate changes to all of his subordinates and to his higher headquarters.

APPENDIX E

TOW EMPLOYMENT IN RESTRICTIVE TERRAIN

The infantry fights best in restrictive terrain. However, the TOW missile system is optimized in unrestricted terrain. A thorough METT-TC analysis is necessary to choose the best employment option. Although the M2 or MK19 is of better use in restrictive terrain, antiarmor leaders must know when and how to effectively employ the TOW to support infantry in the same terrain.

E-1. DEFINITION

Restrictive terrain is defined as terrain that hinders movement to some degree. Little effort is needed to enhance mobility, but units may need to detour frequently. Units may have difficulty maintaining optimum speed or combat formation. Antiarmor leaders must recognize TOW system limitations and take advantage of the TOW system's capabilities in restrictive terrain. The types of terrain described below are examples of the types of restrictive terrain in which infantry forces operate. Often the categories blend together (for example, forests and steep hills).

a. **Forests and Jungles.** The degree and type of vegetation affects mounted movement, altering formations and speeds. Typically, armored vehicles will take advantage of roads or trails to move through these areas as quickly as possible. The ability to mass antiarmor fires on a slowed, contained enemy armored force may outweigh the degraded effectiveness of wire-guided missiles in this environment.

(1) ***European-Model Forests.*** These forests are well tended, free of underbrush or secondary growth, and often hilly. Unopposed armored forces can traverse these forests rapidly because of a large number of good trails. If armored vehicles are forced off the trails, the thickness and spacing of trees and the degree of slope determine how freely they can maneuver. The lack of undergrowth often allows visibility to several hundred meters.

(2) ***Cut-Over or Primeval Forests and Jungles.*** These forests have thick patches of vegetation and poor trail networks. Armored vehicles can travel through these forests if the ground is dry and not too steep, but such "jungle-busting" is slow and visibility and engagement ranges are short--often measured in the tens of meters. TOW employment is seriously degraded unless fire lanes are cut through the underbrush.

b. **Hills and Mountain Ranges.** The degree of slope and vegetation affect the mounted movement, altering formations and speeds.

(1) Forested hills usually force armored vehicles to move on trails, which canalizes mounted movement. This restriction allows carefully positioned TOW systems to engage enemy vehicles unable to maneuver out of an engagement area. However, because tree growth and underbrush restrict visibility and engagement ranges, antiarmor leaders carefully place the TOW systems for as maximum a range as possible.

(2) Bare hills and mountains, where steep terrain and lack of roads again canalize maneuver, often allow engagement out to maximum TOW ranges. However, if an antiarmor unit emplaces TOW systems in obvious positions, a mounted enemy can suppress them with direct and indirect fires. To avoid obvious positions, an antiarmor unit may emplace the TOW systems in locations that sacrifice standoff. This increases their protection from

preplanned enemy suppressive fires (direct and indirect) and allows them to gain surprise.

c. **Swamps and Wetlands.** Swamps stop mounted movement except on any hard-surfaced, elevated roads that pass through them. Flood plains and moors can support lightly armored vehicles, but this type of terrain is often trafficable only during dry periods. In northern Europe, terrain broken by drainage ditches and dikes is common; this type of terrain prevents armored vehicles from moving off roads. Clear weather and good visibility provide the antiarmor unit with better observation, resulting in TOW engagements of 2000 to 3750 meters. However, better visibility also aids the enemy in suppressing obvious TOW system firing positions.

d. **Urban Areas and Villages.** The world is becoming increasingly urbanized, and antiarmor units will likely find themselves employed during urban operations. This environment obviously affects TOW system employment. See Chapter 6, Urban Operations, for more information.

E-2. MANEUVER

Light infantry forces normally are employed on restrictive terrain that makes TOW employment more challenging. The TOW must be moved and positioned on terrain that supports the infantry, but it can be positioned apart from infantry positions. The antiarmor company or platoon can be moved on a separate axis of advance with task-organized infantry to provide security. Timing of the attack is critical. This is complicated because the main attack force (infantry) usually moves from the attack position to the objective on foot while the antiarmor unit usually moves by vehicle to its supporting position.

