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Field Manual

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ARMORED AND MECHANIZED BRIGADE
OPERATIONS
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PREFACE

Study

AN ARMORED OR MECHANIZED BRIGADE is a combination of tank and mechanized battalion task forces and other units grouped under command of a brigade headquarters. Attack helicopter units frequently operate with the brigade which is normally supported by field and air defense artillery as well as USAF fighter bombers. Engineer, signal, and logistical support is provided from divisional and corps units.

The purpose of this manual is to describe how armored and mechanized brigades fight. How battalion task forces fight will be described only to the extent necessary to understand brigade operations. Details about how tank and mechanized battalion task forces fight are set forth in FM 71-2, *The Tank and Mechanized Infantry Battalion Task Force*.

Most armored and mechanized brigades are assigned to armored and mechanized divisions. There are also separate armored and mechanized brigades in the United States Army. Separate brigades may be employed as part of a division or under a corps or some other higher command. While there is some difference between separate brigade and divisional brigade organizations, each essentially fights in the same way.

How armored and mechanized divisions fight is described in FM 71-100, *Armored and Mechanized Division Operations*. Information on infantry, airborne, and air assault brigades may be found in FM 7-30, *The Infantry Brigades*.

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The word "he" or "his" in this publication is intended to include both the masculine and feminine genders and any exception to this will be so noted.

CHAPTER 1

The Brigade

GENERAL

The mission of the United States Army is to win land battles. To do this the Army is organized into divisions which are further organized into brigades. In addition to divisional brigades, the Army has separate brigades: some armored, some mechanized, some infantry.

Brigade organization evolved from earlier US Army regimental organizations. During World War I, divisions were formed by combining regiments into brigades subordinate to divisions. Each divisional brigade of two regiments was supported by field artillery and service units.

Early in World War II, the brigade layer of command was eliminated from the divisional organization in an attempt to streamline divisions. Three divisional regiments were responsible for tactical command control and logistical and administrative support of subordinate battalions. Later, in World War II, armored division regiments were replaced by three combat commands. These were control headquarters to which were attached tank and armored infantry battalions; they controlled tactical operations. Logistical and administrative chains extended direct from the division to its battalions. Between battalions, companies were cross-attached to form battalion task forces. Combat commands were supported by armored field

artillery battalions and engineer units—normally companies from the divisional engineer battalion.

As the Army prepared for nuclear war after World War II, brigades were replaced by five battle groups consisting of five companies each. Battle groups were, in effect, large battalions. In addition to five maneuver companies, each had a combat support

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company and appropriate field artillery and service support. Battle groups were self-contained and could be employed singly or in combinations. In armored divisions, the combat command system remained largely unchanged.

In the early 1960s the Army reorganized once more. The combat command concept of armored divisions was adopted for all divisions. Combat commands were called brigades, and each division had three

brigades under whose command various numbers and types of battalions could be grouped.

Today, US Army armored and mechanized brigades, divisional and separate, are stationed throughout the world. These brigades have about five times the firepower of their World War II ancestors, the combat commands. New equipment to be introduced in the next few years will further increase their capabilities.

ORGANIZATION OF ARMORED AND MECHANIZED BRIGADES

DIVISIONAL BRIGADES

Armored and mechanized brigades are the major subordinate maneuver commands of armored and mechanized divisions. The number of brigades assigned to an armored or mechanized division may vary from time to time depending on operational requirements, but should normally be three or four. Most often there are three.

The only permanent unit assigned to a brigade is its headquarters and headquarters company which provides command control over units attached to or supporting the brigade.

Divisional tank and mechanized battalions are attached to brigades; their mission, like the brigades', is to fight the battle. To do this, they destroy or disrupt enemy forces and seize and hold terrain. As a general rule, each brigade can control three or four battalions and necessary combat support and combat service support elements. *When it is necessary to concentrate forces, control of more battalions may be necessary.* However, as the battlefield becomes denser and the fight more intense, the battalions assigned to a brigade must be

limited to a number that can be controlled in a very complex battle situation—generally not more than three. **How the brigade organizes tank and mechanized battalions for combat is described in Chapter 2, Preparing for Combat Operations.**

Combat support and combat service support are provided to the *brigade* by the *division*. Normally, field artillery support is provided by a field artillery direct-support, medium-cannon battalion. An engineer company, a forward area signal center platoon, combat electronic warfare and intelligence elements, and division support command forward support elements also routinely support a brigade. From time to time, attack helicopter units and USAF fighter bombers operate with the brigade.

SEPARATE BRIGADES

Since separate brigades sometimes conduct independent operations, they are organized to provide for their own support. Each generally includes:

- **A brigade headquarters and headquarters company to provide command control.**

- **Tank and mechanized battalions to fight the battles, to destroy or disrupt enemy forces, and to seize and hold terrain.**
- **An armored cavalry troop for reconnaissance, security, and economy-of-force operations.**
- **A field artillery medium-cannon battalion to provide fire support.**
- **An engineer company for pioneer combat engineer support.**
- **A combat electronic warfare and intelligence company to assist in collecting, processing, and disseminating intelligence, and to support electronic warfare operations.**
- **A support battalion of several support units to provide combat service support.**

Additional combat, combat support, and combat service support units may be attached to a separate brigade as required by the brigade's mission and operating circumstances. *The separate brigade may be attached to a division or controlled by a higher command such as a corps.*

Heavy brigades, with their *survivable, mobile firepower*, are normally employed in terrain where firepower and mobility may be used to best advantage against an enemy with similar capabilities. Heavy brigades are employed to destroy enemy forces by *fire*, and to disrupt enemy operations by *maneuver and fire*. They operate best in *open terrain* where they can maneuver and concentrate fires quickly, disperse, maneuver, and concentrate again. *They are not suited to employment in restrictive terrain—jungles, mountains, or swamps.* Urbanized terrain *impedes maneuver*. Mechanized battalion task forces of heavy brigades can operate in urban areas, although infantry brigades are best suited for urban operations as well as employment in restricted terrain.

WINNING THE BATTLE

For the brigade to win the battle, many things must be done. The more important of these are:

- **See the battlefield.** This means know the *terrain*, know the *enemy*—his *capabilities*, how he normally *fights*. It also means knowing everything possible about the current enemy situation—*strength, location, disposition*, what he's doing. It means learning about enemy *first-echelon* regiments, and those *second-echelon* regiments that can be expected to join quickly in the *first-echelon fight*.
- **Concentrate forces and fires.** To destroy the enemy or disrupt his operations, *forces and fires must be concentrated*. In the attack, battalion task forces mass forces and fires against an enemy, seeking to destroy and break through his first-echelon defenses quickly. They then strike rapidly to disrupt the defensive integrity of succeeding defensive belts. While defending, battalion task forces *mass fires and*

forces against the enemy's main effort to destroy his attacking force, then move quickly to disrupt the advance of succeeding echelons.

- **Direct the battle.** Concentrating forces and fires and controlling maneuver requires the utmost in command control effectiveness. *Careful planning and violent execution are required.* The highest order of *personnel competence* is also required since communication systems providing battle direction may well be overloaded.
- **Maximize weapon capability.** *Cover, concealment, suppression, and combined arms teamwork* must be used in concert to maximize effectiveness of brigade weapons, while at the same time minimizing their vulnerability to enemy weapons.

COMMAND IN BATTLE

Brigade and battalion commanders direct battle fighting. *They put the combined arms team together.* Once the division commander has set in motion the necessary concentration of weapons and supporting fires, brigade and battalion commanders must organize their forces and conduct the battle.

The **brigade commander** organizes tank battalions and mechanized battalions into cross-reinforced tank and mechanized battalion task forces. He sets priorities for field artillery fire support and for engineer work by units supporting the brigade. *The brigade commander maneuvers his units to bring fires and forces to bear on the enemy.* He is assisted by his staff.

The **battalion task force commander** organizes and maneuvers forces and fires to

destroy the enemy. He integrates fire and maneuver, forming tank and mechanized companies into company teams by cross-reinforcing platoons between companies. He, too, has a staff.

Company commanders fight the battle. These and other small-unit leaders must thoroughly understand their weapon systems' capabilities and limitations. They must train their soldiers to use them properly, making full use of cover, concealment, suppression, and teamwork. *Ultimately, the difference between victory and defeat depends on the proficiency of crews and individuals who fire brigade weapons and the skill of the captains, lieutenants, and sergeants who lead them.*

In the opening stages of the next war, US Army forces deployed in the area or first committed to the fight can expect to find themselves *outnumbered* by an enemy whose weapons are at least as good as their own. History proves that a small force can defeat a larger force; but it is also apparent that there is a fine line between victory and defeat. *A well-trained, highly motivated, disciplined brigade led by confident professionals who skillfully execute the tactics and techniques described on the following pages can defeat an enemy whose forces are more numerous, and whose weapons are every bit as good as the brigade's.*

The following chapters describe how armored and mechanized brigades organize for combat, how they attack and defend, how they provide for combat support and combat service support, and how combat operations are controlled. *Because separate brigades fight essentially in the same manner, the descriptions that follow generally deal only with divisional brigade operations. Differences between the two are set forth only as needed.*

CHAPTER 2

Preparing For Combat Operations

GENERAL

Deliberate and careful planning followed by quick and violent execution provides a proven formula for success in battle. At brigade and lower echelons the modern battlefield is full of complex problems, all demanding solutions in a brief time. In battle there is little time to think; therefore, when possible, solutions to the complex problems of battle must be thought out in advance.

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Prior to fighting, the brigade must make certain preparations which generally include:

- Receiving and analyzing missions and tasks.
- Preparing and issuing necessary plans and orders.
- Organizing for combat.
- Executing and supervising execution of orders.

**THE BRIGADE MUST BE ABLE TO
RECEIVE AND EXECUTE A
MISSION WITHIN MINUTES—OR
AT MOST ONLY A FEW HOURS**

Preparation for an operation begins with receipt of a mission. Brigades must be able to *receive and execute* a new mission *quickly*—perhaps in minutes or, at most, within hours. A mission may be given *orally* or in *writing*. It may be in the form of a warning order to be followed by more detailed instructions; it may be very brief and fragmentary, or more formal and detailed. As a general rule, armor units operate more on oral, fragmentary orders than on more formal instructions. To do this well, a great deal of teamwork and mutual understanding among commanders is essential.

**THE BRIGADE COMMANDER
DEVELOPS AND ISSUES THE
INSTRUCTIONS TO ACCOMPLISH
THE MISSION**

Troop leading is the process by which the brigade commander *develops* and *issues instructions* to accomplish the mission. Each step of the troop-leading process should be followed. The process is an ordered way of thinking about a most difficult problem—*battle*. It is an instinctive, almost automatic way of thinking.

Once battle starts, subsequent *orders* and *quick responses* will be necessary. To be effective, these orders must be simple or the response is likely to be slow and confused. Commanders must be trained to accept mission-type orders and, without further detailed instructions, to take action to execute the plan of the next higher commander.

The troop-leading steps are not rigid; they are modified to fit the mission and situation and are taken as time permits. Often they are accomplished concurrently. They are:

STEP 1. Receive the Mission

STEP 5. Reconnoiter

STEP 2. Issue a Warning Order

STEP 6. Refine and Complete the Plan

STEP 3. Make a Tentative Plan

STEP 7. Issue Orders

STEP 4. Start Necessary Movement

STEP 8. Supervise

1 Receive the mission. The brigade's mission may be assigned orally or in writing in an operation order (OPORD) or fragmentary order (FRAGO). Most often, *time will not permit formal, written operation orders*; fragmentary orders will be the rule rather than the exception, and frequently these will be oral. However it comes, the brigade commander analyzes what his brigade has been told to do and in turn decides what he must tell his subordinates to do.

2 Issue a warning order. The brigade commander issues a warning order telling his subordinate commanders and staff generally what is about to happen, when the operation is to start, and, if possible, when they can expect the brigade order to be issued. The brigade warning order alerts subordinate commanders to an impending operation so that they can use the time available to prepare themselves. *Warning orders are usually issued orally.*

3 Make a tentative plan. The brigade commander should quickly analyze what is to be done and draw up a tentative plan of how he intends to do it. This logic process is called the commander's estimate. It follows

the sequence set forth in FM 101-5, **Staff Officers' Field Manual-Staff Organization and Procedure**. Generally this process considers the mission, situation, terrain, enemy, resources, and courses of action that could accomplish the mission. The plan resulting from an estimate is the basis for *unit movement, reorganization, reconnaissance, coordination, and orders* to subordinate units.

For the brigade, as for its battalions, the mission statement will generally specify *what* is to be done, *who* is to do it, *when* and *where* it is to be done, and *why* it must be done—what the commander issuing the order hopes to accomplish. The brigade commander must decide *how* he is to go about his mission. His tentative plan is a direct, simple expression of *how* the brigade will act; it results in instructions to battalions as to *what* they are to do.

4 Start necessary movement. While the brigade commander will, at this point, have many things on his mind, his paramount consideration must be the absolute necessity to make sufficient time available for battalion task force commanders and their subordinates to reconnoiter, move, and ready their units and weapons for the battle. *Units that must move a considerable distance*

should be set in motion immediately, based on the first rough concept, so that they can get on the ground or in position early. Then the brigade commander must get out on the ground and see for himself how to best employ his battalion task forces.

The brigade must have a well-worked-out standing procedure to permit all these actions to proceed simultaneously. *Should the brigade commander be called to the division headquarters to receive an order, he should take with him some other person of authority (the executive officer or S3) who can return to the brigade command post to issue the necessary instructions, prepare the unit, and, if necessary, move it.* With these activities under way, the commander is free to make his reconnaissance, complete his estimate, confirm or modify his tentative plan, and issue his order.

5 Reconnoiter. Perhaps nothing is more important to the commander than a thorough understanding of the terrain over which he must fight. Personal reconnaissance of as much of the assigned area as the situation permits is essential for the commander to verify that his tentative plan is workable. Rarely will there be time to see the whole area, but as much as can be seen must be seen. If the area cannot be reconnoitered for some reason, then map or photo reconnaissance will have to suffice. In any event, *some*

preliminary reconnaissance is absolutely essential.

6 Refine and complete the plan.

Completing his estimate, the brigade commander fleshes out and changes his tentative plan as necessary. He reviews his concept and quickly identifies tasks to be assigned to his subordinate units.

7 Issue orders. It is well for the brigade commander to issue the first order of an operation *face-to-face* with his subordinates. It is therefore useful to have a standing list of personnel who must be present when orders are issued. This is called an orders group and normally includes the deputy or *executive officer, principal staff members, and subordinate commanders.* Orders may be issued from a vantage point forward in the assigned area, at a command post, or at some other convenient location. If the brigade and its battalion task forces are moving or are already involved in an operation, orders may be issued by radio or messenger.

8 Supervise. The brigade commander, his staff, his subordinate commanders and their staffs must insure all necessary preparations for battle are made. These preparations include organizing for combat and coordination of the entire effort, *coordination of fire support, engineer work, maintenance, resupply, and movement.*

THE COMMANDER'S ESTIMATE

Plans and orders result from estimating the situation. This is a process in logic applied to decisionmaking which may require a few seconds or a few hours, depending on the level of command, the complexity of the situation, the leader's experience, and available time. At high levels of command an estimate may

be a more formal process, resulting in a written document. At brigade and lower levels it is almost always mental, and very rapid, but it follows the same logic of the more formal estimating process. It must include the answers to questions indicated on the following page.

MISSION

- What must be accomplished?

SITUATION

- Where and how strong are the enemy forces?
- What is the terrain like in the area and how should it be used?
- What forces are available?

COURSES OF ACTION

- What are the ways this mission might be accomplished with the given resources and circumstances?

ANALYSIS OF COURSES OF ACTION

- What are the favorable and not so favorable features of each course of action?
To the extent possible, quantitative analysis should be applied to this evaluation.

COMPARISON OF COURSES OF ACTION

- Which course of action appears best in this situation?

DECISION AND CONCEPT

- What will be the objectives, organization for combat, scheme of maneuver, plan for fires, plan for other support, and prescribed coordination?

INTELLIGENCE OPERATIONS

The first critical *unknown* in any operation is the enemy—his strength, locations, dispositions, and activity patterns.

Whether the brigade is attacking or defending, information about enemy second-echelon regiments is particularly important to the brigade commander. This is so because second-echelon regiments are the enemy's primary means of influencing the battle being fought against brigade forces in depth. Additionally, since second-echelon regiments deploy in depth, they cannot be reported on by forces in contact. Therefore, *they must be sought out by surveillance means*, most of which are not under the brigade commander's immediate control.

Combat information about second-echelon regiments can be obtained by division means. *But it must be requested.* Therefore, unless the brigade commander personally involves himself in the collection process, vitally needed combat information may not be provided him.

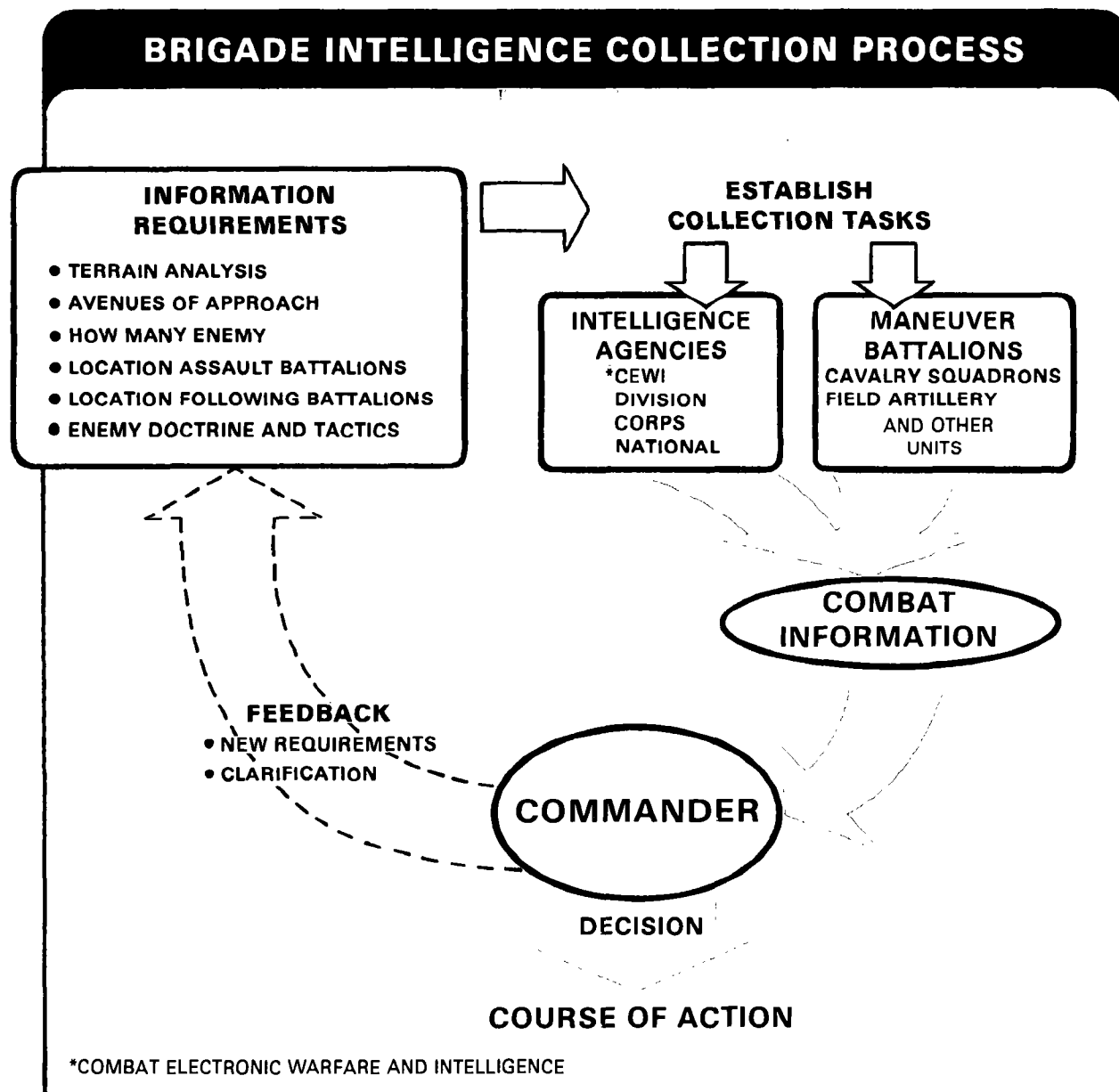
The brigade commander must tell his S2 what he needs to know about the enemy. The S2 converts these needs into essential elements of information (EEI) and other intelligence requirements (OIR). These become the basis for establishing collection priorities, allocating intelligence resources, and assigning collection tasks.

The S2 translates EEI and OIR into missions for subordinate and supporting units and requirements to be met by higher headquarters. He collects information from all sources that provide human, electro-magnetic, or imagery intelligence.

Much information can be produced through a detailed *analysis of the terrain* and a thorough understanding of *enemy tactics and doctrine*. The brigade commander and his staff must know the terrain well enough to identify avenues of approach for friendly and enemy forces and to estimate how large a force each can accommodate. They must know where *line-of-sight* exists and where it

does not. They must know where the terrain permits maneuver and where it does not; where there are natural obstacles and what their effect might be on friendly and enemy movement. They must know where forces can assemble, obtain cover, and move without being detected. And they must know what effect weather and limited visibility may have on the terrain. This information must be constantly refined and made available to those who need it.

The first goal of intelligence operations is to describe the courses of action open to the enemy based on his capabilities and *terrain and weather in the area*. The commander should never mistake these possible enemy courses of action as enemy intentions. Detailed knowledge of terrain and enemy tactics permits the commander to be prepared to some extent for any course of action the enemy may adopt, and thus minimizes the element of surprise.



Several organizations are available to gather combat information and provide intelligence to the commander. Intelligence from higher commands and other services may be available from division. The division can provide aerial imagery reconnaissance and signal intelligence to the brigade collection effort. *The most immediate combat information comes from tank and mechanized battalions.* While not extensive, this first-hand information may be most useful. Field artillery fire request systems are also a good source of battlefield information.

Divisional electronic warfare and intelligence units, organized to produce intelligence, interrogate prisoners of war, and interpret imagery, will normally operate in direct support of the brigade.

Electronic warfare and intelligence units provide:

- **Electronic support measures (ESM)** to locate, intercept, and identify enemy electronic emitters.
- **Electronic countermeasures (ECM)** to suppress enemy communications, electronic surveillance, and target-acquisition devices (jamming), or to deceive the enemy.
- **Ground Surveillance Radar (GSR) Teams** to locate enemy units.

The brigade S2 must insure that information gathered through ESM by electronic warfare and intelligence elements operating with the brigade is *immediately provided* to the brigade staff and subordinate commands. The brigade S3 must insure that targets of concern to the brigade are attacked by ECM.

ORGANIZATION FOR COMBAT

In order to fight the enemy, the brigade must maneuver. To move in the face of lethal weapons in the hands of a capable enemy, enemy direct- and indirect-fire weapons, target acquisition, and electronic warfare systems must be suppressed.

The brigade does not operate by employing its units separately. Were it to do so, it could only bring a fraction of its combat power to bear—the strength of one weapon system would not offset the weakness of another. This is why tanks are not employed without supporting infantry, and vice versa.

In order to move, suppress, and destroy the enemy, the total combined arms and services of the brigade must function as a team. So brigades are organized to fight with a variety of weapon systems—tanks, antitank weapons, riflemen, field artillery, attack helicopters, and USAF close air support.

TANK AND MECHANIZED BATTALIONS

Tank battalions are equipped with main battle tanks, mortars, shoulder-fired air defense weapons, and heavy antitank guided missiles. In mechanized battalions infantry soldiers are armed with rifles, machineguns, and light, medium, and heavy antitank weapons. Mortars and shoulder-fired air defense weapons are also found in mechanized battalions.

Tanks and antitank weapons are used to destroy enemy tanks and other armored vehicles. Infantry is used to destroy enemy infantry and to provide security to tanks in places where maneuver is restricted by terrain. Infantry protects tanks at night and under other conditions of limited visibility. Mortars are used primarily for smoke and illumination; they may also help suppress enemy gunners with high explosive rounds.

EFFECTIVE USE OF FIGHTING ELEMENTS

- Tanks are most effective where fields of fire are relatively long and they can move rapidly.
- Infantry operates in situations where fields of fire are relatively short.
- Heavy antitank weapons are most effective overwatching at longer ranges. They deliver long-range, highly lethal point fire against armored vehicles and, sometimes, against field fortifications.

The brigade commander organizes for combat by grouping tank and mechanized companies under tank or mechanized battalion headquarters. This organization is called a battalion task force. Operations of tank and mechanized battalion task forces are described in FM 71-2, **The Tank and**

Mechanized Infantry Battalion Task Force.

Battalion task forces may be tank heavy, mechanized heavy, or balanced, depending on mission, enemy, terrain, and forces available.

MISSION

- Missions requiring rapid movement over considerable distances generally call for tank-heavy or balanced forces.
- Missions requiring retention of terrain generally call for mechanized-heavy or pure mechanized forces.
- Counterattacks generally call for tank-heavy forces.

ENEMY

- In a movement to contact, anticipating a meeting engagement followed by a hasty attack, tank-heavy or balanced forces are preferred.
- Against deliberate enemy defenses featuring strong antitank systems, mechanized-heavy forces are preferred.

- If the enemy is known to be primarily a tank force, then pure tank or tank-heavy forces should be used.

TERRAIN AND WEATHER

- Conditions providing good, long-range observation and fields of fire generally call for balanced forces or forces heavy in long-range antitank guided missiles (ATGM).
- Terrain with shorter engagement ranges, but with high-speed avenues of approach, favors the tank cannon over the ATGM. Here, tank-heavy forces are preferred.
- Operations in terrain with significant obstacles—forests or urban areas—generally call for mechanized-heavy or pure mechanized forces.
- During conditions of poor visibility caused by fog, snow, or rain, mechanized infantry, often dismounted, is preferred.

ATTACK HELICOPTER UNITS

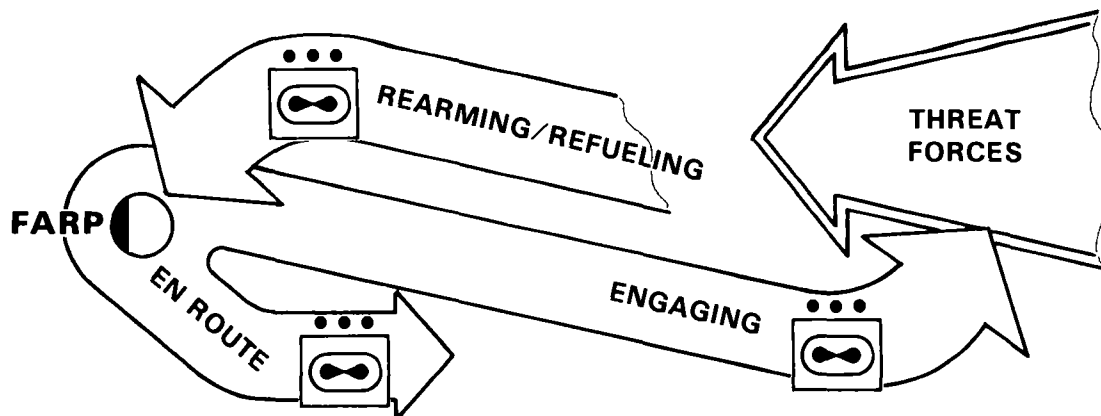
Attack helicopter units are air maneuver units. They employ highly mobile, responsive aerial combat vehicles that operate as part of the combined arms team. They can destroy tanks and other armored vehicles with heavy antitank weapons; they can destroy dismounted infantry and attack area targets with rockets. Attack helicopter units fight in the ground environment—at nap of earth. *They maneuver like ground units to engage enemy from the front, flanks, and rear.*

As a general rule, attack helicopter companies placed under operational control of the brigade should not be further subordinated to operational control of

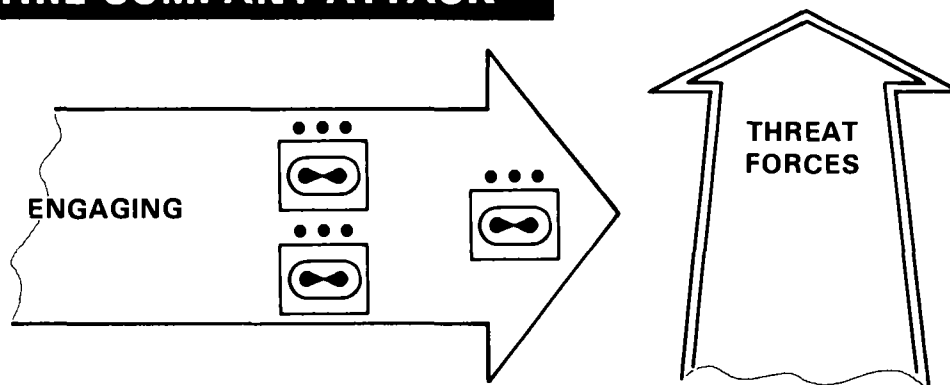
battalion task forces. They should be maneuvered by the brigade commander as are battalion task forces.

Attack helicopter companies should never be parcelled out by platoon. An attack helicopter company normally fights by applying continuous pressure, with one platoon engaging, one platoon rearming and refueling, and one platoon en route to or from a forward arming and refueling point (FARP). A second, although less frequently used, method of employment is one in which an entire company is employed at the same time against the same target. **How attack helicopter units fight is described in FM 17-50, Attack Helicopter Operations.**

PLATOON ROTATION ATTACK



ENTIRE COMPANY ATTACK



FIELD ARTILLERY

Field artillery is the brigade commander's principal and most responsive indirect-fire weapon system. Normally, the brigade will have a medium field artillery battalion in direct support.

Field artillery can deliver a variety of munitions. It is most often used to suppress or destroy enemy direct- and indirect-fire weapon systems with a combination of high explosives and improved conventional munitions; smoke munitions are used to obscure the enemy view of divisional units. Field artillery is also used to destroy or render ineffective enemy command control facilities, logistics, and assembly areas. In the near future, field artillery will be able to lay down minefields with scatterable mine munitions and destroy armored vehicles with precision-guided munitions. **Field artillery support is further described in Chapter 5, Combat Support.**

CLOSE AIR SUPPORT

USAF tactical aircraft provide close air support to the brigade. Because of their ability to carry varied ordnance loads, tactical fighter bombers are very effective against enemy in fortified positions. They can destroy hard point targets, tanks, and other armored vehicles quickly and effectively. Close air support aircraft can operate alone, or together with attack helicopters and field artillery. **Close air support is further described in Chapter 5, Combat Support.**

ENGINEERS

Engineers remove and emplace mines and obstacles, build or repair roads, emplace bridges, and help tank and mechanized battalion task forces and field and air defense artillery battalions construct fighting positions. Engineers can fight as infantry, but they do not do so routinely.

A divisional engineer company is usually in direct support of each brigade. Engineer platoons operate with battalion task forces. **Engineer operations in support of the brigade are described in Chapter 5, Combat Support.**

COMBAT SERVICE SUPPORT

The division support command provides fuel, ammunition, and maintenance, replaces crews and equipment lost in battle, and treats and evacuates wounded. **Details of combat service support to the brigade are contained in Chapter 6, Combat Service Support.**

COMMAND CONTROL

To direct the battle, the brigade commander must locate where he can best control the operation. In the attack, this is most often near the leading battalion task force. In the defense, the brigade commander operates with forces defending against the enemy's main effort. **How the brigade commander organizes to command control an operation is described in Chapter 7, Command Control of Combat Operations.**

CHAPTER 3

Offensive Operations

GENERAL

The primary purpose of offensive operations is to destroy the integrity of the enemy's defense by breaking through his defensive system and driving rapidly into rear areas to destroy artillery, air defense, command posts, logistical support, and command control systems. In concept, the offense is a maneuver-based force disruption operation. Forces and fires are maneuvered in such a way that the enemy operational scheme is disrupted to the point of destruction, forcing the enemy to change—to break off the action or give up his ground. Once disruption has been achieved, the enemy force can be destroyed much more easily than in a weapon-for-weapon firepower exchange against a cohesive defensive force.

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Offensive operations may also be conducted to secure terrain, to gain information about the enemy, and, occasionally, to deceive the enemy. *While defensive operations are often necessary and sometimes preferred, as a general rule it is offensive action which achieves decisive results.*

Since the enemy cannot be equally strong everywhere, it is usually possible to concentrate sufficient combat power to outweigh him at a place of the attacking commander's choosing. During defensive operations, the commander should always be looking for an opportunity to attack.

FUNDAMENTALS OF THE OFFENSE

The several fundamentals which should be applied to the conduct of offensive operations are:

- | | |
|---|--|
| <p>1 See the battlefield.</p> <p>2 Concentrate overwhelming combat power.</p> <p>3 Suppress enemy defensive fires.</p> | <p>4 Shock, overwhelm, and destroy the enemy.</p> <p>5 Attack the enemy rear.</p> <p>6 Provide continuous mobile support.</p> |
|---|--|

1 See the battlefield. To attack successfully, it is first necessary to know the terrain and the enemy—the capabilities of enemy weapon systems and how enemy forces are customarily disposed to defend.

Detailed knowledge of the terrain is essential. In the attack, brigade and battalion task force commanders can seldom actually see beyond the terrain feature to the immediate front. However, the division commander has means available to see farther and can provide that information to brigades and battalion task forces.

Brigade and battalion task force commanders must understand how the enemy normally defends—strongpoints in depth designed to draw the attacker into fire traps, tanks held in reserve for strong counterattacks, echelonment of forces deployed behind the first defensive belt. While much of the information the brigade commander needs may be immediately available, he

must tell his own information-gathering agencies and those at division what else he needs to know.

To attack, *the commander must decide where the enemy is weak or can be weakened.* In order to find this out it may be necessary to conduct a reconnaissance in force.

2 Concentrate Overwhelming Combat Power. Most attacks begin with an advance to contact, often on a broad front. Once contact is made, brigade and battalion commanders must press in quickly to disrupt the enemy by maneuvering forces and fires. As a general rule, if this initial contact is not favorable in the first few minutes, it will be necessary to take up a hasty defense of some kind and prepare for a more deliberate attack. Since a deliberate attack against prepared positions is a difficult and costly operation, commanders should try for a favorable

outcome of the meeting engagement which results from the move to contact. To do this, it is necessary to try very early to detect an area where the enemy is weak or can be weakened, quickly move forces to that area, and concentrate on a narrow front to break through the enemy formation or his forward defenses. *Field and air defense artillery* concentrate fires to support advancing tank and mechanized forces at the point of main effort. *Engineers* concentrate to assist in breaching and clearing minefields or other obstacles which can slow or stop advancing tanks and mechanized infantry. *Electronic support* means are concentrated to locate enemy emitters so enemy weapon and command control systems can be attacked by fire or jammed by electronic countermeasures (ECM).

While mobility of armored and mechanized forces allows them to move rapidly from one place to another, moving to concentrate means thinning out forces elsewhere and that involves some risk. However, by clever use of terrain, camouflage, smoke, electronic countermeasures, and electronic counter-countermeasures, and by moving during periods of reduced visibility, it should be possible to deceive or at least confuse the enemy about what is going on.

3 *Suppress Enemy Defensive Fires.* Concentrated forces are vulnerable to enemy fires. Therefore it is necessary to suppress enemy weapons and to obscure the vision of enemy gunners who can interfere with advancing tanks and mechanized infantry, or with attack helicopters and close air support aircraft.

Enemy field and air defense artillery which threatens a force concentration must also be suppressed. This is normally done by the division artillery. Enemy electronic warfare systems which can disrupt command control can be suppressed by means available to the division commander.

4 *Shock, Overwhelm, and Destroy the Enemy.* Once an enemy weakness has been found or created, the brigade presses through with all speed. Prepared positions are bypassed when possible; they are cleared only when necessary. The brigade must not hold up if leading battalion task forces are temporarily stopped. Stalled attacking units should be bypassed by fresh units. These units exploit enemy weaknesses as they can be identified. The attacker must develop the situation before the enemy can react. Fire and maneuver continue until the enemy is overrun, bypassed, destroyed, or forced to flee the battle.

5 *Attack the Enemy Rear.* Once enemy forward forces are penetrated, the brigade drives quickly into the enemy rear to destroy field artillery, air defenses, command control facilities, logistical installations, and enemy reserves. As the enemy defense is disrupted and gives way, the brigade proceeds quickly to destroy or capture enemy forces, or continues the attack pursuant to the division's mission.

6 *Provide Continuous Mobile Support.* Continuous mobile support is necessary to sustain tank and mechanized forces in an offense. Field and air defense artillery, engineers, and signal units must keep pace with maneuver units. Fuel and ammunition consumption will be high, but that fact must not slow or stop the advance. Inoperable combat vehicles must be repaired as far forward as possible and quickly returned to battle. Those that cannot be repaired forward must be immediately replaced from the divisional operational readiness float.

The deeper the brigade advances, the more difficult it becomes to keep support moving at a satisfactory pace. Combat service support commanders must be as aggressive in supporting as combat commanders are in attacking.

HOW THE ENEMY DEFENDS

Threat doctrine prescribes offense as the principal combat operation. While defense may be necessary at times, it is seen as a temporary expedient. In general, Threat commanders take up the defense to accomplish one or a combination of the following actions:

- Economize force,
- Gain time to concentrate forces for offensive operations,
- Repel a stronger force,
- Consolidate captured objectives, and
- Cover withdrawal.

Echelonment of forces is an important Threat concept in the defense. Commanders to battalion level determine the number of echelons required for an operation. Normally it is two. Commanders are also permitted to retain reserves.

Threat forces normally plan for nuclear and chemical weapons employment in the defense. They intend to fight on the nuclear battlefield generally as they do on the conventional battlefield, with some additional dispersion of forces prescribed for nuclear operations.

Threat doctrine prescribes motorized rifle units as best suited for the conduct of the defense. A tank army, for example, defends as a first-echelon unit only when necessary, and only temporarily. It is replaced by a combined arms army at the earliest possible time.

HASTY DEFENSE

The Threat perceives the hasty defense, assumed for short periods of time, as the most frequent form of defense. The hasty defense

permits rapid movement to offensive operations or to a well-prepared, deliberate defense. It is normally used when units on the move are forced to stop for some reason. In taking up a hasty defense, forward forces deploy as in the first echelon of the main defense belt of a deliberate defense. Strongpoints are established on the most defensible terrain. As time and forces permit, a second-echelon belt is established and the defensive system is improved.

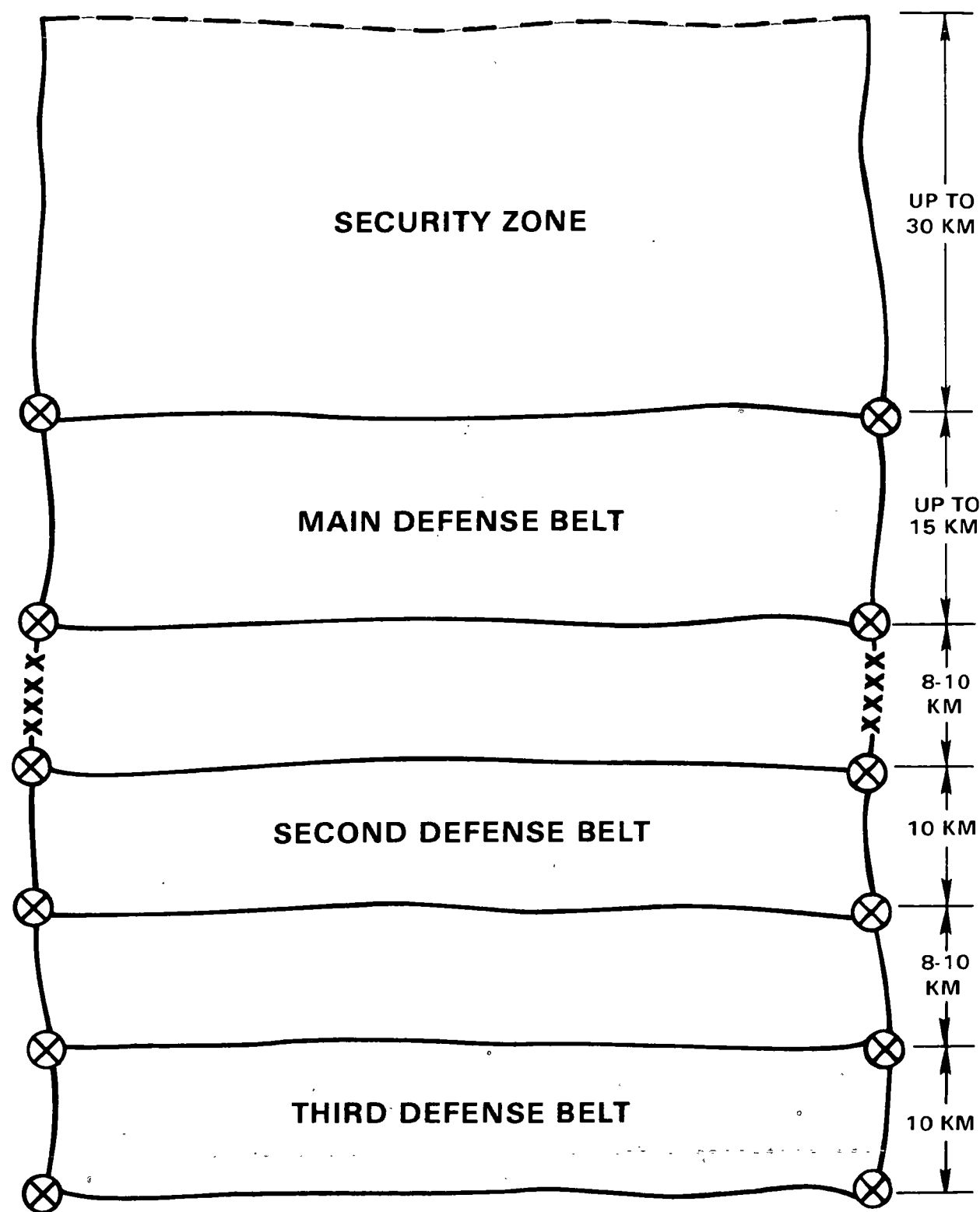
DELIBERATE DEFENSE

When an enemy advance is halted for more than a few hours, a deliberate defense is organized in successive belts and in echelons designed to provide depth to the defensive system. A deliberate defense consists of, as a minimum, a security zone and a main defense belt. Second and third defense belts are normally organized at echelons above division when time permits.

Each defense belt consists of a series of mutually supporting company and battalion strongpoints echeloned in depth. Strong, mobile, tank-heavy reserves are retained as counterattack forces.

Obstacles are constructed forward of and within each defense belt to slow attacking forces and to canalize them into preplanned killing zones. Combat formations, fronts, and depths of defending forces are determined by terrain, enemy, mission, forces, and available fire support.

THREAT DEFENSE
BELT CONCEPT
(NOT TO SCALE)



**MOTORIZED RIFLE
DIVISION
IN THE DEFENSE**

The *security zone* normally extends as far as 30 kilometers forward of the main defense belt. Forces in the security zone try to stop or delay an attacker by forcing him to deploy before reaching the main defense belt.

Combined arms army second-echelon motorized rifle units and tank reserves, reinforced with artillery and engineer support, establish the security zone. Forces operating in the security zone fight as reinforced battalion- or company-size units; their mission is to delay the enemy and cover preparation of main and successive defense belts. In successive delaying actions, security zone forces withdraw through the main defense belt and take up positions in the second defense belt.

Motorized rifle divisions in the main defense belt establish general outposts in the security zone as far as 15 kilometers in front of the main defense belt, usually with one motorized rifle battalion per 8 to 12 kilometers of front. General outpost forces will normally come from divisional second-echelon motorized rifle regiments.

First-echelon regiments in the main defense belt establish combat outposts in the security zone 3 to 5 kilometers to the front of forward battalions. Regimental combat outposts normally consist of a rifle company reinforced by antitank weapons, artillery, tanks, and engineers. They protect forces in the main defense belt against surprise attack, conduct counterreconnaissance, and direct counterfire against the attacker's field artillery. They also attempt to deceive the enemy as to the location of the main defense belt and try to prevent the attacker from clearing obstacles.