E-3. PROTECTION

In restrictive terrain, the antiarmor unit requires protection from close assault since it has limited, or no, armor protection and limited self-defense capabilities. Only after conducting a detailed analysis of the factors of METT-TC does the commander (or platoon leader) decide how to move the antiarmor unit. Options include--

- Attaching an antiarmor platoon to an infantry company.
- Attaching an infantry platoon to an antiarmor company.
- Attaching an infantry squad to an antiarmor platoon.
- Moving antiarmor unit’s vehicles within the battalion formation.

E-4 GUIDELINES FOR TOW EMPLOYMENT

The basics of TOW employment outlined in Chapters 4 through 8 and direct fire planning and control described in Appendix C still apply when antiarmor units operate on restrictive terrain. However, commanders and leaders must look at these basics from a different perspective; certain principles may be more important than others, depending on the situation. Leaders can best employ the TOW missile in ambush scenarios where antiarmor units fire from unobtrusive positions to surprise the enemy and where TOW, infantry fires, mines, and indirect fires are closely coordinated. Finally, commanders must realize that employing the TOW in restrictive terrain is less than ideal, and they should do so only if the results of a detailed METT-TC analysis dictate it. The seven principles of TOW employment have been modified for consideration in restrictive terrain.

a. **Mutual Support.** Mutual support is vital when terrain inhibits the engagement range.

Instead of massing the TOW missile fires from the antiarmor company into an engagement area, leaders may have to mass fires with other infantry weapons systems (M2, MK19, Javelin, and AT4) and indirect fires.

b. **Security.** Shorter engagement ranges and ample concealment make antiarmor squads employing TOWs more vulnerable to dismounted enemy infantry. Therefore, the antiarmor unit should be positioned so that the infantry can protect it. If the infantry is not available, the antiarmor unit must protect itself by task-organizing the unit with some soldiers operating the TOW systems and other soldiers providing security with small arms or with M2 or MK19.

c. **Flank Shots.** The feasibility of flank shots often determines whether TOW systems should be employed, especially in restrictive terrain. Flank shots provide the largest view of the target and come from an unexpected direction. Enemy armored vehicles are better protected on the frontal slope; crew orientation is primarily to the front; and it is difficult to traverse a turret in most restrictive terrain. An enemy tank gunner or commander will fire his main gun or coaxial machine gun as a reaction to the flash of a TOW missile launch. The TOW gunner could lose focus on, and control of, the missile after seeing the enemy return fire. Leaders should strive for flank shots in restrictive terrain.

d. **Volley Fire.** Volley fire (also referred to as simultaneous fire) is used to rapidly mass the effects of fires or to gain immediate fires superiority over an enemy. It is also used to negate a low probability of hit given the terrain and expected engagement ranges. Antiarmor units need not volley fire TOW missiles only. Other weapon systems may be employed to complement the TOW to gain immediate fire superiority.

e. **Cover and Concealment.** Cover and concealment are especially important for TOW firing positions in restrictive terrain. Although antiarmor units try to fight from prepared positions, engineers may not be available to modify the terrain. Therefore, antiarmor units must often employ TOW missiles from hasty positions, mounted or dismounted. In restrictive terrain, antiarmor units use the existing terrain for cover and concealment.

f. **Employment in Depth.** Restrictive terrain limits TOW employment in depth for antiarmor. Depth in restricted terrain is achieved by focusing on where (or how) to destroy the enemy, not where to locate the system. One method is to emplace TOW systems so they each can fire into an engagement area from different locations (rear and flanks) at the same time. Strict direct fire control measures must be implemented to reduce the risk of fratricide (see Appendix C, Direct Fire Planning and Control). Another method to achieve depth is to designate different weapons systems (M2, MK19, Javelin, AT4) to engage different enemy targets throughout an engagement area or an area of operations.

g. **Employment as Part of Combined Arms Team.** This is especially important in restrictive terrain. Assets such as TOW, M2, MK19, Javelin, AT4, mines and other obstacles, small arms or machine guns, M203 grenade launchers, and indirect fires must be skillfully blended to achieve the desired effect on the enemy. Antiarmor weapon systems (for example, TOW) alone will not be sufficient. Leaders must position all assets so that rounds impact on the appropriate portions of the enemy formation.