The *main defense belt*, the backbone of the defense, is designed to stop and destroy attacking forces. It can be up to 15 kilometers deep and is designed to take advantage of the natural defensive strength of the terrain.

Normally, motorized rifle divisions are employed in the main defense belt on fronts of

20 to 30 kilometers each to depths of about 15 kilometers. The division in the defense usually organizes into two echelons with two motorized rifle regiments in the first echelon and one in the second. First-echelon motorized rifle regiments defend the first 8 to 10 kilometers of the division zone. The second-echelon motorized rifle regiment organizes battalion defense areas across the rear of the division zone approximately 10 kilometers from the forward trace of the main defense belt. Second-echelon battalions are positioned to protect key terrain and block penetrations.

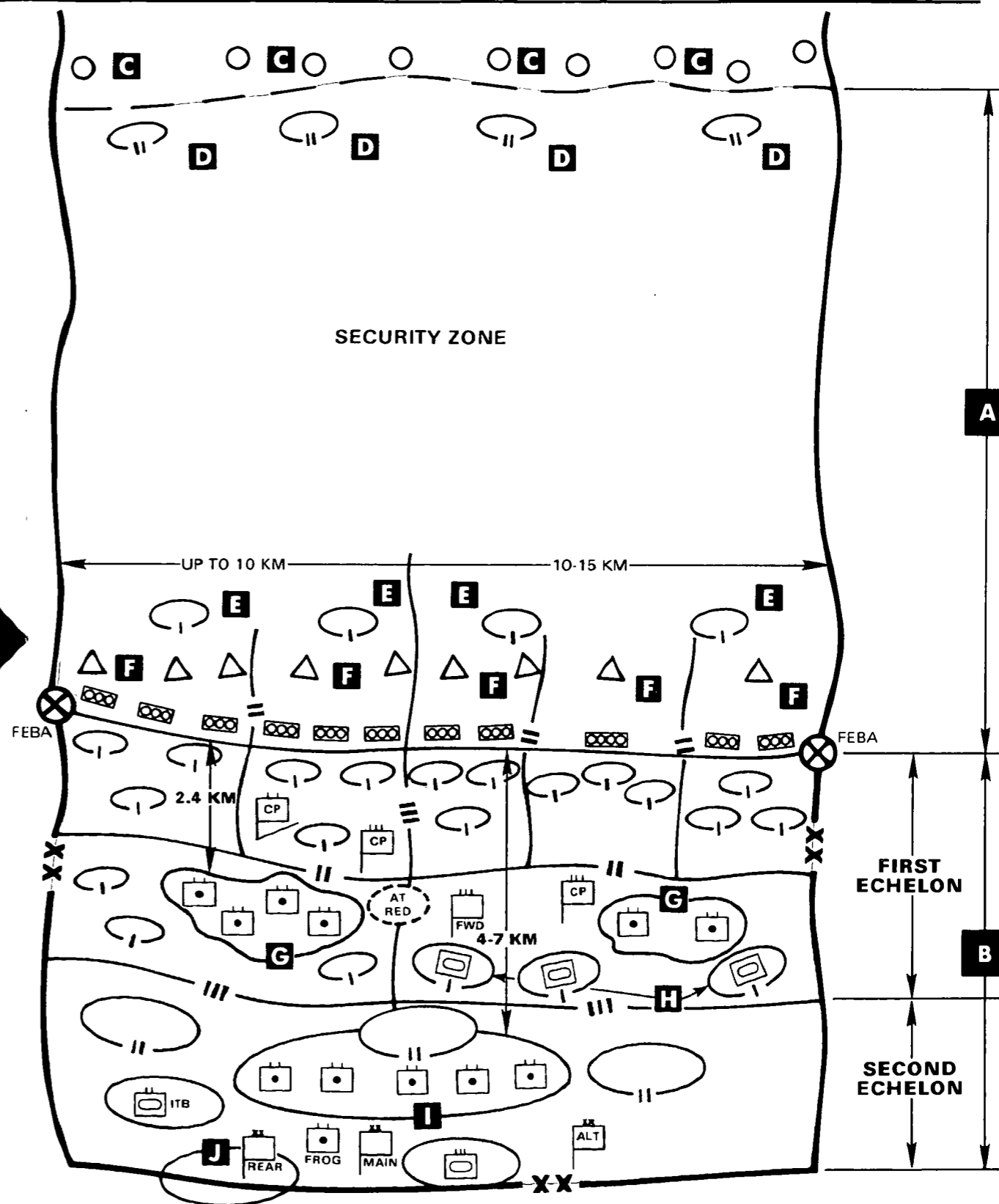
The medium tank regiment and independent tank battalions are normally held as a reserve under division control. They usually are located to the rear of the second-echelon motorized rifle regiment. Elements of the tank regiment (two or three companies) may be used to reinforce motorized rifle regiments.

MOTORIZED RIFLE DIVISION IN THE DEFENSE

LEGEND

- A** SECURITY ZONE
- B** MAIN DEFENSE BELT
- C** RECONNAISSANCE ELEMENTS
- D** FORWARD DETACHMENTS
- E** GENERAL OUTPOSTS
- F** COMBAT OUTPOSTS
MANNED FROM FIRST-ECHELON DIVISION
- G** REGIMENTAL ARTILLERY GROUP
- H** TANK BATTALION
MAY BE CENTRALIZED AS A COUNTERATTACK FORCE
- I** DIVISIONAL ARTILLERY GROUP
- J** DIVISION DEPOT AREA

NOTE: LEFT SECTOR ASTRIDE A MAIN AVENUE OF APPROACH



The *second defense belt* is established and defended by army second-echelon motorized rifle divisions and reserves. These include tank divisions which deploy to prepared positions in the second defense belt after completing security zone missions.

The second defense belt is up to 10 kilometers deep and located 8 to 10 kilometers to the rear of the main defense belt. If the enemy penetrates the main defense belt, forces in the second belt fight to contain him until counterattacks from the third defense belt can be launched.

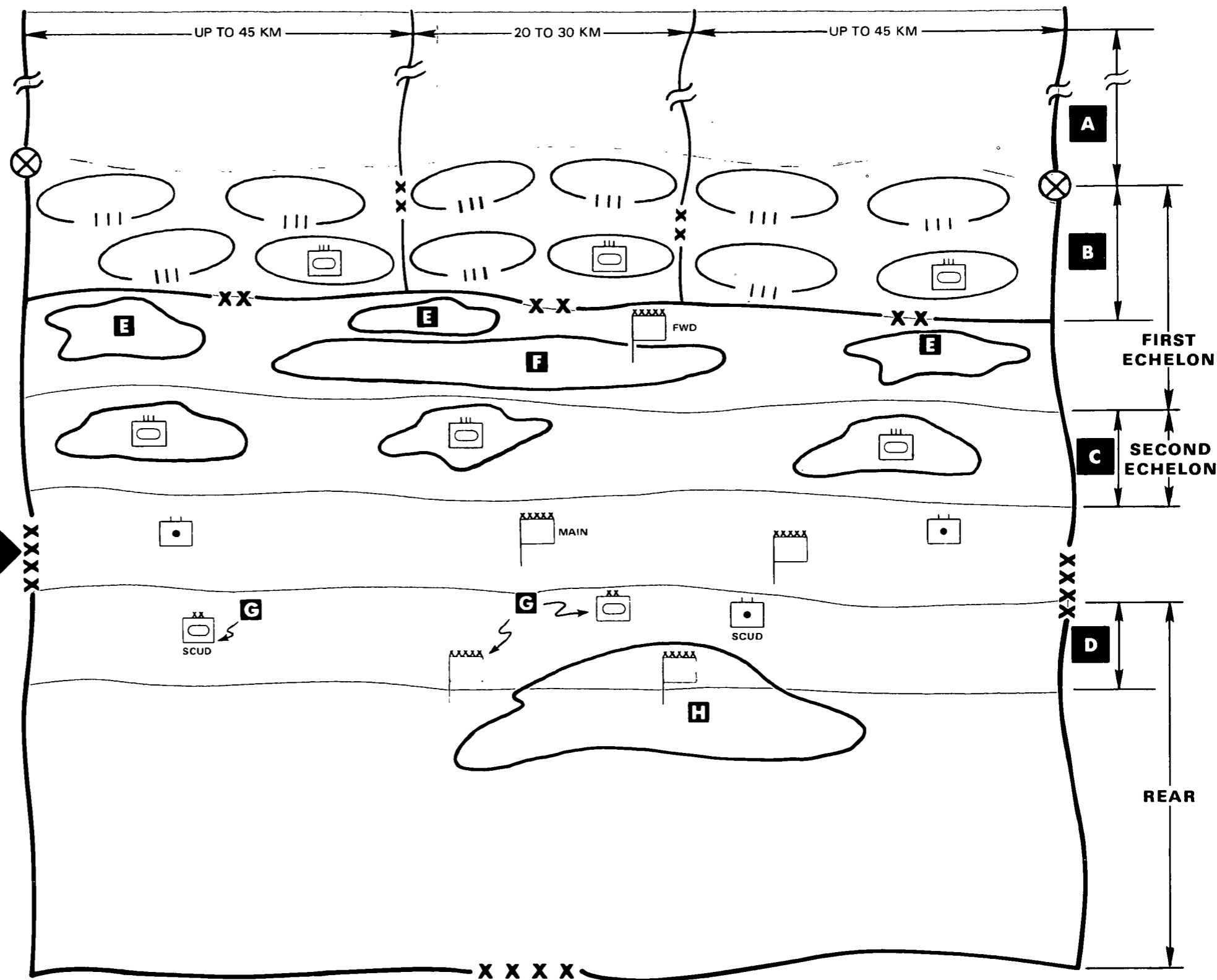
The *third defense belt* is located 8 to 10 kilometers to the rear of the second defense belt. This belt normally consists of elements of a tank army, reserves available to the front, and possibly a combined arms army dispersed over a very wide zone.

The mission of forces in the third defense belt is to counterattack. In the event a counterattack cannot be mounted, they occupy prepared positions and attempt to stop the enemy's advance.

COMBINED ARMS ARMY IN THE DEFENSE

LEGEND

- A** SECURITY ZONE
- B** MAIN DEFENSE BELT
TANK REGIMENT HELD AS A
COUNTERATTACK FORCE. ONE OR TWO
COMPANIES MAY REINFORCE
MOTORIZED RIFLE REGIMENT
DEFENSIVE POSITIONS
- C** SECOND DEFENSE BELT
- D** THIRD DEFENSE BELT
- E** ADVANCED ARMY SUPPLY BASE
- F** ARMY ARTILLERY GROUP
UP TO FOUR BATTALIONS
- G** FRONT ASSETS
- H** ARMY SUPPLY BASE



**IN THE DELIBERATE
DEFENSE, EVERY EFFORT IS
MADE TO STOP THE ENEMY
FORWARD OF THE MAIN
DEFENSE BELT**

**COMBINED ARMS
ARMY
IN THE DEFENSE**

The defense begins when attacking units make contact with outposts in the security zone. Security outposts keep attacking units under continuous surveillance and take them under fire with mortars, small arms, machineguns, tanks, and antitank weapons. Every effort is made to deceive the attacker as to the location of the main defense belt and to cause him to mass his forces. As security outposts are forced to withdraw, artillery fires are placed on the attacker to cover the withdrawal.

Fires from the main defense belt are withheld until the attacker reaches a point where maximum effectiveness can be obtained by the defender's weapons. At this time, close-in artillery and mortar barrages begin. The attacker is also brought under antitank and artillery direct fire while negotiating antipersonnel and antitank obstacles. Tanks are the primary target. The enemy employs all weapons that can damage or destroy tanks. Machinegun and small arms fire is used to separate dismounted infantry from tanks.

Defending battalions remain in place until overrun or ordered to withdraw by higher headquarters; however, occupation of alternate and supplemental positions within the defense area is permissible. The enemy expects penetrations in gaps between units and intends to accomplish maximum killing in these areas. Lightly engaged units adjacent to threatened areas fire into flanks of attacking forces. Penetration of forward positions of battalion defense areas is blocked by the second echelon. Local counterattacks are used by the battalion or regiment to restore its part of the main defensive area.

If enemy penetration of the main defense belt cannot be stopped by local counterattacks, the combined arms army normally launches a counterattack. The counterattack force consists of the tank division and available elements of the engaged motorized rifle division. The counterattack force is

supported by nondivisional reserves of tanks and other supporting weapons. If the combined arms army counterattack fails to eject the enemy from the main defense belt, remaining elements of engaged divisions withdraw to take up positions in the second defense belt. A counterattack is then mounted by the front second-echelon tank army.

FIRE SUPPORT

Threat artillery is organized for combat at army, division, and regimental level by grouping organic artillery with artillery of higher headquarters. Located 2 to 4 kilometers from the forward edge of the main defense belt are regimental artillery groups (RAG) consisting of two to four battalions of 122-mm guns and 152-mm gun/howitzers. Division artillery groups (DAG), positioned 4 to 7 kilometers from the forward edge of the main defense belt, consist of two to four battalions of 130-mm guns and 152-mm gun/howitzers. The DAG may also include the divisional multiple-rocket-launcher battalion. The army artillery group (AAG), when formed, is composed of four battalions

of mixed caliber and is normally located well forward in the army sector. Any of these three types of artillery groups may be altered during the operation.

Forward detachments and outposts will normally have accompanying artillery in the form of 122-mm self-propelled batteries. Motorized rifle battalions along the FEBA have an organic battery of 120-mm mortars and may be allotted up to a battalion of self-propelled or towed artillery for direct fire against tanks, armored personnel carriers (APC), and ATGM.

AIR DEFENSE

Threat forces deploy mobile surface-to-air missiles (SAM) and conventional antiaircraft (AA) guns for air defense. Zone coverage is provided by SAM systems, while point protection is provided by divisional and regimental light air defense weapons.

Regimental air defense weapons are employed in direct support of maneuver battalions. Deployed well forward, their primary targets are the attacker's air support aircraft and attack helicopters.

PREPARING FOR OFFENSIVE OPERATIONS

A general description of preparations for offensive operations is found in chapter 2. Once the commander has completed his estimate and drawn up a plan of operation, it is necessary to issue orders to the staff and subordinate commanders.

The brigade commander must describe his concept of the operation in sufficient detail for his staff and subordinate commanders to understand exactly what the brigade is supposed to do and what each of them is supposed to do. As a minimum, he should specify:

- Time and place of the attack,

- Scheme of maneuver for the force as a whole,
- Task organization,
- Control and coordination measures.

Time of the brigade attack may be specified by division orders. In any case, the brigade commander provides time—time for his subordinates to reconnoiter, to gather information about the enemy, to move into position, to refit (arm, fuel, maintain), to draw up their own plans, to issue orders, and to prepare for the operation.

**ATTACKS SHOULD BE
AIMED AT WEAKPOINTS IN
THE ENEMY DEFENSE**

The *place* to attack is that location which offers the greatest likelihood of success. Attacks should be aimed at weakpoints in the enemy defense. If no weakpoint can be found, then one must be created. This can be done by fire, fire and maneuver, or deception—a feint or demonstration which causes the enemy to shift his forces elsewhere.

Terrain over which the attack is to move should allow rapid movement into the enemy rear. Ground that will slow the advance should be avoided. Occasionally, an attack on less-than-suitable terrain may be desirable if it achieves surprise.

SCHEME OF MANEUVER

The brigade commander's concept will include the brigade scheme of maneuver. Generally, this can be described in one of four ways:

1. Overrun and destroy a weaker enemy in position,
2. Fix or hold an enemy force in position,
3. Rupture and pass through enemy defenses to secure a deep objective, or
4. Pass around enemy's main defenses to strike from the flanks and rear, causing him to fight in an unexpected direction or perhaps two directions.

Enemy positions can be approached in two ways—from the front or from the flank or rear. There are, therefore, two ways to maneuver—envelop or penetrate.

In a division attack, the brigade may be required to fix enemy units in position, to envelop enemy flanks, or to follow up to exploit or reinforce the attack of another brigade. Seldom will the division order prescribe the form of maneuver to be used by battalions of the brigade unless it is necessary for coordination.

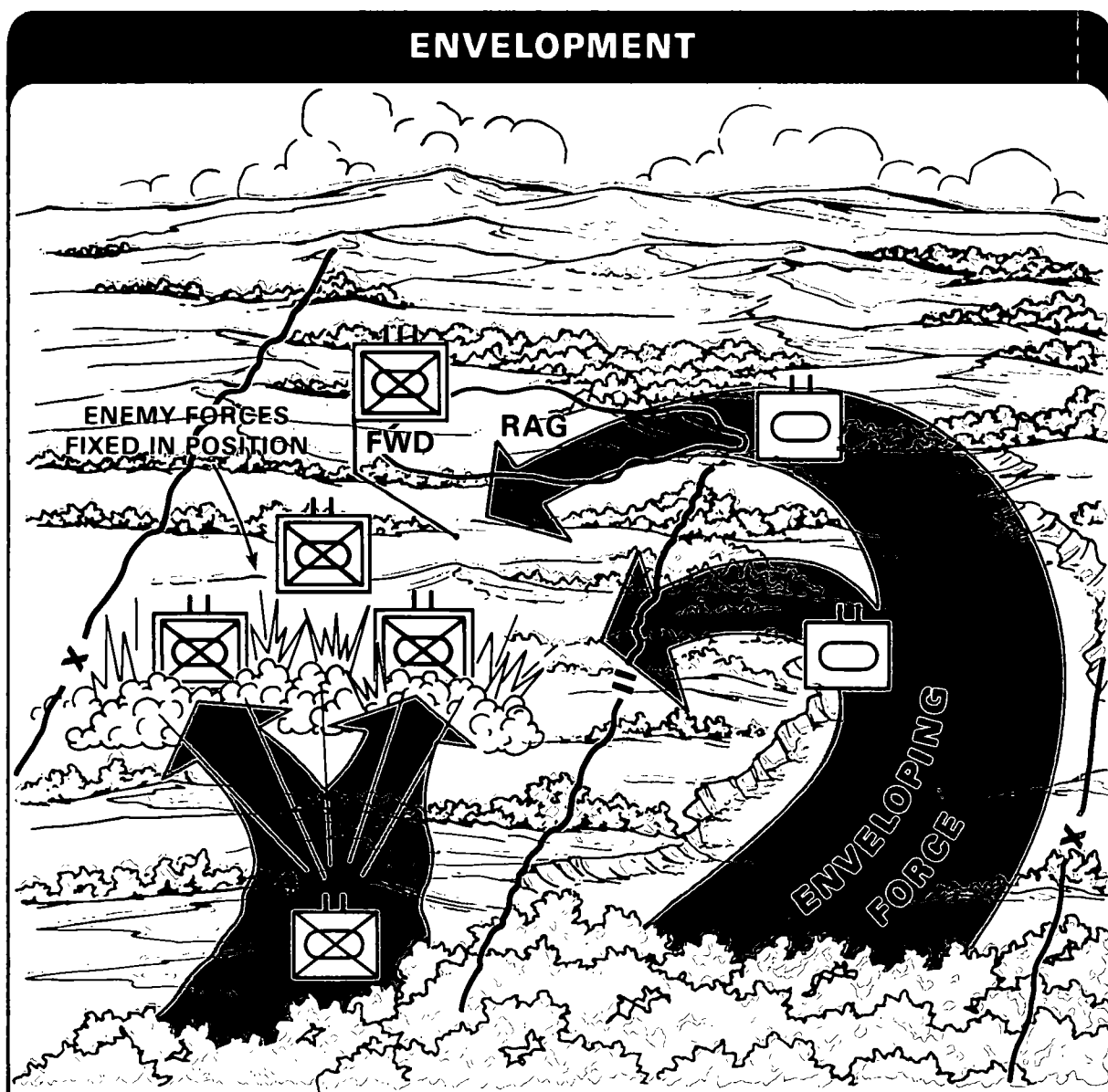
In an *envelopment*, the attacker avoids enemy strength, passing round to strike on a lightly guarded flank or into the enemy rear.

If there is no open flank or gaps which lead to a flank, gaps can be created by fires, fire and maneuver, or a deception operation. Nuclear weapons are particularly useful for creating gaps; chemical weapons used with scatterable mines can be used to protect the flanks of the enveloping force.

Success most often depends on speed and preventing the enemy from reacting with sufficient force in time to slow the attack. It may be necessary to fix the enemy in place

from the front by a supporting attack which will complicate enemy reaction to the enveloping force. The enemy is then forced to fight in several directions or abandon his positions.

Envelopment is usually the preferred form of maneuver. Striking from several directions at once or from unexpected directions forces the enemy to fight thin—along lightly defended or undefended avenues of approach.