NOTE: Integration of indirect fires into massed direct ATMG fires enhances the effect of a unit's engagements. Mortar and artillery fires can damage TOW wires, causing missiles to miss targets. Leaders must ensure adequate fire control measures are implemented to prevent indirect fires from falling between the antiarmor unit and the targets during TOW engagements.

E-5. OFFENSIVE OPERATIONS

Antiarmor units seldom provide more than limited support with TOWs to dismounted infantry units attacking through restrictive terrain. The antiarmor units have little chance to reconnoiter beyond the LD, and when employing the TOW they may lack the necessary ranges. However, the TOW can still be used effectively if a careful reconnaissance is performed and if a detailed analysis of the factors of METT-TC allows it.

a. **Attack.** Antiarmor units are most useful when providing direct fire TOW support for a planned attack. They fire missiles at hard targets such as bunkers, weapons emplacements within trench systems, fortified rooms in houses, and dug-in vehicles. See Appendix A, Weapon Reference Data, for round-target selection. Although TOW rounds are less effective than HEAT or high explosive, plastic (HEP) rounds against bunkers, the antiarmor unit's vehicle (HMMWV or ICV) has better mobility in restrictive terrain than a tank. The antiarmor leader (or support force leader) and assault force commander must ensure that signals for ceasing fires and designating targets (for example, AN/PEQ-2A, M203 smoke, various colored star clusters, or infrared chemical lights) are well coordinated before the attack begins.

b. **Armored Enemy.** An armored enemy typically defends from well-prepared vehicle fighting positions that are supported by dug-in infantry. While providing overwatching fire, TOWs must be employed at least 1,000 meters from the enemy armored vehicles to survive. Even then, they can only survive if they surprise the enemy. Directly supporting the infantry attack in restrictive terrain is extremely risky. Other options for TOW employment are--

- Employ TOWs to isolate the enemy in the restrictive terrain, focusing on mounted enemy avenues of approach.
- Protect consolidating infantry or follow-on forces from armor counterattack.

c. **Dismounted Enemy.** A dismounted enemy relies mainly on dug-in infantry (possibly reinforced with dug-in armored vehicles) on terrain that severely inhibits vehicular movement. TOW systems can be used dismounted, which usually makes stealthy occupation of positions easier. Antiarmor units must carry the TOW systems to reach good firing positions, making movement slower and more difficult. Carrying a dismounted TOW system limits an antiarmor section to one system. If an infantry squad is available, its members can carry the extra missiles and provide security; if not, one antiarmor squad in the section carries the extra missiles and provides security.

E-6. DEFENSIVE OPERATIONS

Commanders can use the TOW effectively more often in restrictive terrain during defensive operations than during offensive operations. A defender has more time to conduct a thorough analysis of the factors of METT-TC, to conduct a detailed ground reconnaissance, and to prepare his area of operations.

a. **Integration of Direct and Indirect Fires.** The restrictive terrain prevents the enemy from isolating and concentrating on single defending elements. The most desirable method for destroying enemy formations, even in restrictive terrain, is to integrate the direct fires of all of the available weapons and weapon systems and indirect fires with existing and reinforcing obstacles. The defender must overwhelm the entire enemy formation throughout an area of operation with direct and indirect fires. However, this must be coordinated and rehearsed. If the defenders fail to mass fires throughout the enemy formation, the enemy can counterattack or suppress individual defending elements.

b. **Enemy Employment of Obscurants.** A mounted enemy will plan to use smoke to conceal his movement across open danger areas or anticipated engagement areas. Although antiarmor units are equipped with thermal sights and can observe and engage through most kinds of smoke, leaders must ensure that accurate range cards are prepared.

c. **Antiarmor Reserves.** Commanders may not find suitable terrain to support company or battalion engagement areas within the battalion's area of operations, or they may find that terrain dictates long, narrow TOW sectors of fire. In either case, antiarmor units employing TOW can be designated as the reserve with several clearly defined missions. For each mission, they move to hasty firing positions to counterattack or block enemy penetrations. Routes and firing positions are prepared and the antiarmor unit rehearses daytime and nighttime occupation. Counterattacks work best when TOW fires are combined with other fires (direct and indirect). Antiarmor units rehearse these missions; they use engineers to reinforce existing natural positions or, at least, to construct hasty vehicle firing positions. If only one good, platoon-sized engagement area exists, commanders can position antiarmor units to cover it with TOW fires.