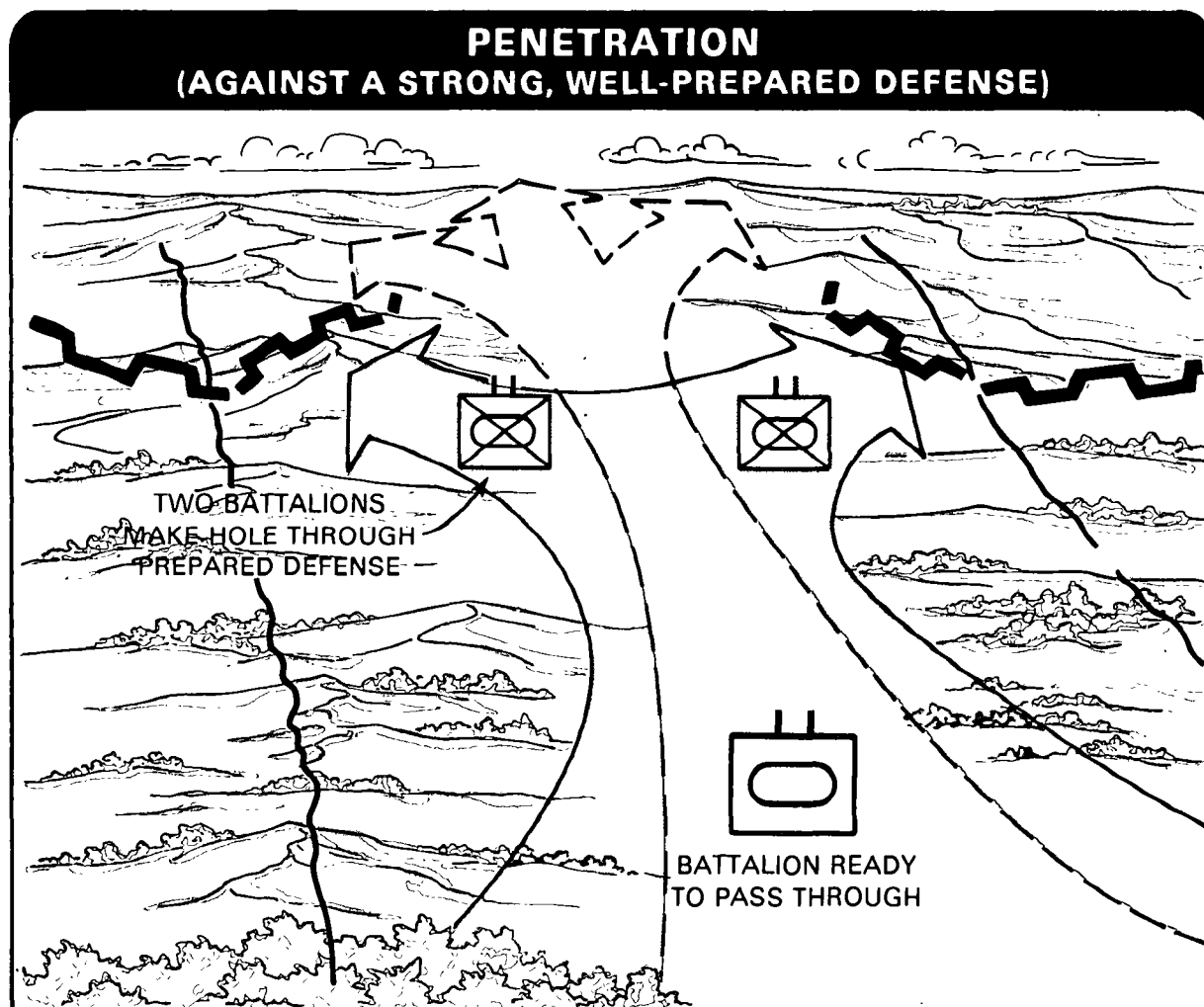
In a *penetration*, the attacker concentrates forces to strike at an enemy weakpoint, breaks through the position, holds the shoulders of the gap created, and advances rapidly through the gap.

Successful penetration depends upon the ability of the attacker to suppress enemy weapons, to concentrate enough forces and fires to overwhelm the defender at the point of attack, and to pass sufficient force through the gap to quickly secure an objective. Once this is accomplished, the commander has two options: He may continue forward to rupture successive defense lines and ultimately enter enemy rear areas, or he may turn forces to roll up enemy positions from the flanks. The

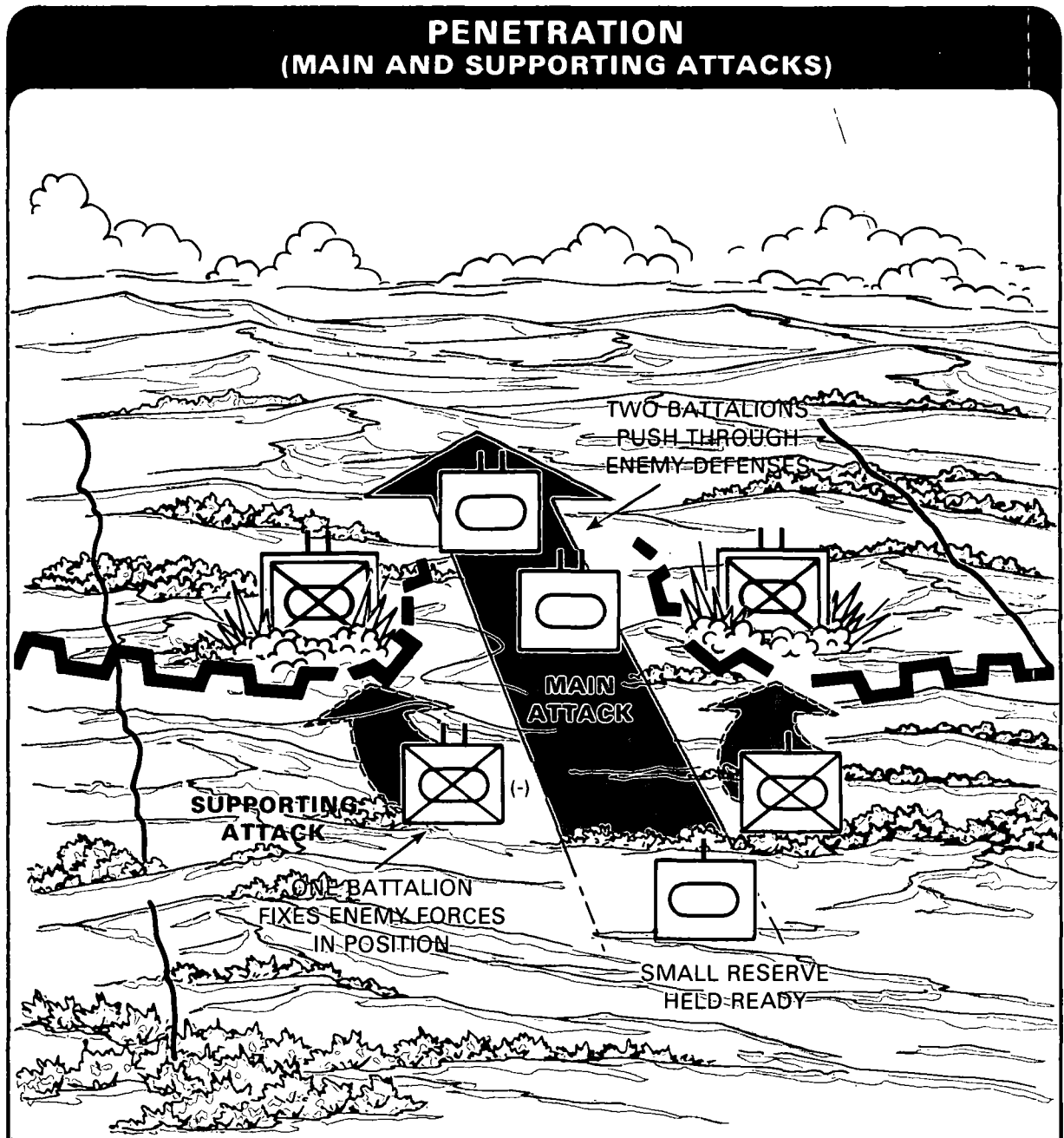
penetration may be preferred when the enemy is overextended or he does not have an exposed flank. Nuclear weapons may be used to rupture the enemy defense; chemical and nuclear weapons to block enemy reserves.

Successful attack depends on concentration of combat forces on a narrow front. There are several ways to do this, depending on the forces the brigade has available.

Two or more battalions make the main effort to create and widen a gap in the enemy defense while an additional battalion is held ready to pass through the gap into the enemy rear. This type of attack is normally required against strong, well-prepared defenses.

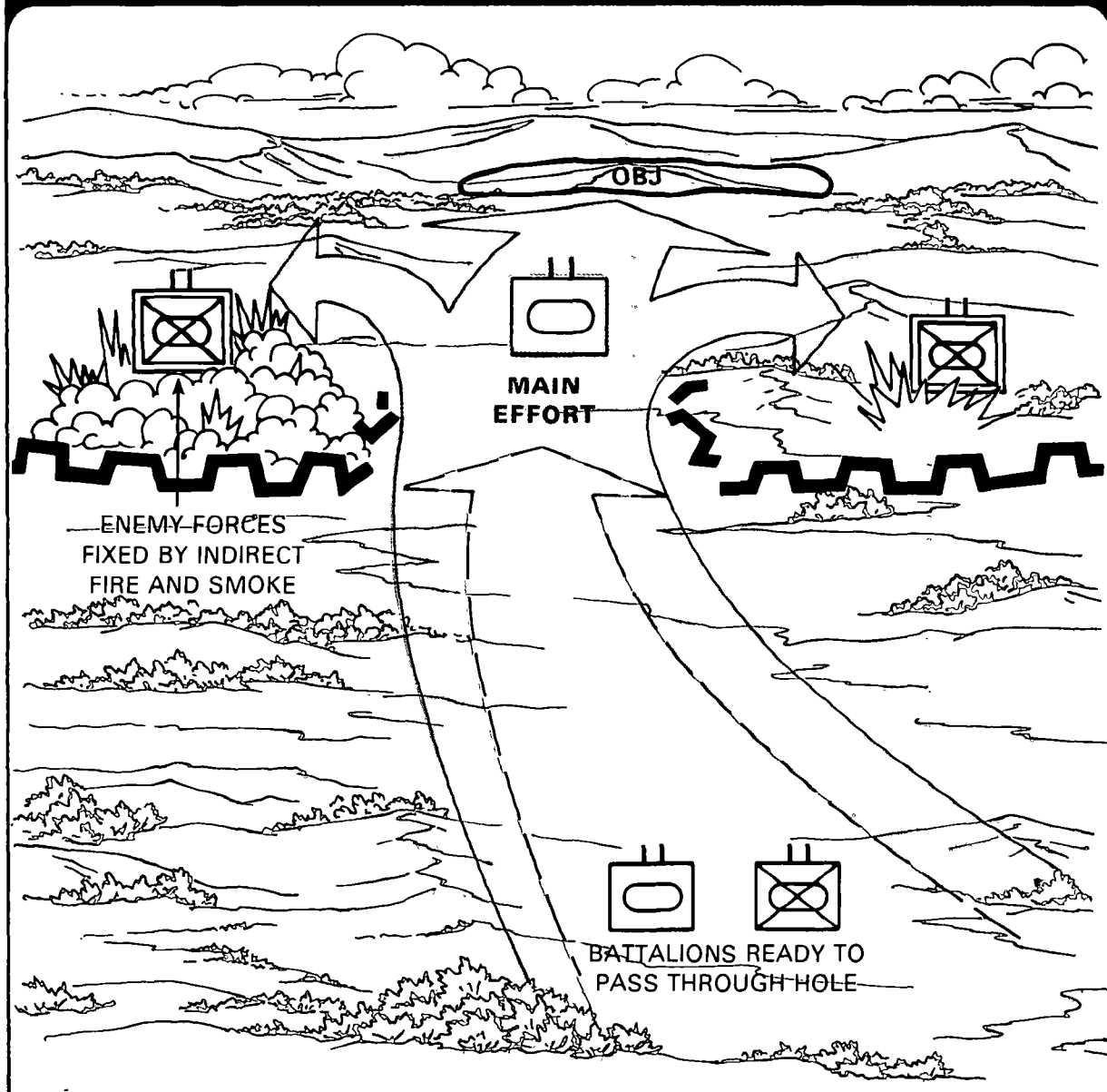


Two or more battalions make the main effort to push through enemy defenses into the rear while an additional battalion fixes enemy forces in position. A small reserve may be constituted if there are sufficient forces. This type operation is normally conducted against enemy defenses which are extended over a wide area.



One battalion makes the main effort while remaining battalions are held ready to pass through. Under these circumstances, it may be necessary to fix enemy forces elsewhere by indirect fire or by deception. This type operation may be conducted when attacking a flank; or when the enemy is weak and his forward defenses can be penetrated.

PENETRATION/ENVELOPMENT (ATTACK AGAINST A WEAK DEFENSE)



For the attack, a battalion should be task-organized according to the mission, enemy, terrain, and forces available, as previously described.

FIELD ARTILLERY AND CLOSE AIR SUPPORT

Priority of field artillery fires and close air support is usually assigned the battalion(s) making the main effort. When attacking strong enemy positions, the division commander may direct that a preparation be fired. If not, the brigade commander may choose to do so.

AIR DEFENSE ARTILLERY

Frequently, a Vulcan platoon, or perhaps more than one, is provided to an attacking brigade. When this is done, Vulcans are employed with leading company teams until contact is made. Then they deploy to the rear of the line of contact. Their primary targets are enemy attack helicopters.

ENGINEER SUPPORT

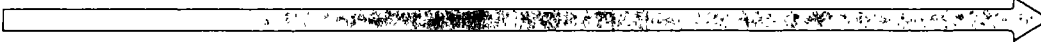
Priority for engineer support is also assigned the battalion task force or task forces making the main effort. When ditches are to be crossed or hasty river crossings are to be conducted, bridging must be provided to leading units. It is often desirable to attach an engineer platoon to each battalion task force to aid in maintaining momentum. Engineers can quickly bridge gaps and breach minefields.

ELECTRONIC WARFARE AND INTELLIGENCE SUPPORT

Divisional collection and jamming elements and ground surveillance radar teams normally operate with each brigade. They are sited forward and on the flanks to locate enemy forward units, reserves, regimental command posts, field and air defense artillery, and jammers.

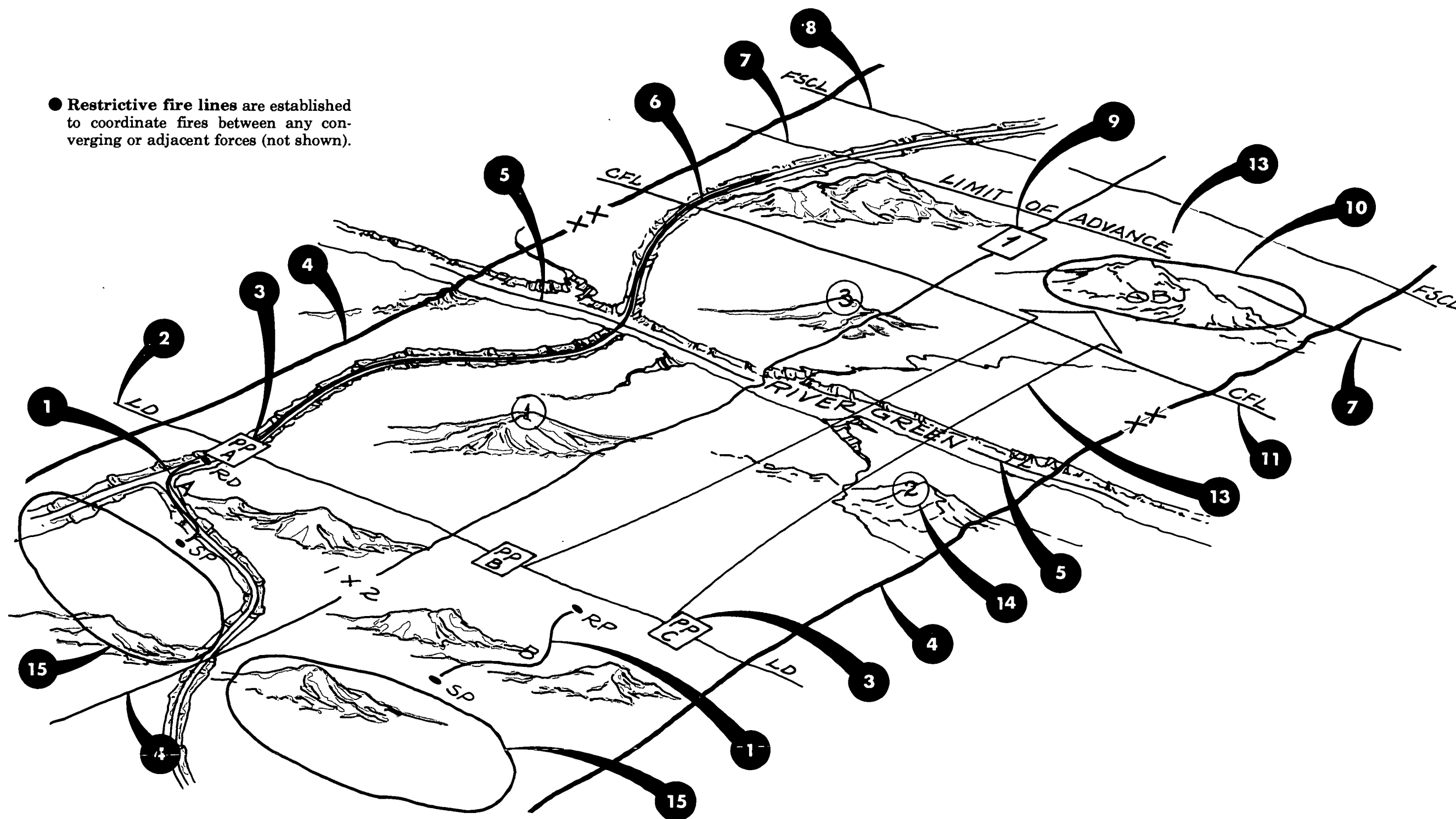
CONTROL MEASURES

Control measures are necessary for proper organization and control of offensive operations. They are keyed below to the illustration on the next page.



- 1** A **route of advance** is the assigned route of march and is labeled with a number, letter, or name. The start point (SP) and release point (RP) may also be shown.
- 2** A **line of departure (LD)** is designated to coordinate the departure of attack elements. It should be a terrain feature easily recognized on the ground, generally perpendicular to direction of attack, and under friendly control.
- 3** **Passage points (PP)** are designated locations in the unit being passed through. They are the points through which, by commander's agreement, passing units should move.
- 4** **Boundaries** mark sectors of responsibility. However, commanders must not allow boundaries to prevent fires on an enemy force simply because the enemy is on the other side of a boundary.
- 5** **Phase lines** extend across the zone or likely area of action and are located on easily recognized terrain features such as ridgelines, streams, and roads. Phase lines are used to control unit movement.
- 6** **Direction of attack** can be assigned when objectives are not assigned. They may also be useful supplementary control measures, as are axes of advance (12).
- 7** A **limit of advance** is set by the commander for control and to prevent assaulting elements from being hit by friendly fires.
- 8** **Fire support coordination lines (FSCL)** are those lines forward of which all targets may be attacked by any weapon system without danger to, or additional coordination with, the establishing headquarters.
- 9** **Contact points** are designated places where two or more units are required to make physical contact.
- 10** **Objectives** are normally assigned in an attack to battalions of the brigade. They may be the only control measures assigned and are used to direct the efforts of attacking units.
- 11** **Coordinated fire lines (CFL)** delineate the area beyond which field artillery, mortars, and ships may fire at any time without additional coordination.
- 12** **Axes of advance** indicate a general axis of movement for an attacking unit.
- 13** **Zone of attack** specifies an area in which a unit must attack enemy forces located there.
- 14** **Checkpoints** are reference points used to facilitate control. They may be selected throughout the zone of action or along an axis of advance or direction of attack.
- 15** **Assembly areas** are specified for organization, maintenance, supply, issuance of orders, and rest. The command assembles in an assembly area to prepare for operations.

- Restrictive fire lines are established to coordinate fires between any converging or adjacent forces (not shown).



TYPES OF OFFENSIVE OPERATIONS

MOVEMENT TO CONTACT

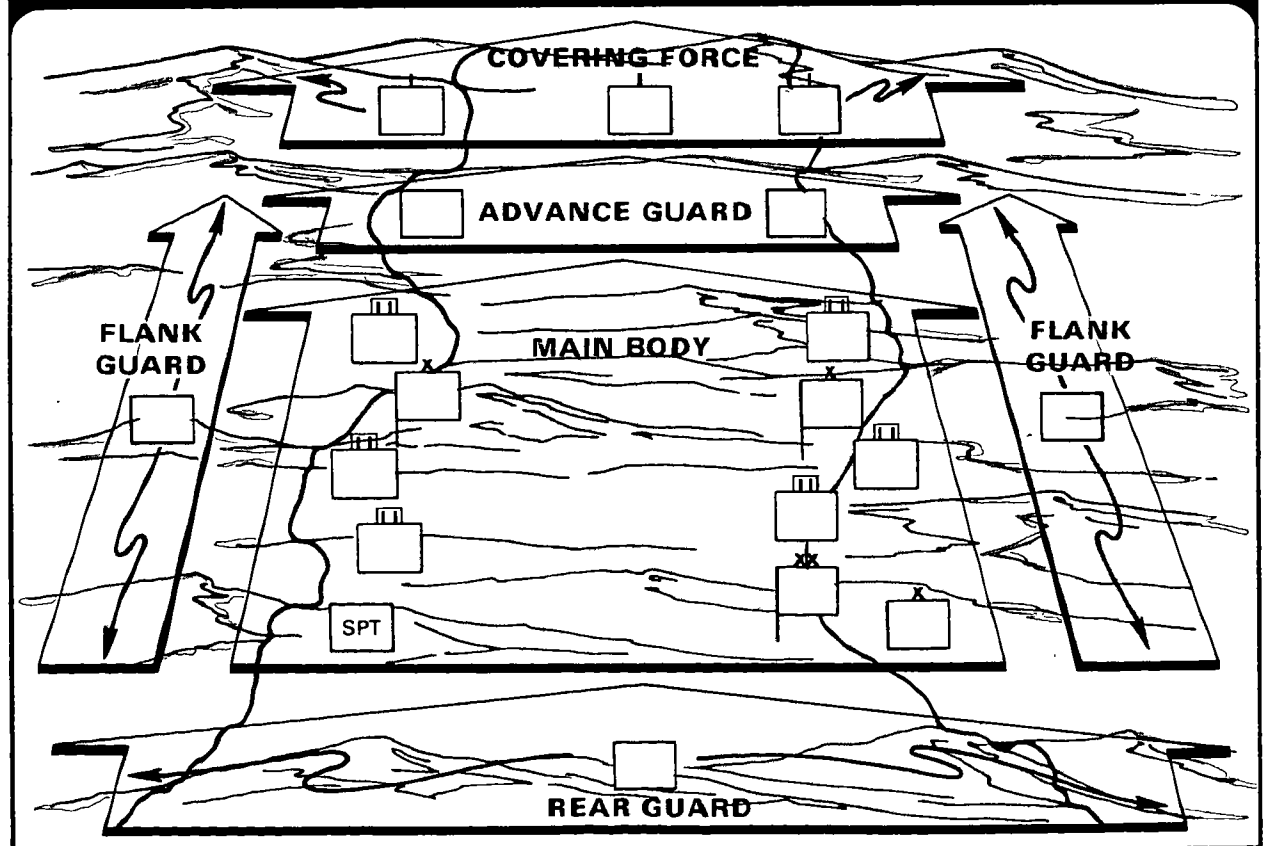
Whenever US Army forces conducting an offensive operation are moving, but are not in contact with the enemy, they are said to be moving to contact. Most attacks begin with a movement to contact. *The purpose of movement to contact is to gain or regain contact with the enemy, and to do it in a way that risks the smallest possible part of the force. The balance of the force remains available to respond immediately when contact is made.* Once in contact, the commander can develop the situation by maneuvering to concentrate forces and attack. When out of contact he can do none of these.