GLOSSARY

AA	assembly area
AAR	after-action review
ABF	attack by fire
ACE	armored combat earthmover
ADA	air defense artillery
ADAM	area-denial artillery munitions
ADO	air defense officer
ADW	air defense warnings
AFATD	advanced field artillery tactical data system
AGC	advance guard company (graphics only)
AI	area of interest
A/L	administration and logistics
ALO	Air Force liaison officer
AMD	air and missile defense
ANCD	automated net control device
AO	area of operation
AP	antipersonnel
ARFOR	Army forces
ARNG	army national guard
AT	antitank
ATGM	antitank guided missile
ATGM-CM	antitank guided missile countermeasures
ATK POSN	attack position
ATP	ammunition transfer point
ASLT POSN	assault position
AVLB	armored vehicle-launched bridge
AXP	ambulance exchange point
BAS	battalion aid station
BDA	battle damage assessment
BDAR	battle damage assessment and repair
BRDM	Boyevaya Razvedyuatel'naya Dozornaya Meshina (Russian combat reconnaissance patrol vehicle)
BDU	battle dress uniform
BFV	Bradley fighting vehicle
BHL	battle handover line
BMNT	beginning morning nautical twilight
BMP	Russian abbreviation for tracked infantry fighting vehicle (Boyevaya Mashina Pehoti)
BN	battalion
BOS	battlefield operation systems
BP	battle position
BSA	brigade support area
BSB	brigade support battalion

BSC	brigade support company
BSFV	Bradley Stinger fighting vehicle
C2	command and control
CA	civil affairs
CAS	close air support
CASEVAC	casualty evacuation
CBRNE-CM	chemical, biological, radiological, nuclear, and high-yield explosive consequence management
CBU	cluster bomb units
CCIR	commander's critical information requirements
CCP	casualty collection point
CFZ	critical fire zones
CFFZ	critical friendly fire zones
CGP-1	commander's ground pointer (laser pointer)
CMOC	civil military operations center
COA	course of action
COLT	combat observation lasing team
COP	common operational picture
CP	command post; checkpoint
CRT	combat repair team
CS	combat support
CSOP	combat security outpost
CSS	combat service support
CTCP	combat trains command post
DA	Department of the Army
DOD	Department of Defense
DOS	days of supplies
DPICM	dual-purpose improved conventional munitions
DS	direct support
DSO	domestic support operations
DX	direct exchange
DZ	drop zone
EA	engagement area
EAD	echelon above division
ECM	electronic countermeasures
ECOORD	effects coordinator
EEFI	essential elements of friendly information
EENT	end of evening nautical twilight
EFST	essential fire support task
EPW	enemy prisoner of war
ESV	engineer squad vehicle

1SG	first sergeant
FA	field artillery
FAC	forward air controller
FASCAM	families of scatterable mines
FBCB2	force XXI battle command brigade and below
FDC	fire direction center
FEBA	forward edge of battle area
FFIR	friendly forces information requirements
FHA	foreign humanitarian assistance
FID	foreign internal defense
FIST	fire support team
FLIR	forward-looking infrared radar
FLOT	forward line of own troops
FM	frequency modulated; field manual
FO	forward observer
FPF	final protective fire
FPL	final protective line
FRAGO	fragmentary order
FS	fire support
FSB	forward support battalion
FSCOORD	fire support coordinator
FSCM	fire support coordination measures
FSE	fire support element
FSO	fire support officer
FSV	fighting support vehicle
GPS	global positioning system
GS	general support
GSR	ground surveillance radar
G/VLLD	ground/vehicle laser locator designator
HC	hexachloroethane
HCA	humanitarian and civic assistance
HE	high explosive
HEAT	high explosive, antitank
HEDP	high explosive, dual purpose
HE-FRAG	high explosive, fragmentation
HEMTT	heavy expanded mobility tactical truck
HEMTT-LHS	heavy expanded mobility tactical truck-load handling system
HEP	high-explosive, plastic
HHC	headquarters and headquarters company
HIMARS	high mobility artillery rocket system
HIMS	HMMWV interchangeable mount systems
HMMWV	high-mobility, multi-purpose wheeled vehicle
HTU	handheld terminal unit