In moving to contact, the division may deploy an advance, flank, or rear guard. This can be a cavalry unit or a combined arms task force. Depending on where the brigade is marching in the division formation, contact with these guard forces must be maintained. If separate guard forces are not deployed, the brigade may be required to provide such forces from brigade elements.

The brigade of two or more battalions normally moves along two axes. When speed is essential, all task forces may move abreast. The direct-support field artillery battalion moves with the brigade; some batteries march well forward in the column.

CONTROL MEASURES

DIVISION MOVEMENT TO CONTACT



A meeting engagement occurs when a moving force makes contact with a moving or stationary enemy force about which it has little or no information. *The action ceases to be a meeting engagement when the situation has been developed and other actions, such as a hasty attack or defense, are undertaken.* However, if the advance guard or a leading battalion is able to defeat the enemy force, the movement to contact continues.

Once contact is made, it is essential to gain the upper hand—overcome the enemy before he can react. To do this the commander must have his force well in hand when contact is made. He must quickly learn the situation, either through good reports or personal observation, and immediately issue instructions and take action.

If the enemy force is also moving, which often happens in an exploitation or counterattack, speed in both decision and execution is vital. *The commander must make a very quick estimate of the situation and either attack quickly to disrupt the enemy operation by outflanking or destroying the enemy force or adopt a hasty defense.*

**WHEN CONTACT IS MADE
WITH THE ENEMY DURING A
MEETING ENGAGEMENT, QUICK
ACTION MUST BE TAKEN
BEFORE THE ENEMY CAN REACT**

THE ATTACK

The brigade most often attacks—

- From defensive positions after an enemy attack has been slowed or stopped,
- Following a movement to contact, or
- Following a passage of lines through an attacking or defending friendly force.

Once contact is made, it is necessary to determine as quickly as possible if the enemy can be bypassed or if he can be attacked and his defense disrupted. Bypassed enemy forces

are reported to the next higher headquarters which must assume responsibility for their destruction, suppression, or containment.

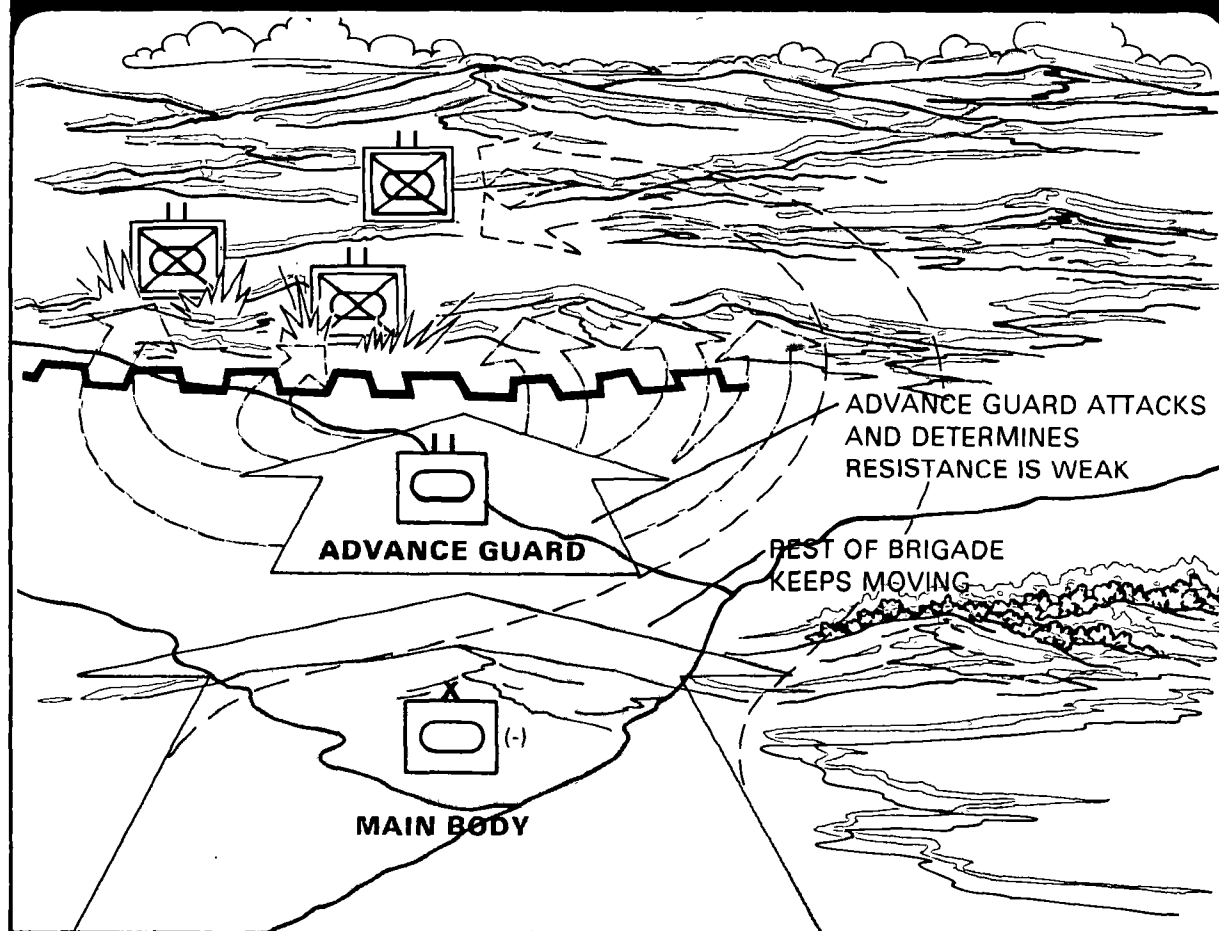
As a general rule, if leading battalion task forces conducting a hasty attack cannot fight through the enemy, it may be necessary to develop the situation further and conduct a well-planned, deliberate attack. However, only the minimum time necessary should be spent for preparation. Too much preparation time permits the enemy to reinforce his positions or even to launch an attack of his own.

The brigade commander must size up the situation, decide what to do, and issue orders immediately. Those orders set battalion task

forces in motion, together with supporting field artillery, attack helicopters, and close air support, in sufficient strength to move friendly forces quickly through. Speed is most important. If momentum is lost, a hasty attack can fail.

In setting up an attack on a prepared position, it must be remembered that terrain can be seen or reconnoitered in detail no more than 4-5 kilometers into enemy territory. Therefore, detailed planning of maneuver and fires will be limited to this area. Planning for actions beyond this limit must be more general. Units must be prepared to exploit any opportunity presented by terrain and enemy reaction.

HASTY ATTACK FOLLOWING MOVEMENT TO CONTACT



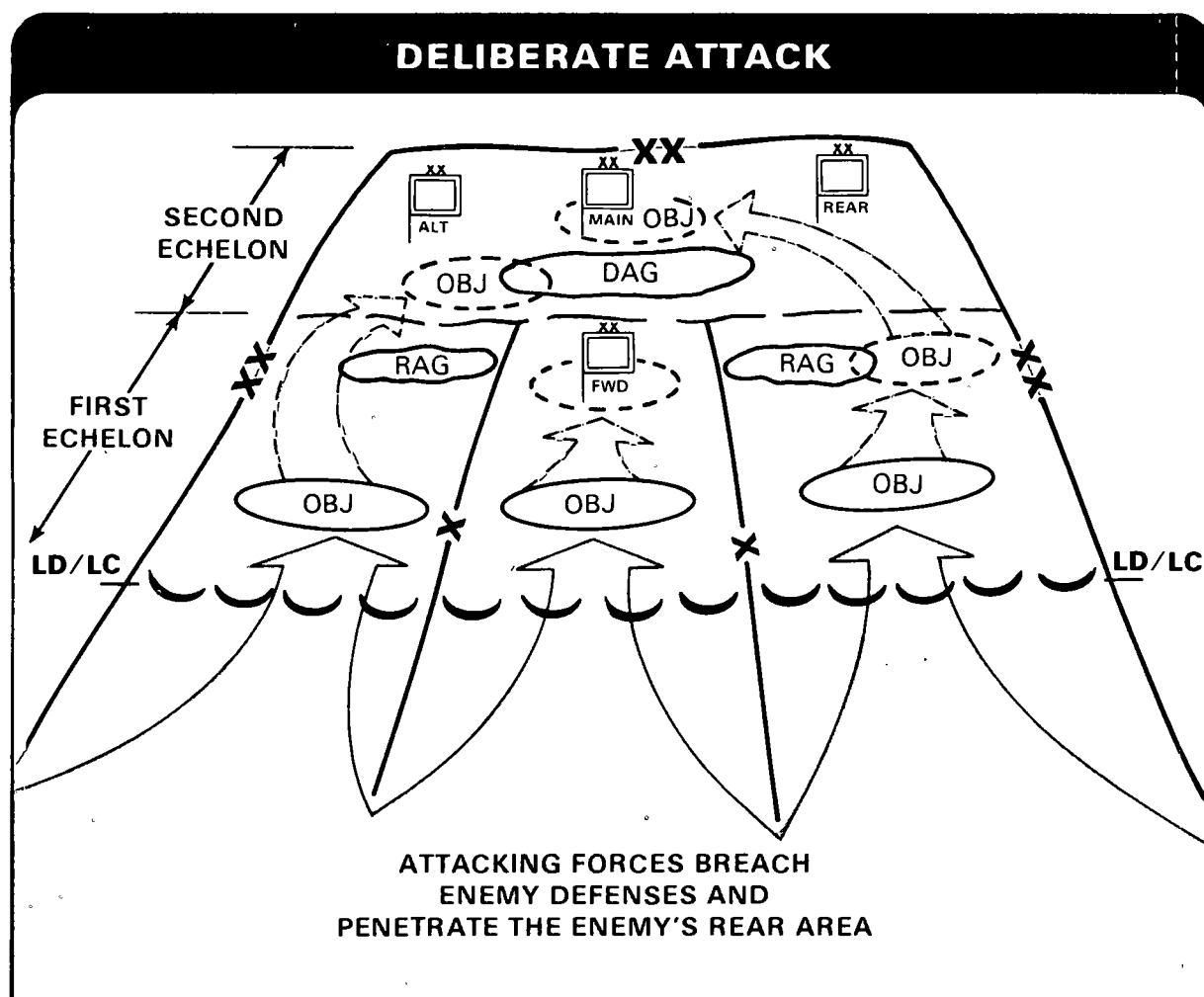
Initial brigade objectives assigned by division in a deliberate attack are designed to breach or envelop enemy defenses and allow entry to the more vulnerable rear areas. If a deliberate attack is successful, the brigade may be committed to press forward to the next echelon of enemy defenses, to envelop the first-echelon defense from the rear, or to hold and widen the breach. Pressing the attack to the next echelon maintains the momentum and prevents the second echelon from supporting or reinforcing the first.

Enveloping the first echelon from the rear widens the breach and permits another force to pass through to attack the second echelon. If committed to this course of action, the brigade must take into account that enemy

second-echelon defenses are always sited to support the first-line defensive belt. This means the roll-up operation must be conducted within range of second-echelon fires. It also means the roll-up force can become engaged to the extent that it cannot support forces moving to exploit the breach.

Holding and widening the breach, especially at the shoulders, is necessary if attacking or following forces are to have access to the area behind first-echelon positions.

Whatever the case, brigade objectives should be selected carefully to permit rapid, well-coordinated, and violently executed assaults by battalion task forces.



EXPLOITATION AND PURSUIT

Exploitation and pursuit quickly follow a successful attack and are aimed toward completing the disruption of the enemy defense and destroying his forces.

EXPLOITATION DENIES THE ENEMY THE ABILITY TO RECONSTITUTE AN ORGANIZED DEFENSE

The purpose of *exploitation* is to prevent the enemy from reconstituting an organized defense or conducting an orderly withdrawal. To do this the brigade must advance quickly into the enemy rear area, bypassing small pockets of resistance and destroying lightly defended and undefended installations and activities, primarily command control and communications, logistical support, artillery, reserves. The brigade should seek to exploit on a broad front, usually with its task forces moving abreast. Terrain objectives, some distance away, are assigned the exploiting force. They should be selected so that capture will help to destroy organized enemy resistance.

Exploitation continues day and night so long as the situation permits. In the end, it may be limited more by vehicle breakdown and by high fuel consumption than by combat losses and ammunition. As the exploiting force penetrates deeper into the enemy rear, its supply lines grow longer. Adequate stocks of fuel, spare parts, and food, as well as ammunition, should move with the force so momentum is not lost for lack of support.

As a general rule, the brigade should carry 4 to 6 days of supplies as its attack begins. Disabled vehicles that cannot be repaired should be towed forward with the attacking force and repaired at the earliest opportunity.

IN PURSUIT, THE ULTIMATE BLOW IS DELIVERED TO COMPLETE DESTRUCTION OF AN ENEMY FORCE

Pursuit completes destruction of an enemy force that has lost the ability to defend or delay in organized fashion and is attempting to disengage and withdraw. Unlike exploitation, in which the attacking force avoids enemy units in order to destroy their support system, *in pursuit the attacker focuses on the major enemy force*. Terrain objectives assigned to orient pursuing forces

will usually be very deep. A brigade, for example, having broken through enemy defenses along a river, might be ordered simply to pursue enemy forces toward a particular city. Pursuit operations require:

- A **direct pressure force** to deny enemy units any chance to rest, regroup, or resupply by keeping them in flight, and
- An **encircling force** to envelop the fleeing force, cut its escape route, and, in conjunction with the direct pressure force, attack to destroy the enemy force.

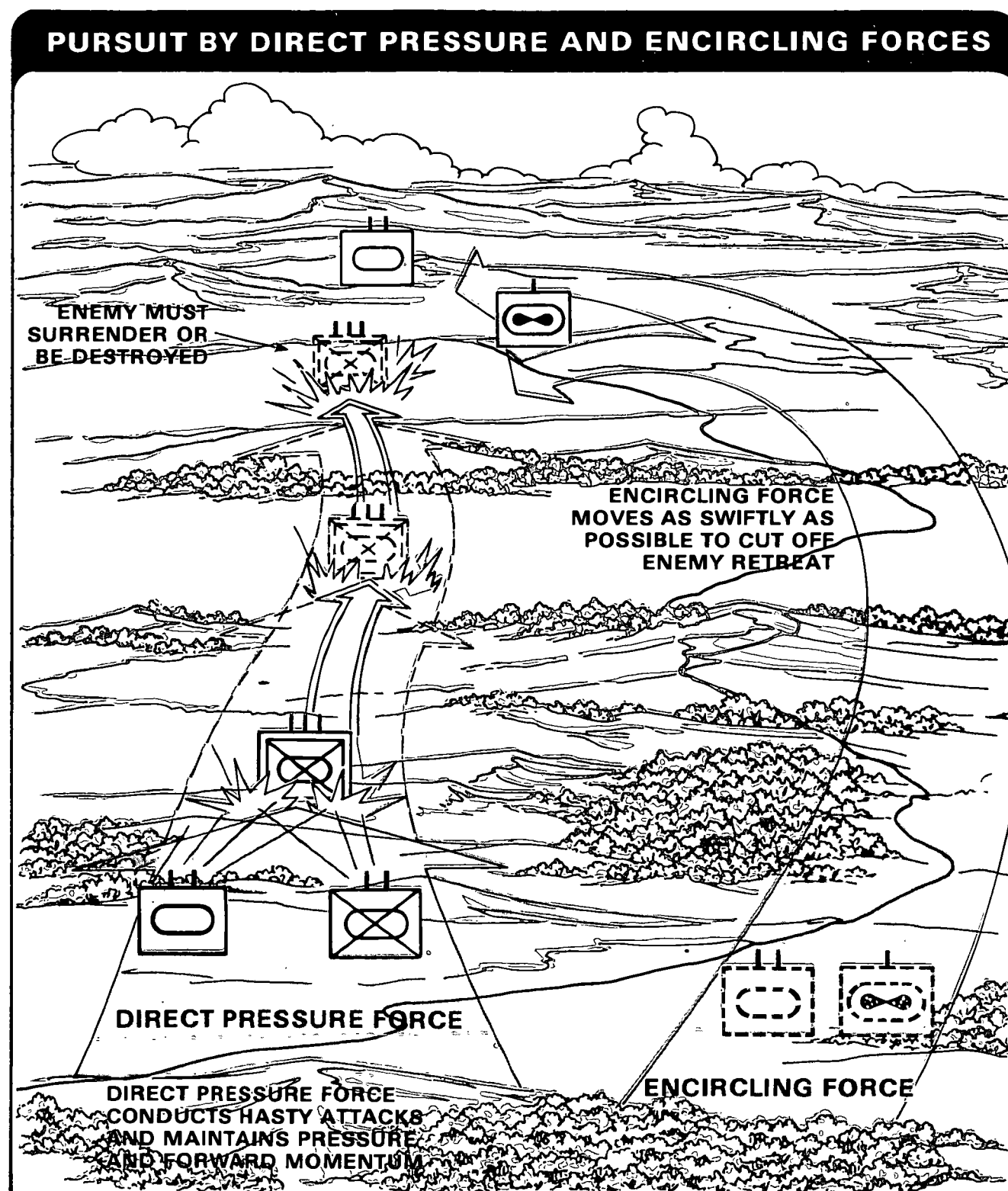
The *direct pressure* force conducts hasty attacks, always maintaining contact and forward momentum.

The *encircling* force moves as swiftly as possible, by the most advantageous routes, to cut off enemy retreat. If necessary, it adopts a hasty defense behind the enemy to block his retreat. Caught between two forces, unprepared and unable to defend, the enemy must surrender or be destroyed.

The brigade can participate in the pursuit as a direct pressure or an encircling force.

When attack helicopter units are operating in support of the brigade, they should be used with the encircling force. A brigade conducting independent pursuit operations, supported by attack helicopters, should use ground units as the direct pressure force and helicopters as the encircling force.

Field artillery units are integrated into pursuing forces so that they will always be available to fire into and beyond retreating enemy columns. Here, nuclear weapons may be useful to destroy enemy artillery and large concentrations of enemy forces. Engineers must be well forward so that hastily erected barricades and natural obstacles will not impede progress of pursuing units or permit the enemy to break contact or reorganize. Adequate combat service support is at least as important in pursuit as it is in exploitation.



A *follow-and-support* force is usually employed in exploitation and pursuit operations. It is used to accomplish any or all of these tasks:

- Destroy bypassed enemy units,
- Relieve in place any supported units that have halted to contain enemy forces,
- Block movement of reinforcement,
- Secure lines of communication,
- Guard prisoners, key areas, and installations, and control refugees.

**A FOLLOW AND SUPPORT FORCE
BLOCKS ANY ATTEMPT
BY THE ENEMY TO REORGANIZE
HIS FORCES**

The follow-and-support force is not a reserve. It is a fully committed force and must be provided support normally associated with such a force.

When the division is conducting an exploitation or pursuit operation, it may assign a brigade the mission to follow and support exploiting or pursuing brigades.

MOBILITY AND COUNTERMOBILITY

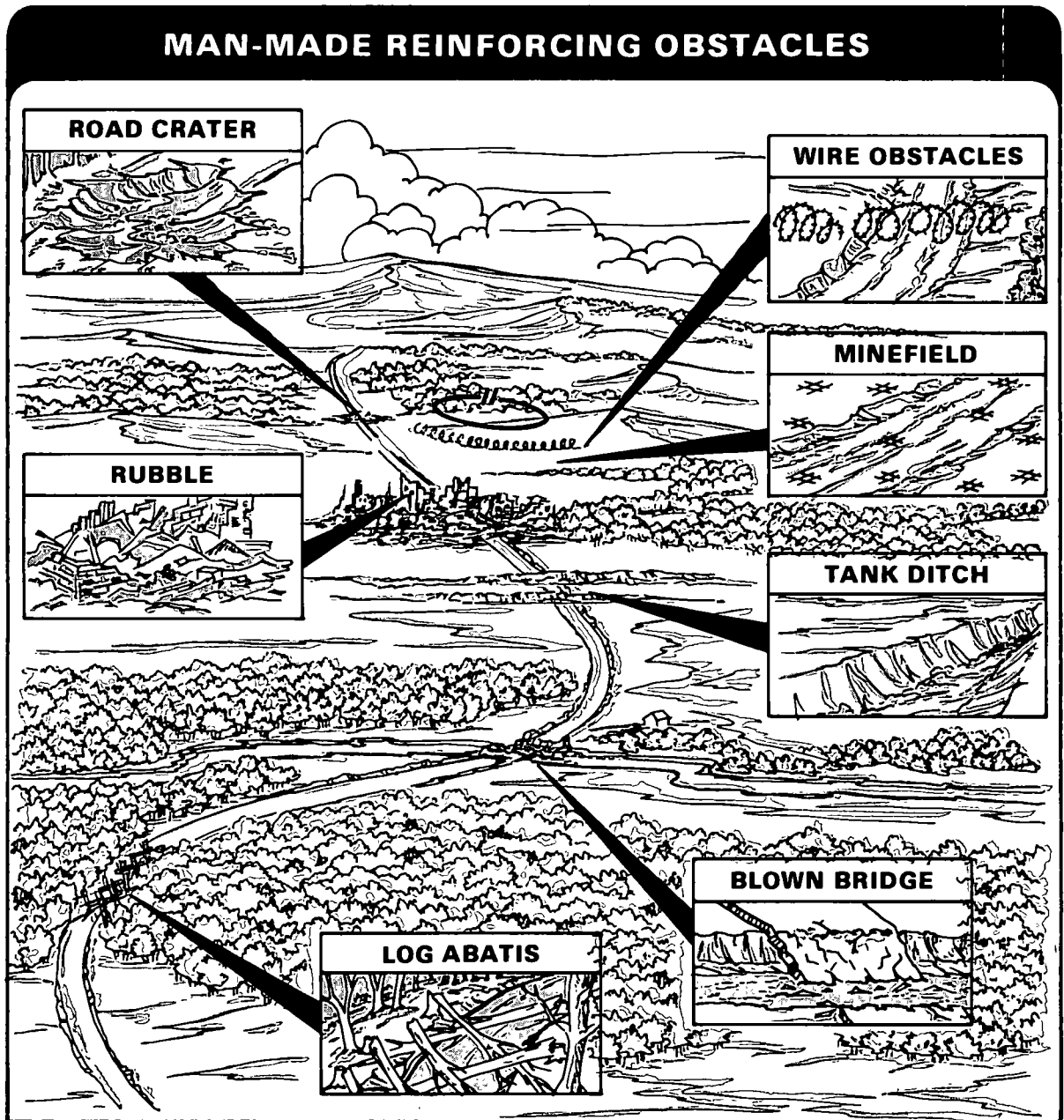
During an attack, particularly against a deliberate defense, the brigade should expect to encounter obstacles to mounted movement. Natural obstacles such as forests, large bodies of water, canals, rivers, or gaps in the terrain can be identified in advance from map or physical reconnaissance. Operations are planned to bypass natural obstacles. If that cannot be done, sufficient engineer equipment must be located well forward with leading battalion task forces to breach or cross the obstacles.

While aerial reconnaissance can sometimes reveal the location of man-made reinforcing obstacles, they are more often

**OPERATIONS ARE PLANNED
TO BYPASS NATURAL
OBSTACLES**

discovered by leading task forces. The most common reinforcing obstacles are:

- Minefields;
- Log obstacles such as abatis, log cribs, stumps, posts;
- Wire obstacles; and
- Tank ditches and craters.



**REINFORCING OBSTACLES
SHOULD BE BYPASSED
WHENEVER POSSIBLE**

As with natural obstacles, reinforcing obstacles should be bypassed whenever possible. A task force commander whose force encounters an obstacle should immediately determine if it can be readily bypassed. If quick bypass is not possible, breaching operations are started immediately. While breaching operations are underway, other forces should continue the search for a bypass. Since obstacles are often covered by fire, it is important to bypass or breach quickly to avoid delaying the advance or exposing brigade units to fire longer than necessary. Two breaching methods are commonly used:

An **assault breach** is accomplished rapidly with little reconnaissance or advance planning, using vehicle-launched bridges, forward positioned engineer equipment, or field-expedient methods. When possible, combat engineers moving with leading company teams execute the breach, overwatched by tanks and infantry. Tank and mechanized units may execute assault breaches without engineer support. The goal of an assault breach is to clear lanes through the obstacle just wide enough to allow combat forces to continue the advance.

A **deliberate breach**, usually executed by combat engineers, requires reconnaissance, planning, and, above all, time to completely clear obstacles such as minefields.

Breaching operations are described in detail in FM 90-7, Obstacles.

Short gaps—tank ditches, craters, and canals of 18 meters or less—can normally be spanned by an armored vehicle-launched bridge (AVLB). AVLBS are assigned to tank battalions and engineer battalion bridge companies. Mechanized battalions have no bridging of their own, so AVLBS must be provided by the engineer company supporting the brigade.

For crossing rivers wider than 18 meters, bridges must be assembled by divisional and

corps engineers. River-crossing operations may be either hasty or deliberate.

Hasty crossings are conducted with little or no loss of momentum. The river is approached at maximum speed on a broad front. Every effort is made to seize existing bridges intact. If this cannot be done, crossings are made on a wide front at multiple crossing sites using rafting and bridging equipment from the divisional engineer battalion bridge company. When river crossings are anticipated, necessary crossing equipment should move with *leading battalion task force combat trains* so that it can be put quickly into operation.

Lead company teams approaching the obstacle occupy overwatching positions, dispatching scouts to reconnoiter crossing sites and the far bank.

Overwatching forces should position themselves to observe and engage targets that may threaten the crossing area. Close air support and/or attack helicopters can be useful in isolating the crossing area and preventing the enemy from reinforcing. Air defense elements are positioned with overwatching forces to provide cover for the initial crossing.

When a hasty crossing is not possible, a deliberate crossing operation is conducted. In a deliberate crossing, it is necessary to concentrate forces on the entry shore for the assault. As a general rule, deliberate river-crossing operations by brigades cannot be conducted without support from division and corps.

River-crossing operations are normally conducted in phases:

- **The first phase is the assault. It is conducted from the line of march using amphibious vehicles and assault boats, if available. The purpose of the assault is to move as many troops and weapons as possible across the river quickly in order to secure the exit bank.**

Mechanized infantry conducts an assault crossing to clear the bridgehead and keep enemy direct fire off the crossing site. Direct and indirect fires, attack helicopters, and close air support facilitate the assault and expansion of the bridgehead.

- **Rafting begins as soon as the assault is underway in order to move tanks and, later, field artillery across the river.**
- **Bridges are usually installed by corps engineers once assault forces have penetrated the exit bank of the river deep enough to preclude enemy ground observation of bridge sites. Bridges are generally not used during the assault because they take time to erect and emplace and are vulnerable to enemy fire.**

River-crossing operations are described in detail in FM 90-13, River Crossing Operations, and FM 5-100, Engineer Combat Operations.

Although obstacles are used by the brigade most often during defensive operations, they may also be used from time to time during an attack. When it is necessary to do so, mines or craters can be used to protect a vulnerable flank or a unit reorganizing on an objective if the unit is to be there for an extended period. The family of scatterable mines (FASCAM) soon to be introduced into the US Army will allow emplacement of mines in the enemy rear to block enemy reinforcements, routes of withdrawal, and counterattacking forces. Persistent chemical munitions can also be used with scatterable mines to slow or stop enemy reinforcement or to halt an enemy retreat.

SMOKE OPERATIONS

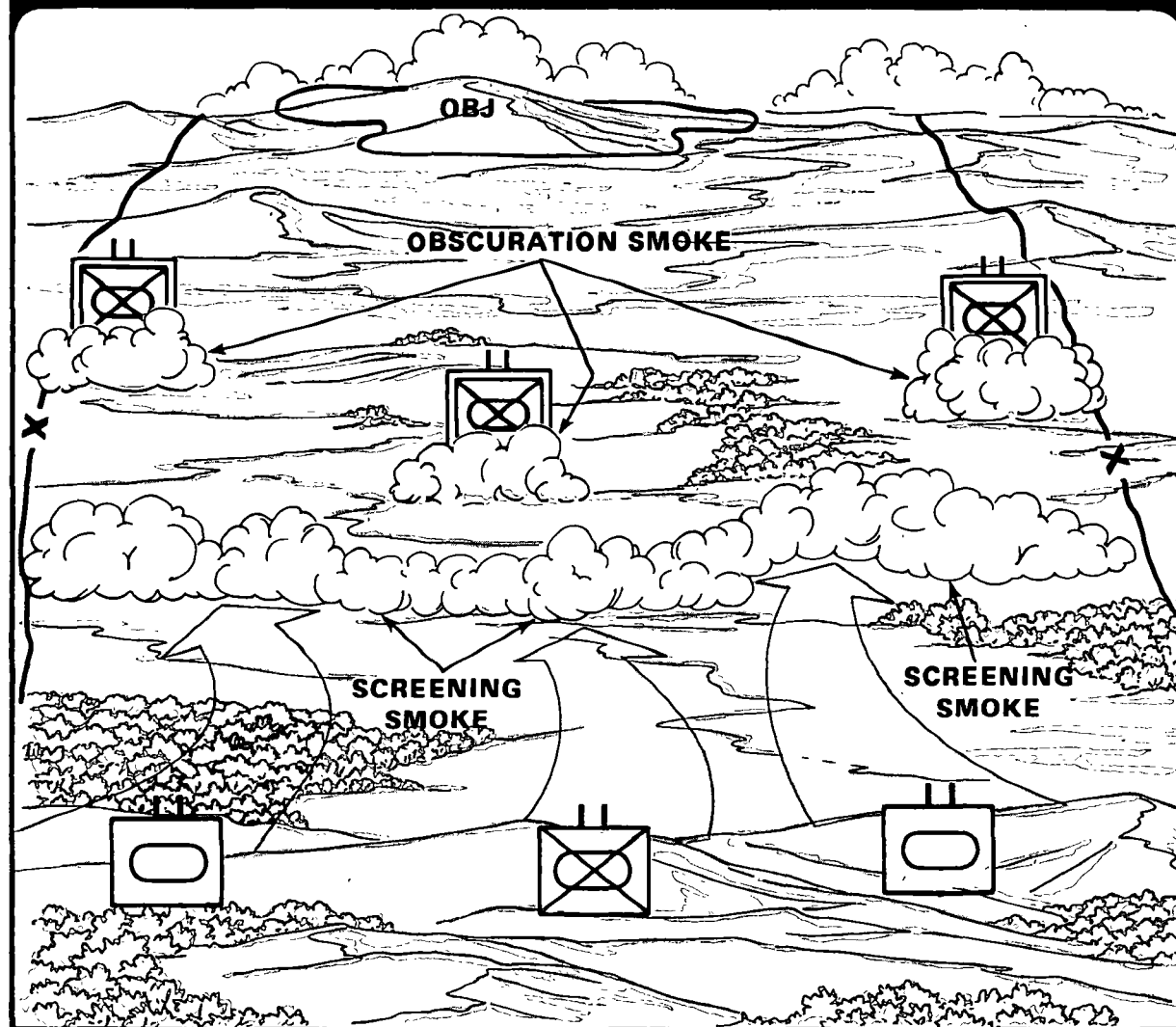
During offensive operations, the brigade can use smoke delivered by direct-support field artillery and battalion mortars to degrade enemy observation. *Obscuration smoke* is placed on or near enemy positions to blind gunners and observers; *screening smoke* is placed between brigade and enemy forces to conceal brigade units.

Smoke may also be used to deceive the enemy as to brigade intentions; for example,

it may be used to attract the enemy's attention to one part of the battlefield while brigade units attack on another.

In the attack, when smoked by the enemy, brigade units should move rapidly out of smoked areas to regain good observation and fields of fire and continue to advance. Care must be exercised to avoid being silhouetted against smoke. *Movement techniques, that is, good use of natural cover, concealment, and overwatch, are just as important in smoke as during normal visibility.*

OFFENSIVE SMOKE OPERATIONS



LIMITED-VISIBILITY OPERATIONS

The brigade will often attack at night and during other periods of limited visibility. Attacking during such periods offers the advantage of surprise, reduces enemy target acquisition and weapons effect ranges, and inhibits mutual support between adjacent defensive positions.

**ATTACKING DURING PERIODS
OF LIMITED VISIBILITY OFFERS
THE ADVANTAGE OF SURPRISE**

Modern night vision devices provide the brigade with the capability to fight at night almost as it fights in daylight, although range capabilities may be somewhat reduced. White light artificial illumination, with all its inaccuracies, should be used only when night vision devices are not available, when ambient light levels are very low, or when enemy night vision equipment has an advantage. Flares do not know friend from foe and so illuminate both. Changes in wind direction can result in flare exposure of the attacker while defenders hide in the shadows. Searchlights and other active illumination means disclose their sources. The side equipped with passive devices has a distinct advantage over the side that is not.

**ILLUMINATION DEVICES
SHOULD ONLY BE USED WHEN
NIGHT VISION DEVICES ARE
NOT AVAILABLE**

Whatever advantage may be gained by illumination depends on the extent to which visibility is limited, and on the availability of night vision devices to both *attacker* and *defender*. During periods of darkness with high ambient light levels, passive night vision devices will allow the battle to be fought using daylight tactics. However, detection and engagement ranges, length of bounds, and the ability to move mounted on covered and concealed routes all may be reduced. When ambient light levels are very low, or when the defender has an advantage in night vision devices, artificial illumination may be necessary.

Visibility limited by snow, rain, fog, or smoke presents special problems in both navigation and in maneuver of forces. Target acquisition is complicated by the difficulty of identifying friend from foe.

Human efficiency is reduced by the inability to see. Many soldier tasks that are simple in warm, dry weather become difficult to perform in snow or rain. The efficiency of radar and night vision devices is reduced in snow, rain, fog, or smoke.

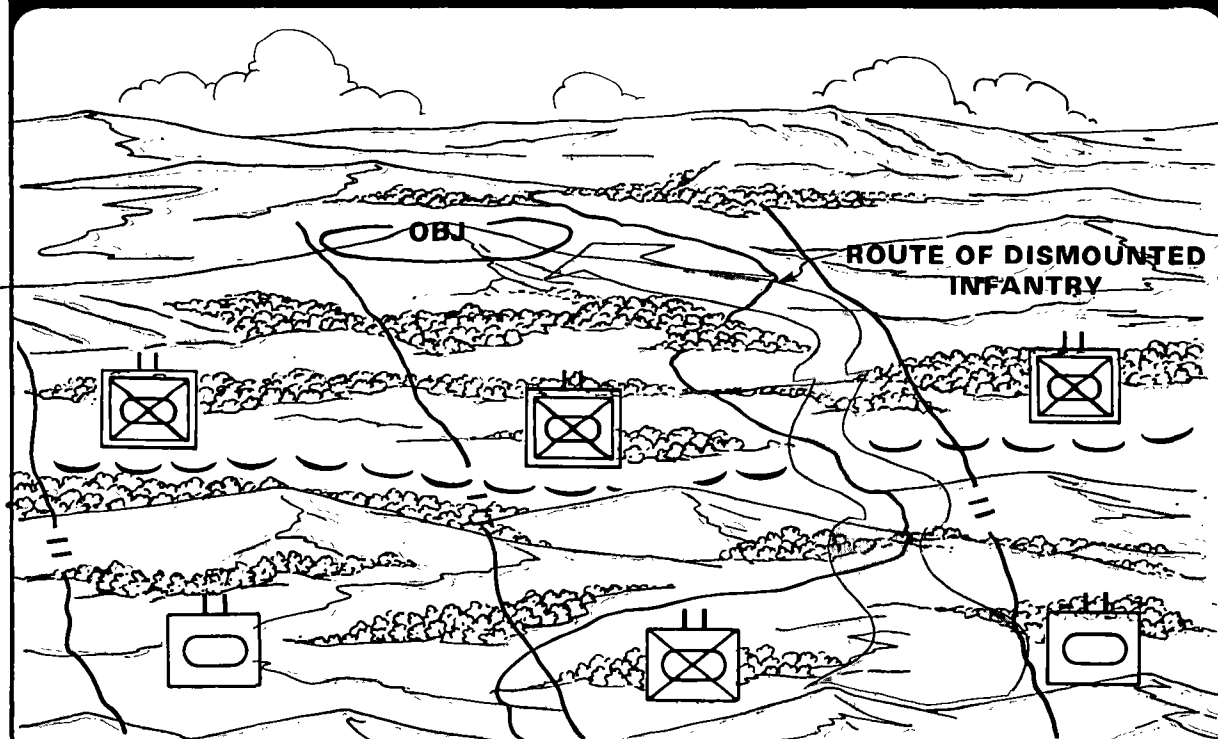
The brigade can conduct three types of limited-visibility attacks:

- 1 Movement to a more favorable position for a daylight attack,
- 2 Infiltration attack by dismounted elements, and
- 3 Attack of an occupied objective.

1 Movement to a More Favorable Position. When attacking an enemy disposed in positions affording good, long-range fields of fire, the last 3,000 meters of the approach may produce unacceptable losses. Under these circumstances, it may be better to take advantage of darkness, bad weather, or fog. Terrain objectives believed to be unoccupied are selected. Forces are maneuvered onto terrain which facilitates destruction of the enemy when visibility improves, or which forces the enemy to react because he has been outflanked.

2 Infiltration. A dismounted infantry force can move around or between enemy positions under cover of darkness. The force can occupy terrain not held or lightly held by the enemy. When daylight arrives, infantry can assault strong enemy positions nearby from flank or rear, support other attacking forces, or block withdrawing enemy.

DISMOUNTED INFANTRY INFILTRATION UNDER COVER OF DARKNESS



③ **Attack of an Occupied Objective.**

Techniques used to attack an occupied objective during periods of limited visibility are similar to those used during a daylight deliberate attack. Detailed knowledge of enemy dispositions on each position to be assaulted must be available to make this type attack successful. The maneuver force can often get closer to an enemy position by capitalizing on the enemy's inability to acquire and engage long-range targets and on reduced mutual support between enemy positions due to lack of visibility. *Although the fundamental of attacking enemy weaknesses holds true, attacks during periods of limited visibility can be used to rupture strong enemy positions when no weaknesses can be found.*

When a mounted attack is conducted, dismounted engineers and infantry may be used to breach enemy obstacles ahead of mounted elements. Illumination fires are planned and called for if required—normally not until final assaults are made. Smoke should be planned to cover movement. Field artillery and mortar fires may be used to deceive the enemy and hide the sound of vehicle movement, as well as to suppress his observation and weapons fires. Deception measures can be effective in misleading the enemy as to the location and time of attack. The attacker moves as close to enemy positions as possible without having to fight, then overwhelms the enemy with carefully planned final assaults.

Distances to be covered should be relatively limited—1 to 3 kilometers from LD to objective. Leaders should have the opportunity to observe the terrain all the way to the objective during good visibility.

Command control is accomplished primarily by radio once the attack begins. Insofar as they can be seen, visual aids for recognition may assist in control of forces. Color panels, arm bands, luminous strips, or

patterns may help. Objectives will usually cover less ground than is normally the case, and must be sufficiently prominent for easy identification.

RECONNAISSANCE IN FORCE

A reconnaissance in force is a limited-objective attack to obtain information, locate enemy dispositions, test enemy strengths, and develop the situation. A reconnaissance in force may reveal weaknesses in enemy defenses which, if exploited, can lead to tactical success.

When planning a reconnaissance in force the commander must decide if:

- **The desired information is important enough to justify the risks.**
- **Other intelligence-collection agencies can obtain the needed information faster or with less risk.**
- **The reconnaissance will produce the desired information.**

The reconnaissance force is usually tank heavy; it must be strong enough to force the enemy to react. Normally, the smallest unit assigned to conduct a reconnaissance in force is a battalion task force; a corps or a division might send a brigade. Whatever the size force, the operation is planned and executed like any other attack, except that less will be known of the enemy. A terrain objective which, if threatened or occupied, will cause the enemy to react is most often used. When enemy forces react, the reconnoitering force breaks off the action. Sufficient reserves are maintained to exploit success or enemy weaknesses, or to extricate the force should it become necessary.

RAID

A raid is an attack into enemy-held territory for a purpose other than gaining or holding terrain. The raiding force withdraws after it accomplishes its mission. Typical raiding force missions are to:

- Capture prisoners, installations, or enemy materiel.
- Destroy enemy materiel or installations.
- Obtain specific information of a hostile unit—its location, disposition, strength, or operating scheme.
- Deceive or harass enemy forces.

**THE RAIDING FORCE MUST
ACCOMPLISH ITS MISSION AND
WITHDRAW BEFORE THE ENEMY
CAN REACT**

Although forces as large as a brigade have historically conducted raids, a tank-heavy task force or armored cavalry squadron is generally the best choice for a raiding force. The raiding force must accomplish its mission and withdraw before the enemy can react. *Raids require current intelligence and must be executed with speed and surprise.*

LINKUP OPERATIONS

Linkup operations are conducted to join two friendly forces. Both forces may be moving toward one another, or one may be stationary. Linkup operations may be conducted in a variety of circumstances. Most often they are conducted to:

- Complete the encirclement of an enemy force,
- Assist breakout of an encircled friendly force, or
- Join an attacking force with a force inserted in the enemy rear (for example, join an inserted airborne or air-landed force with an armor unit attacking on the ground).

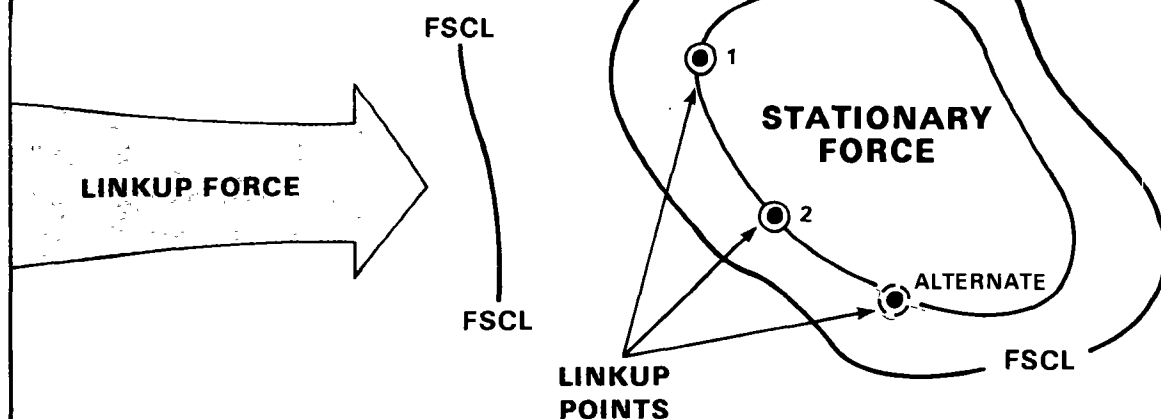
When linkup is accomplished, the two forces may operate as a combined force or continue to operate separately under control of a higher commander.