IAW	in accordance with
ICM	improved conventional munitions
ICV	infantry carrier vehicle
INFOSYS	information systems
IPB	intelligence preparation of the battlefield
IR	infrared
IREMBASS	improved remotely monitored battlefield sensor system
ISR	intelligence, surveillance, and reconnaissance
ITOW	improved TOW
IV	inter-visibility
JP8	army common fuel
KIA	killed in action
LD	line of departure
LOGPAC	logistics package
LOS	line of sight
LRP	logistic release point
LVOSS	light vehicle obscuration smoke system
LZ	landing zone
MANPAD	man-portable air defense
MANPADS	man-portable air defense system
MBA	main battle area
MCOO	modified combined obstacle overlay
MDMP	military decision-making process
MEL	maximum engagement line
MEDEVAC	medical evacuation
METT-TC	mission, enemy, terrain, troops and support available, time available and civil considerations
MG	machine gun
MGS	mobile gun system
MIA	missing in action
MICLIC	mine clearing line charge
MICO	military intelligence company
MOE	measures of effectiveness
MOGAS	motor gasoline
MOPMS	modular pack mine system
MOPP	mission-oriented protective posture
MPCOA	most probable course of action
MR	moonrise
MRB	motorized rifle battalion
MRC	motorized rifle company
MRE	meal, ready to eat
MRP	motorized rifle platoon

MS	moon set
MSL	minimum safe line
MSR	main supply route
MTOE	modified table of equipment
NAI	named area of interest
NBC	nuclear, biological, and chemical
NCA	national command authority
NCO	noncommissioned officer
NCS	net control station
NEO	noncombatant evacuation operation
NFA	no fire area
NGO	non-governmental organization
NLT	not later than
NVD	night vision device
OBJ	objective
OAKOC	observation and fields of fire, avenues of approach, key terrain, obstacles, and cover and concealment
OP	observation post
OPCON	operational control
OPORD	operations order
OPSEC	operational security
ORP	objective rally point
OTM	on the move
OTN	own the night
PAO	public affairs officer
PCC	precombat check
PCI	precombat inspection
PIR	priority intelligence requirements
PL	platoon leader; phase line (graphics only)
PLD	probable line of deployment
PLL	prescribed load list
PLS	palletized load system
PLT	platoon
PMCS	preventive maintenance, checks, and services
POL	petroleum, oils, and lubricants
POSNAV	position navigation
PSG	platoon sergeant
PSS	personnel service support
PSYOP	psychological operations
PVO	private volunteer organization
PZ	pickup zone
RAAM	remote antiarmor mine

RATELO	radiotelephone operator
RCPA	relative combat power analysis
REDCON	readiness condition
RCU	remote control unit
RFL	restrictive fire line
ROE	rules of engagement
ROI	rules of interaction
ROM	refuel on the move
RP	release point
RPOL	rearward passage of lines
RROM	refuel/resupply on the move
RSTA	reconnaissance, surveillance, and target acquisition
SA	situation awareness
SAW	squad automatic weapon
SBCT	Stryker brigade combat team
SCATMINE	scatterable mine
SCATMINWARN	scatterable minefield warning
SD	self-destruct
SEAD	suppression of enemy air defenses
SHORAD	short-range air defense
SITREP	situation report
SITEMP	situational template
SOF	special operations forces
SOI	signal operating instructions
SOP	standing operating procedures
SPO	support operations officer
SPOTREP	spot report
SR	sunrise
SS	sunset
SU	situational understanding
TACP	tactical air control party
TLP	troop-leading procedures
TOC	tactical operations center
TOE	table of organization and equipment
TOW	tube-launched, optically tracked, wire-guided (missile)
TRP	target reference point
TSOP	tactical standing operating procedure (graphics only)
UAV	unmanned aerial vehicle
UCMJ	Uniform Code of Military Justice
UMCP	unit maintenance collection point
UN	United Nations

UO	urban operations (replacing term MOUT)
USACE	U S Army Corps of Engineers
VC	vehicle commander
VEESS	vehicle engine exhaust smoke system
WARNO	warning order
WCS	weapons control status
WIA	wounded in action
WP	white phosphorous
WSRO	weapons system replacement operations
XO	executive officer

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DOCUMENTS NEEDED

These documents must be available to the intended users of this publication.

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