The headquarters ordering the linkup establishes the command relationship between forces and prescribes the responsibilities of each. It should also establish control measures such as boundaries, fire support coordinating lines, and other measures to control maneuver and fires. Such control measures may be adjusted

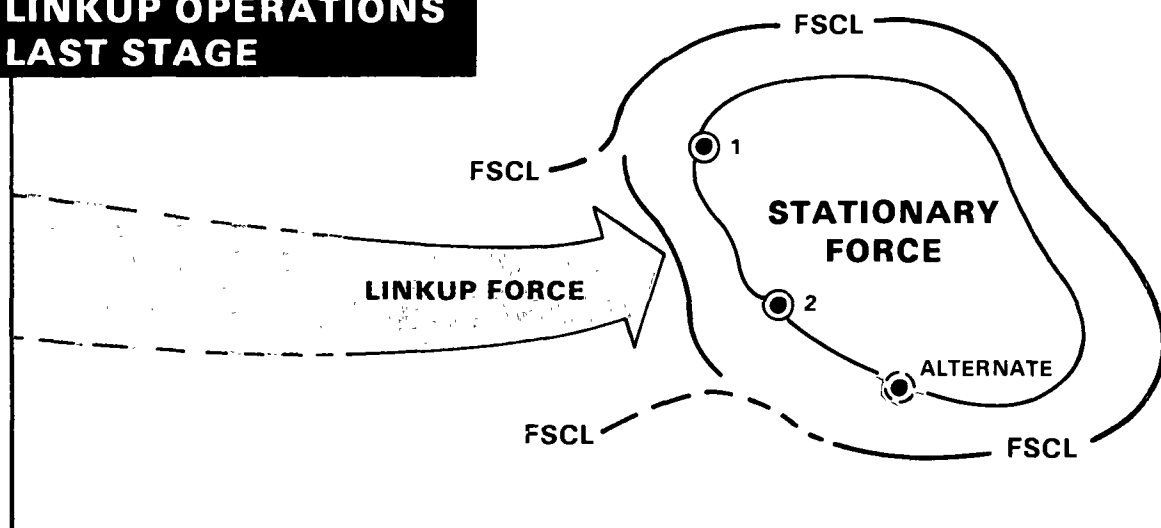
during the operation to provide for freedom of action as well as positive control.

When one of the involved units is stationary, linkup points are usually located where the moving force's routes arrive at the location of the stationary forces' security elements. Alternate linkup points are also designated since enemy action may interfere with linkup at primary points. Stationary forces assist in the linkup by opening lanes in minefields, breaching or removing selected obstacles, furnishing guides, and designating assembly areas.

LINKUP OPERATIONS EARLY STAGE



LINKUP OPERATIONS LAST STAGE



Primary and alternate linkup points for two moving forces are established on boundaries where the two forces are expected to converge.

Joining forces exchange as much information as possible prior to the operation. Commanders of the involved forces should meet to consider:

- **Command relationships before, during, and after linkup,**
- **Coordination of fire support before, during, and after linkup,**
- **Planning routes to linkup points,**
- **Location and description of linkup points and alternate linkup points,**
- **Recognition signal and communication procedures to be employed,**
- **Operations to be conducted following linkup.**

PASSAGE OF LINES

Forward passage of lines is an operation in which one friendly unit moves forward

through positions held by another friendly unit.

Normally, the division prescribes areas through which the brigade will pass. Boundaries are usually those of the stationary force. Specific passage lanes and other details are coordinated between task force commanders. Stationary force artillery reinforces fires of the attacking force. Passage is completed as quickly as possible to minimize vulnerability. In a forward passage, the moving force must assume control of the battle as soon as its lead elements have passed through the stationary force. During this operation, the moving force must have freedom to maneuver. Since the brigade will frequently be called on to conduct passage of lines, it is important that it have a well-developed standing operating procedure for such operations.

FEINTS AND SPOILING ATTACKS

Brigades or their subordinate units may sometimes conduct feints or spoiling attacks. A spoiling attack is an offensive operation conducted during an overall defensive operation. Its goal is to disrupt an enemy force preparing to attack. **Feints and other deception operations are described in FM 90-2, Tactical Deception.**

CHAPTER 4

Defensive Operations

GENERAL

The goals of defensive operations are to kill enough men and vehicles to convince the enemy that his attack is too costly and that he must break it off; to sufficiently disrupt his follow-on attacking forces so they cannot reinforce the attack; and to destroy and disrupt sufficient enemy fires so defense operations can be undertaken. It is a firepower-based force destruction operation integrated with a fire- and maneuver-based force disruption operation. From time to time, defensive operations are conducted for other reasons—to concentrate forces elsewhere on the battlefield; to gain time; to conserve forces, facilities and installations; or to control essential terrain.

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**THE BRIGADE MUST
BE PREPARED TO DEFEND
AGAINST AN ENEMY DIVISION**

The US brigade should expect to defend against an enemy division; it will therefore be outnumbered most of the time. One important task of the defender, especially when outnumbered, is to defeat the attacker and survive with a force capable of continuing military operations. The defender should operate so as to destroy first-echelon forces and still be able to engage the following echelon; or disrupt the second echelon by attacking to preempt the second-echelon force's attempt to join the battle. If the defender is fixed by the enemy and subsequently destroyed, or if the defending force is so degraded by successive losses as to become ineffective, the battle will be lost.

Armored and mechanized brigades use their mobility and firepower to kill first-echelon and disrupt second-echelon forces. The division economizes forces in less threatened areas to concentrate against the enemy main effort.

The brigade defends by confronting the enemy with strong combined arms task forces positioned in depth in the area to be defended. As the enemy attack moves into the defended area, it comes under frontal and flanking fires delivered from well-positioned battalion task forces in battalion battle positions in the brigade battle area.

**OBSTACLES SUCH AS ANTI-
TANK DITCHES AND MINES ARE
USED TO DISRUPT THE
ENEMY ATTACK**

Obstacles such as antitank ditches and mines are used to disrupt the enemy attack. If possible, the enemy is forced onto unfavorable terrain selected and prepared by the defender.

In the brigade battle area the first order of business is to meet the enemy attack by killing as many of the attackers as quickly as possible. This calls for well-designed and coordinated direct- and indirect-fire plans.

and on-site command control by brigade and battalion commanders. As the enemy attack begins to break stride and becomes disrupted, the brigade can often destroy even more enemy by attacking.

The decision to counterattack must be made carefully for, by attacking, the defender must get up out of the ground where he enjoys many advantages. Therefore, it is sometimes better to plan counterattack by fire than by

fire and maneuver when the situation permits.

In order to slow the attack to allow more time to engage large numbers of targets, the defender may need to hold strongly on certain terrain. In such cases battalion strongpoints may be established by mechanized infantry. In a well-prepared strongpoint, a unit holds terrain around which the battle pivots; other units fight from nearby, mutually supporting battle positions.

FUNDAMENTALS OF THE DEFENSE

Regardless of why the defense is undertaken or how it is described, several fundamentals govern its conduct. These fundamentals are common to all levels of command, even though their application may vary at each level depending on available resources.

UNDERSTAND THE ENEMY

The brigade commander and his staff must know the capabilities and limitations of enemy weapons and equipment from battalion through division. These are the forces the brigade must defeat. The commander must know how these units are organized for combat and how they deploy and fight. Knowledge of enemy tactics is necessary to develop a scheme of maneuver to destroy the enemy and disrupt his attack.

For the battalion task force and company team, the battle is dominated by direct-fire weapon systems, numbers of enemy, and terrain. These matters are also important to the brigade commander. However, he must concern himself with how the enemy deploys divisional second-echelon forces as well, for as first-echelon regiments are destroyed, he

must seek to engage second-echelon regiments.

SEE THE BATTLEFIELD

Prior to battle, the brigade commander must study alternatives available to the attacker. He must know each of the avenues of approach into his area, which are most likely to be used; what size enemy force they can accommodate, and how fast the enemy can move on each.

The brigade commander must be aggressive in his effort to learn where the enemy is, how he is organized, which way he is moving, and what his strength is. As the battle unfolds, he must seek a continuous flow of information and deny the enemy similar information about his own forces as he maneuvers to attack.

The brigade commander can seldom see beyond terrain features to his immediate front, yet he needs information about second-echelon regiments. To get such information, he must rely on division and corps collection means.

In most cases the brigade commander relies on resources beyond his control for information about the enemy. Therefore, he must give information collection his personal attention. Although he will almost always have to make decisions based on incomplete information, his chances for success can be improved if he understands enemy tactics and organizations and, most important, the terrain.

CONCENTRATE AT CRITICAL TIMES AND PLACES

The brigade commander positions his battalion task forces so that their fires can be concentrated on regimental-sized avenues of approaches most likely to be used by the attacker. He must take risks in less important areas, covering them with electronic surveillance, detection devices, patrols, or small detachments from battalion task forces.

One of the brigade commander's most difficult tasks comes when division attaches several additional battalions to concentrate against an enemy attack. Here, the brigade commander must decide where and when to position these additional forces, how to integrate their fires, and how to maneuver and resupply them.

As maneuver battalions concentrate, attack helicopters, additional field artillery, and close air support will also be made available to the brigade. The brigade commander must decide how to integrate and control the fires of these units as well. He must also carefully manage the space he has available to provide adequate room for combat, combat support, and combat service support units to function.

As a general rule, the intensity of the fight and density of the battlefield will be such that controlling more than three or four battalions may be difficult. However, for short periods of time the brigade commander may have to concentrate, fight, and control

more than four maneuver battalions and several field artillery battalions. To do this successfully, he must clearly understand where the enemy can be defeated, how much force it will require, and how to quickly get defending units there as they become available to him.

FIGHT AS A COMBINED ARMS TEAM

As additional units are provided, the brigade commander commits them to combat according to their weapons' capabilities and the enemy situation at the moment.

Field artillery fires are usually first to be employed. The massed fires of field artillery are used to force enemy tank crews to stay buttoned up, reducing their effectiveness. Field artillery can separate enemy infantry from tanks and can be used to smoke enemy forces. Field artillery can suppress enemy air defense so that attack helicopters and close air support can operate.

Attack helicopters also provide the means to quickly influence early stages of the attack. Attack helicopters can destroy tanks at ranges beyond 3,000 meters. They are especially effective attacking the enemy on his flanks, destroying armor targets, and disrupting operations until additional antitank systems are available on the ground.

As tank and mechanized battalions arrive, the brigade commander cross-reinforces as necessary, assigning battle positions and missions.

Close air support of engaged forces offers a major increase in combat power. However, effective close air support against enemy first-echelon forces has a price—air defense suppression. The brigade commander will have to use part of his supporting field artillery and perhaps even maneuver forces to adequately suppress extensive and effective enemy air defenses.

Collection and jamming elements in support of the brigade are used to disrupt enemy regimental command control nets and to collect vital combat information about the enemy.

EXPLOIT ADVANTAGES OF THE DEFENDER

The defender's advantages are numerous and make it possible for a numerically inferior force to defeat a much larger attacking force. The defender's greatest advantage is his opportunity to know the terrain. The attacker cannot do this. If the defender knows the enemy, he can prepare the ground in advance, build obstacles and firing positions, and improve routes between battle positions. He can use the terrain to develop a scheme of maneuver that concentrates the fires of his battalion task forces where the enemy is most vulnerable.

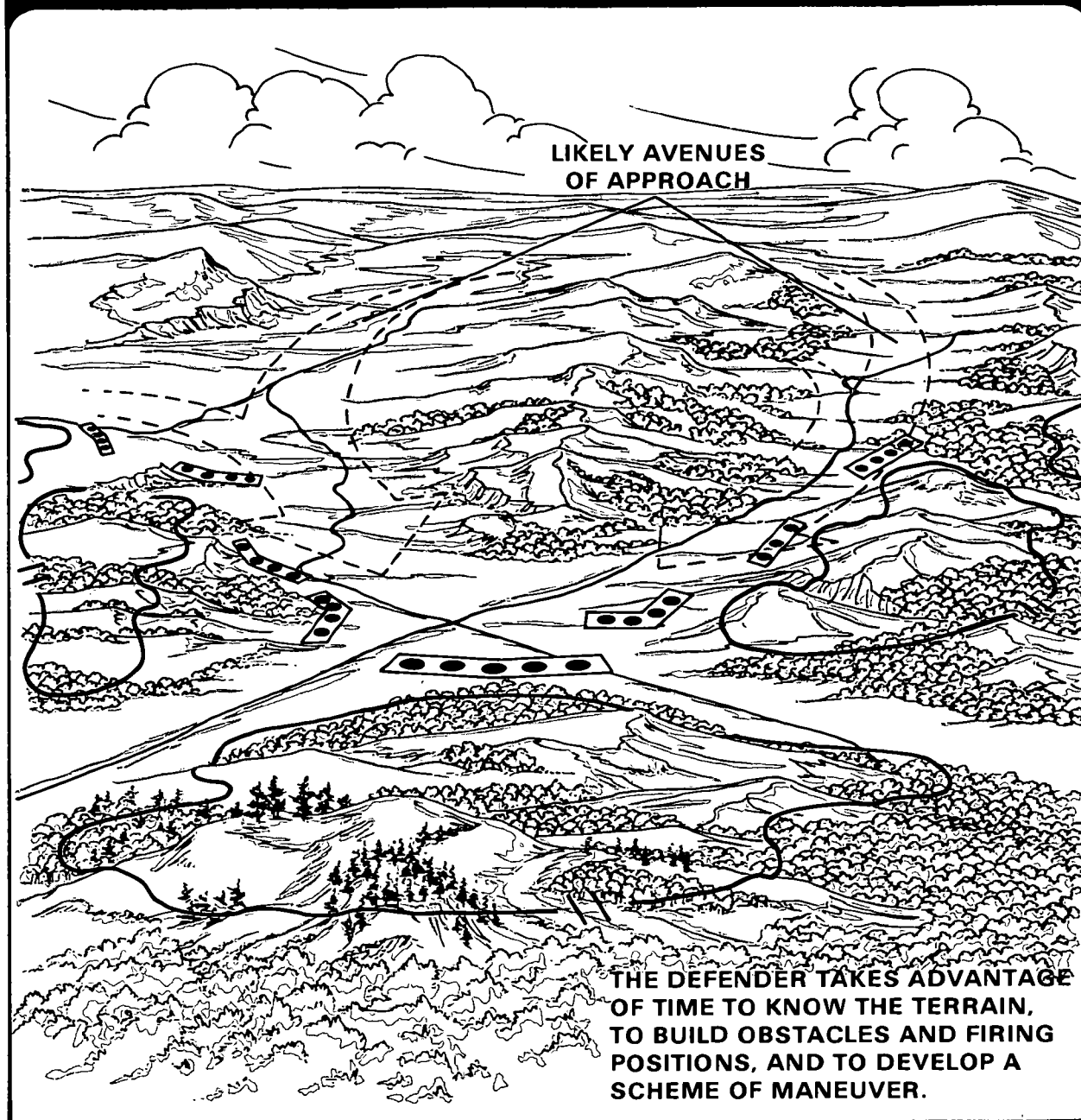
The defender can fight from cover while the attacker is in the open. He can shoot first and force the attacker to react. The defender can shoot from stationary, well-prepared positions while the attacker must move. The defender can shift forces, behind cover, between prepared positions to concentrate his fires or ready himself for successive engagements. The attacker must feel his way over the terrain, seeing the ground for the first time. The defender can know the terrain well and can plan communications control measures, fires, and logistical support in advance based on this knowledge. The attacker must adhere to a predetermined course of action or risk altering his plans as the battle develops and thus suffer from uncoordinated effort.

Where possible, battle positions should be mutually supporting and permit concentrated fires from several or all positions. Areas of responsibility should be clearly defined so that all targets can be engaged. Target engagement should be planned to

destroy the largest number of enemy targets with the least possible expenditure of ammunition. Obstacles are used to slow targets at ranges which take advantage of the defending weapons' capabilities.

These combined advantages, repeated in each set of positions in depth and supported by field artillery, close air support, and attack helicopters, should enable the defender to inflict high losses on the attacker.

PREPARED DEFENSIVE BATTLE POSITIONS



HOW THE ENEMY ATTACKS

For the most part, potential enemies of the United States are organized, equipped, trained, and tactically schooled in Soviet military concepts. Fundamental to these concepts are:

MASS — Victory is most easily and, in the end, economically achieved by overwhelming the enemy with numbers.

MOMENTUM — Numbers combined with speed destroy an enemy quickly; and, although losses may be high at the outset, quick collapse of the enemy makes the mass-speed combination more economical in the long run.

CONTINUOUS COMBAT — By applying mass continuously—night, day, bad weather, limited visibility—one achieves and sustains momentum, overwhelming enemy forces and destroying their ability as well as their will to defend.

OFFENSE — Threat forces defend primarily to permit an attack somewhere else, to regroup forces, or as an interlude between offensive operations. As a general rule, however, they consider attack necessary to achieve decisive results.

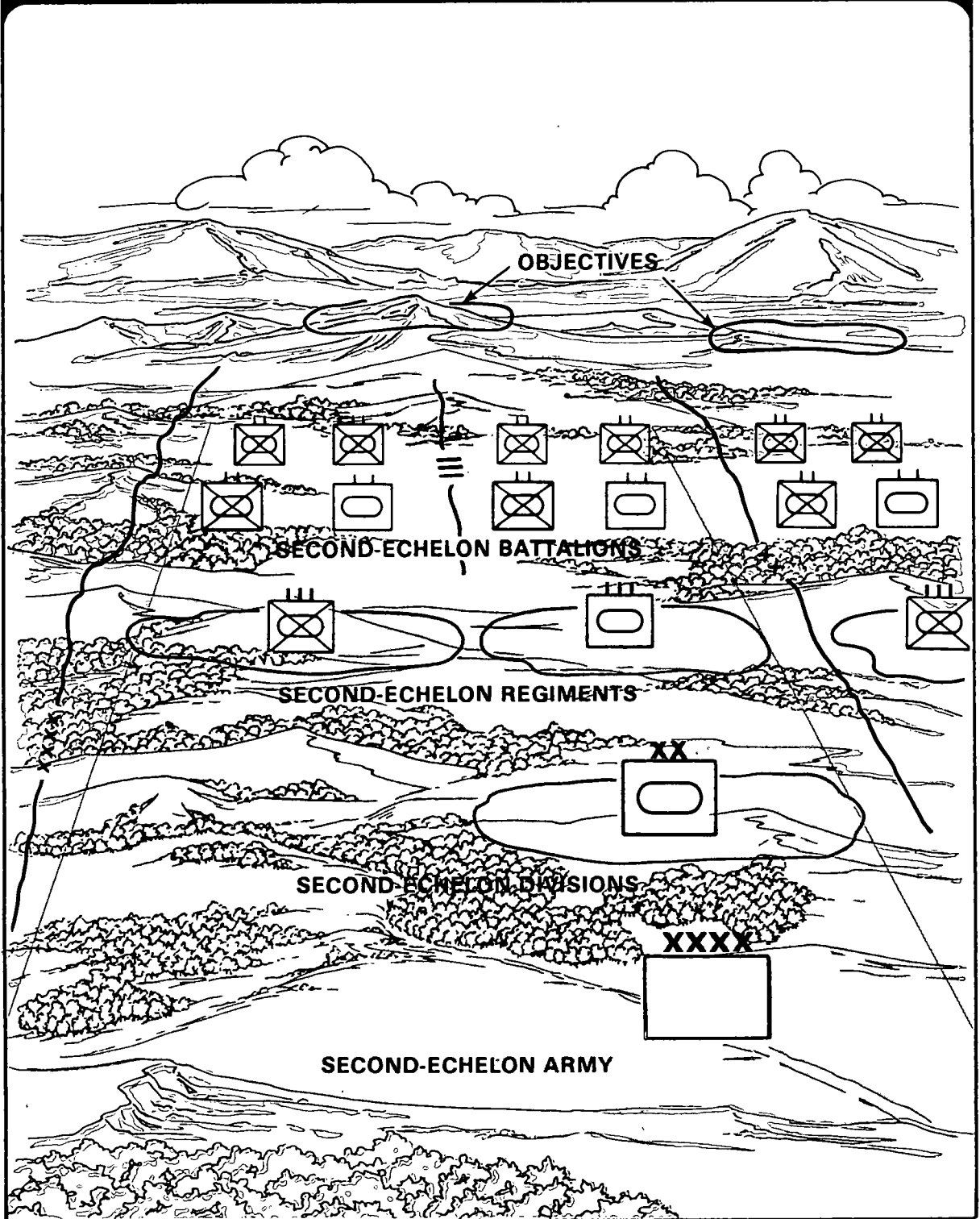
In world areas of most vital concern to the United States, Threat forces are primarily armored. They feature a comprehensive combined arms team of tanks, armored infantry fighting vehicles, antitank guided missiles, self-propelled field and air defense artillery, tactical fighter bomber aircraft and armed helicopters, self-propelled, rapid-launch tactical bridging, and supporting mobile equipment.

Threat forces train extensively for operations on a battlefield where nuclear, biological, and chemical (NBC) weapons are used. They carry a complete array of individual and vehicular NBC protective gear. Most Threat armored vehicles provide pressurized protection for crews.

Threat electronic warfare capability is substantial and impressive. It includes radio intercept, direction finding, jamming, and deception. Threat forces use electronic warfare together with fire support to deny the enemy use of his electronic systems and to protect Threat electronic systems. These operations are called radio-electronic combat.

All this spells out that the battlefield will be dense with high-quality complementary weapons of all types, and there will be an intense fight in which large numbers on both sides are likely to be destroyed very quickly. The air over the battlefield will be dense with air defense and artillery fires. Employment of fighter bombers and attack helicopters will depend highly on successful suppression of enemy air defenses. Command control will be difficult because of the density of systems and intensity of the fight, and also because of extensive electronic warfare aimed at disrupting it. Mobility will be difficult to achieve due to the presence of considerable countermobility factors. These will include natural and man-created obstacles, destroyed equipment and units, artificially created smoke and the natural smoke and dust of battle, and disrupted command control systems.

In the offense, following closely the concepts of mass, momentum, and continuous operations, enemy tactics focus on concentrating numerically superior forces and firepower for a combination of frontal attacks, envelopments, holding attacks, and deep thrusts into the enemy rear by armor-heavy combined arms forces. *Momentum in the attack is sustained by echelonment of forces in depth so that succeeding echelons can pass through or around first echelons, join the fight with fresh forces, and press on to achieve and sustain continuous operations.* The enemy usually attacks using combined arms forces supported by extensive artillery fires.

MOMENTUM BY ECHELONMENT OF FORCES

**THREAT ARTILLERY USES
"FIRE STRIKE" TO DESTROY
THEIR ENEMY WITHOUT USING
GROUND TROOPS**

Threat artillery support saturates areas with massive barrages to cover all likely targets. Threat artillery also uses the "fire strike," a severe and intense bombardment by artillery to destroy the enemy without using ground troops. Heavy indirect fire is used on targets of opportunity, fortifications, and to support tank and motorized rifle attacks, especially by countering or suppressing ATGM and similar systems.

Threat artillery is organized for combat at army, division, and regimental levels by combining organic artillery with that of higher echelons. Each of these groups, the army artillery group (AAG), the division artillery group (DAG), and regimental artillery group (RAG), can be immediately responsive to the level of command it supports. For example, the RAG, led by the senior artillery battalion commander in the group, is under the control of the regimental commander of the maneuver regiment to which it is assigned. A division making the main effort may be further augmented by artillery from second-echelon divisions and from army and front artillery.

A group normally contains from two to four battalions. Battalions can be detached or attached to groups as necessary during operations. Fire planning and the execution of fire support for the AAG, DAG, and RAG are centralized at army level at the beginning of a battle and then decentralized as the battle develops. Through this procedure, Threat forces add weight to the main effort.

**THREAT FORCES MAY
EMPLOY NUCLEAR AND
CHEMICAL WEAPONS
TOGETHER OR SEPARATELY**

Nuclear and chemical fires may be combined/coordinated with nonnuclear fires, chemical fires, and air attacks, and exploited rapidly by ground and air assault forces. Nuclear and chemical weapons may be employed together or separately. Each may be employed with biological agents.

When nuclear and chemical weapons are used, Threat force tactics are similar to those employed on the nonnuclear battlefield.

The enemy attempts to overwhelm the defense with the weight and speed of his attack, both day and night. The attack is conducted on a broad front, with formations moving on independent axes, accepting the risk of open flanks. To minimize this danger, the enemy may use nuclear or chemical weapons to neutralize ground dominating his axis of advance and to protect his flanks.

**THREAT FORCES ATTEMPT
TO OVERWHELM THE DEFENSE
WITH WEIGHT AND SPEED**

To avoid presenting nuclear targets, the enemy may concentrate forces for only short periods of time. He may close with the defender either to destroy him or to insure that the defender cannot use nuclear weapons without endangering his own forces. Primary nuclear targets are nuclear and chemical weapon delivery systems, command control systems, logistics systems, and large concentrations of troops.

The brigade should expect to face an attacking motorized rifle or tank division organized with four regiments supported by artillery and air. An attacking Threat division usually employs two reinforced regiments in the first echelon followed by two regiments in the second.

If the division has been ordered to conduct a main attack, it will be given a narrow sector, perhaps 10-16 kilometers wide. The division will be heavily weighted with artillery and logistical support from both army and *front*. It may also have an additional tank regiment from an army second-echelon division operating with it.

**IN THE MAIN ATTACK
THE DIVISION WILL BE
SUPPORTED HEAVILY FROM
BOTH ARMY AND FRONT**

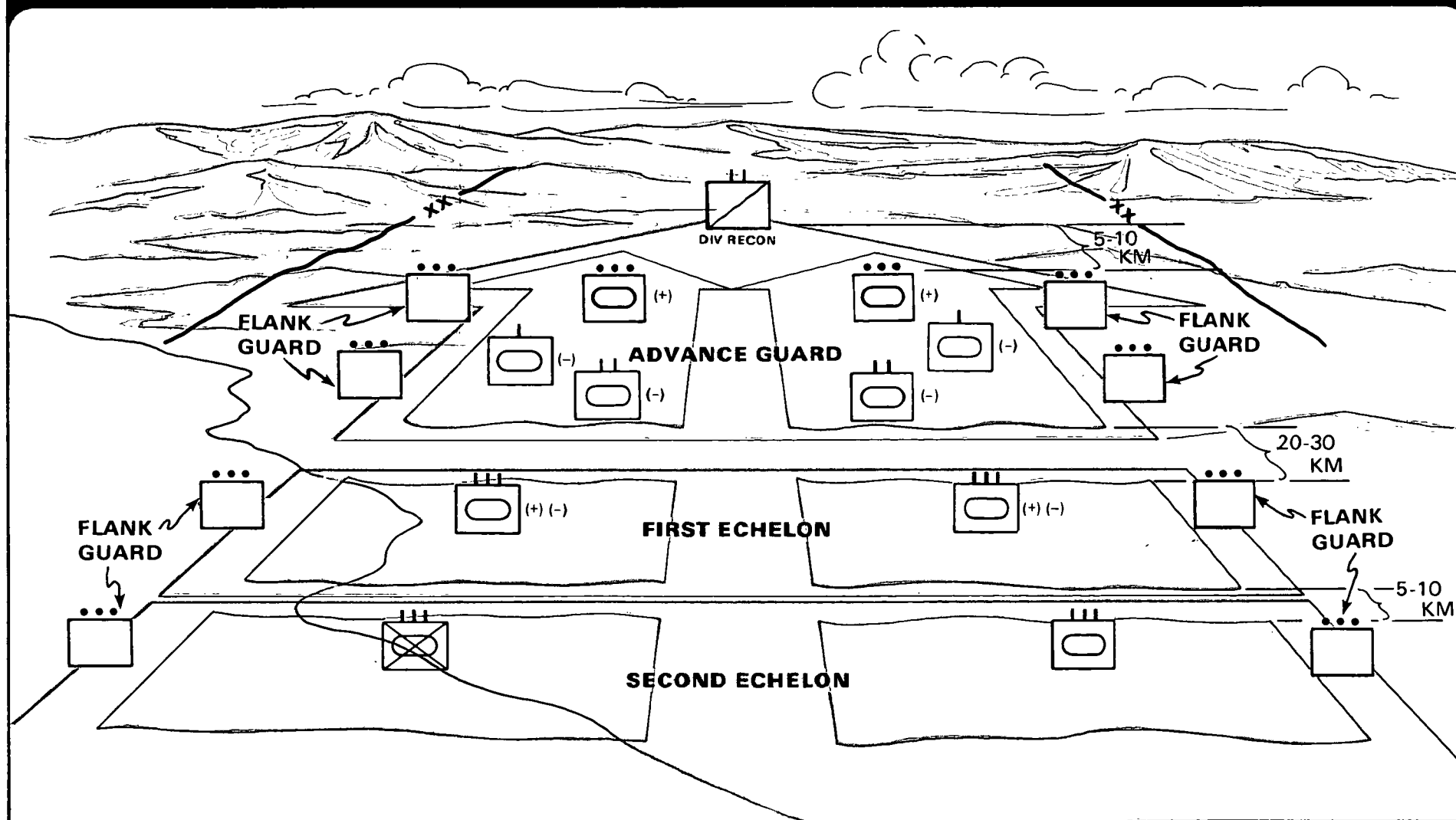
If the division is making a supporting attack, it will have a wide sector, usually 20-30 kilometers. Divisions do not designate regimental main and supporting attacks.

MOVEMENT TO CONTACT

The enemy attacks with first-echelon divisions moving to contact in assigned sectors, often during periods of reduced visibility. A Threat division will normally use at least two main routes of advance. On each route, reconnaissance elements from divisional reconnaissance battalions or regimental reconnaissance companies usually precede the advance guard by 5-10 kilometers.

Each forward regiment of the division organizes an advance guard, usually a tank-heavy reinforced battalion. Its purpose is to roll back the defending covering force and develop the situation. In some cases, the advance guard for the division making the main effort may be as much as a reinforced regiment from the army second-echelon division.

THREAT DIVISION MOVEMENT TO CONTACT

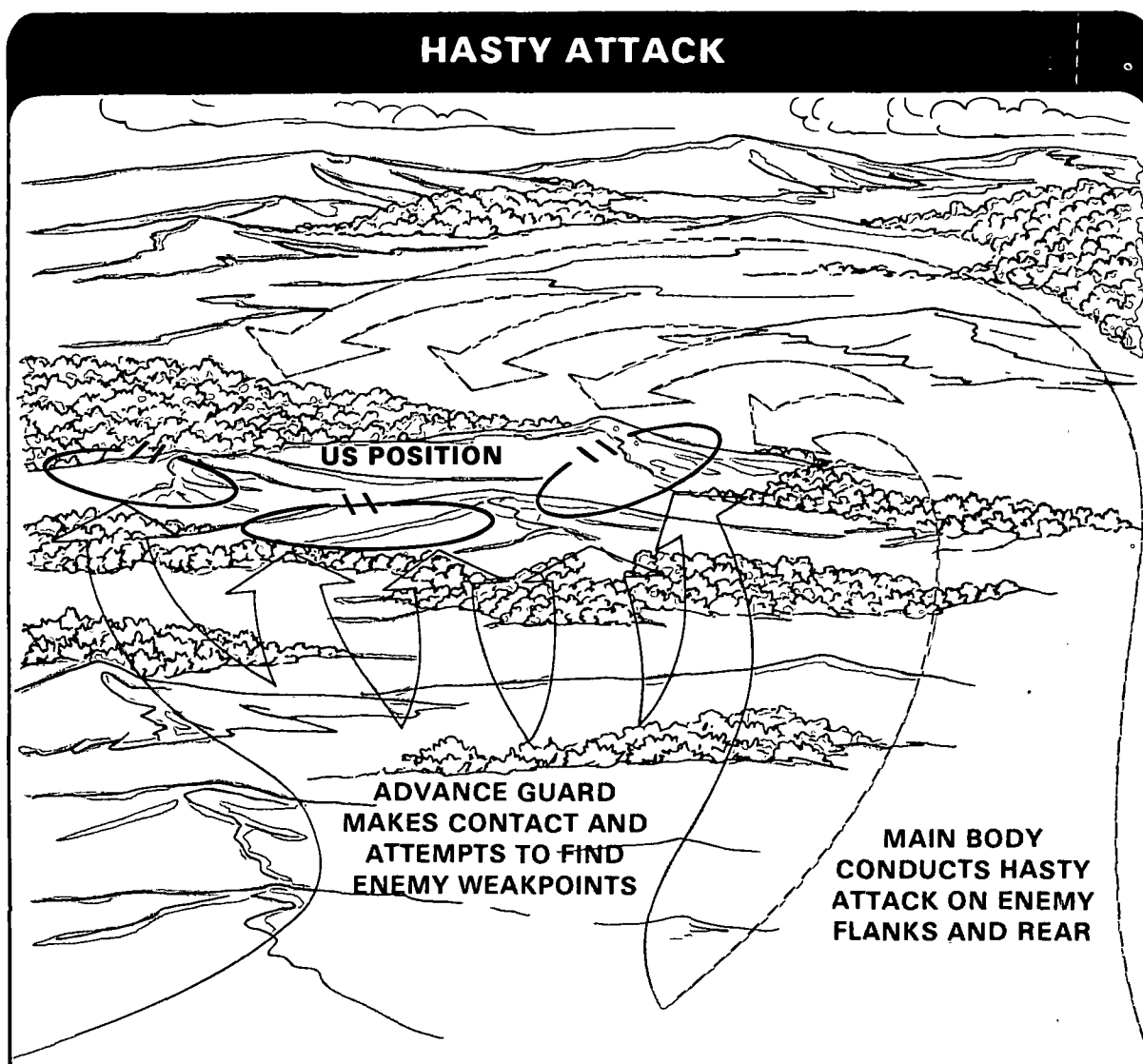


Mobile air defense, automatic weapons, and low-altitude SAM are integrated by individual piece into march columns. High altitude SAM units normally move by battery; they may be integrated into march columns or move along separate routes to insure adequate coverage. Towed AA guns also move by battery, integrated into march columns.

When contact is made, the advance guard attempts to drive in the enemy force. If not

immediately successful, the advance guard seeks flanks, gaps, and weak points while the main body deploys. The main body then conducts a hasty attack from march column against enemy flanks and rear, supported by all available artillery and air.

If this proves unsuccessful, the enemy division commander may attempt additional hasty attacks from new directions. If still unsuccessful he will probably pause and prepare to conduct a breakthrough attack.



DELIBERATE ATTACK OR BREAKTHROUGH

A deliberate attack is conducted only when necessary and then usually from the line of march using routes previously designated by the Army commander. Under these circumstances little lateral movement of units is necessary.

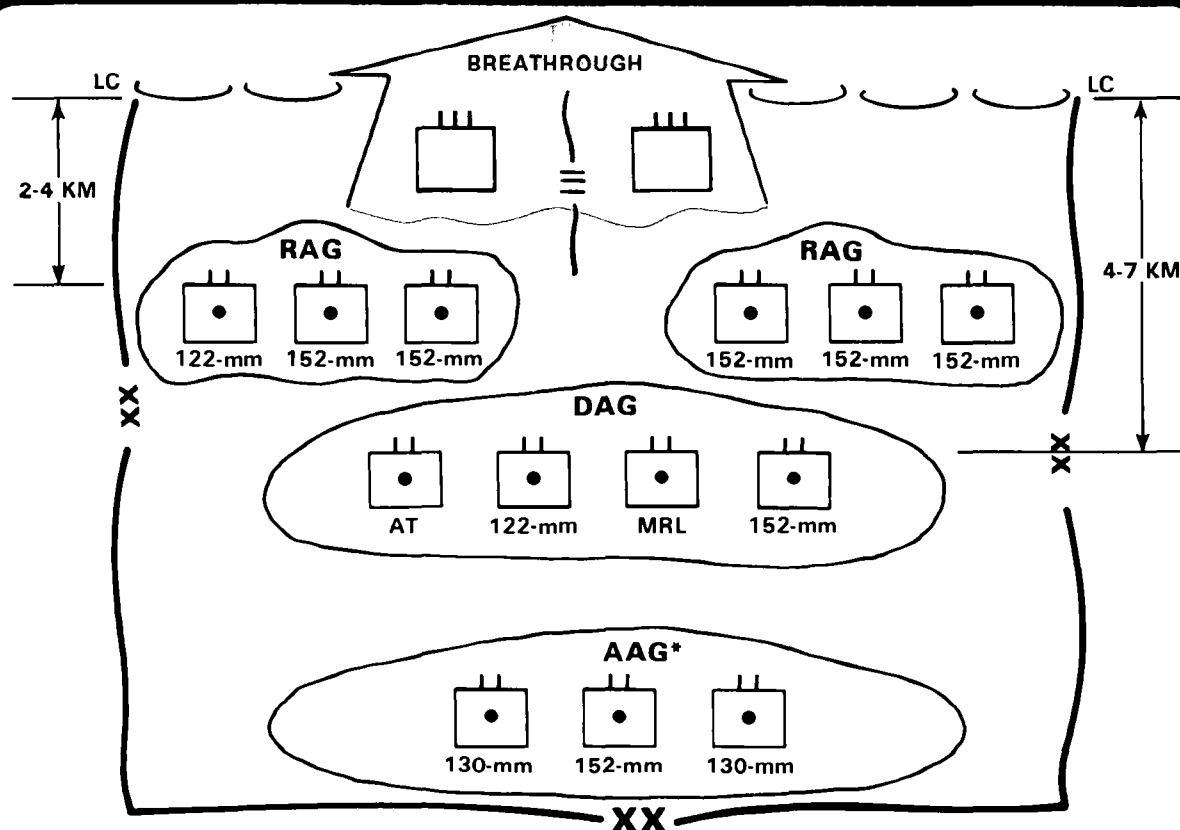
One first-echelon division in each army conducts the breakthrough while the other conducts a supporting attack.

The Threat prefers to conduct the operation from the line of march using the division previously designated for the Army's main effort as the breakthrough

division. If a division other than that reinforced for the main effort is selected for the breakthrough, repositioning artillery and logistical units to support the operation can be time-consuming.

Although there is little lateral movement, there may be considerable forward and rearward movement of artillery and ammunition vehicles as artillery is repositioned and organized into regimental and divisional artillery groups. Each group consists of from two to four battalions. An Army artillery group of two to four battalions of 122-mm, 130-mm, and 152-mm guns provides counterfire support.

CONCENTRATION OF ARTILLERY FOR BREAKTHROUGH



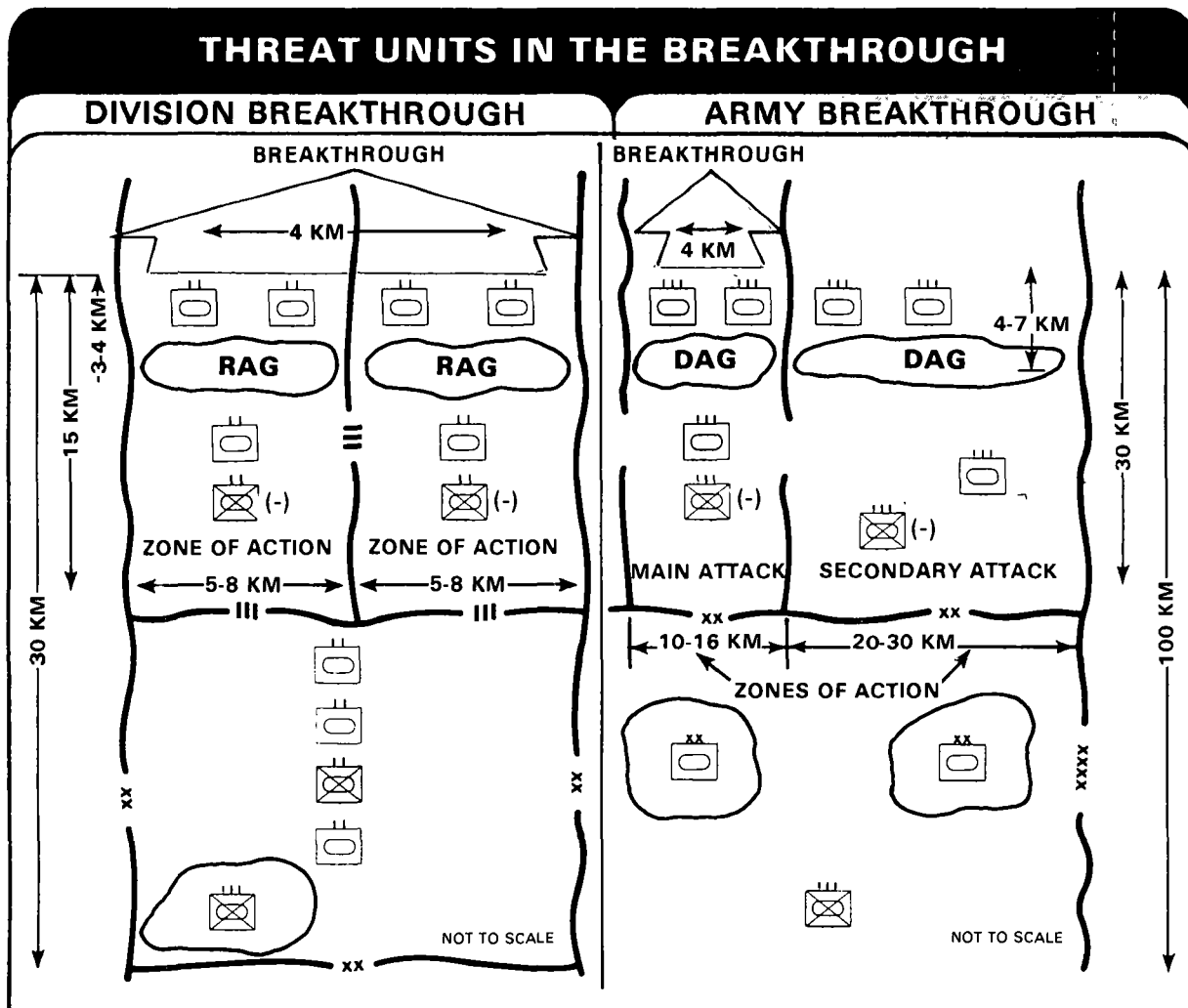
*INCLUDES UP TO FOUR BATTALIONS OF 122-MM, 130-MM, AND 152-MM ARTILLERY FROM FRONT ASSETS. ARTILLERY FORCES ARE DEPLOYED APPROXIMATELY 1-2 HOURS BEFORE THE ARRIVAL OF THE MAIN BODY AT THE LINE OF CONTACT.

Once the artillery is in position, a massive preparation, lasting from 30 minutes to an hour or more, is fired. In order to fire the preparation, it is necessary to move considerable ammunition to firing positions. So, large numbers of supply trucks are normally found in the breakthrough zone.

During the preparation, maneuver units deploy into battalion and company columns, gradually narrowing the width of advance. The rate of advance is carefully controlled. When preparatory fires have ceased or have been shifted into the depth of the enemy defense, the assault begins. At this point, the breakthrough division front has narrowed to approximately 4 kilometers.

First-echelon regiments try to rupture initial defensive positions, creating a gap in the defense. Tanks normally lead the attack. Motorized rifle troops remain mounted in infantry fighting vehicles and follow immediately behind tanks. If the defense, particularly the antitank defense, is too strong, motorized rifle troops dismount and assault on foot, the infantry fighting vehicle providing fire support from the rear.

Second-echelon regiments of the breakthrough division pass through gaps created by the first echelon, widening the initial breach. If the breakthrough has been successful, a gap of approximately 20 kilometers in the defense should exist.



Second-echelon divisions then move forward, pass through the first echelon in order to strike deep into the defender's rear, defeat whatever forces are there, and destroy or capture command posts, depots, and communication facilities.

If the breakthrough division is not successful, the front commander may:

- Continue the attack using second-echelon divisions,
- Transfer the main effort to a sector that is enjoying more success, or
- Order a halt to the attack, establish a defense, withdraw breakthrough divisions, and conduct a reassessment of front capabilities.

If the breakthrough successfully disrupts the defense, *front* second-echelon tank or combined arms armies are committed through gaps to exploit initial successes. Once in the enemy's rear, divisions move out in column or multiple routes, as in a movement to contact.

PREEMPTIVE MANEUVER

THREAT FORCES ARE TRAINED IN TECHNIQUES DESIGNED TO ACHIEVE SURPRISE

The Threat has long emphasized the singular advantage that can be gained by surprise. Threat forces are therefore trained in techniques designed to achieve surprise—active and passive operations and communications security measures, deception measures, operations in darkness, bad weather, or smoke. All are extensively documented and widely practiced.

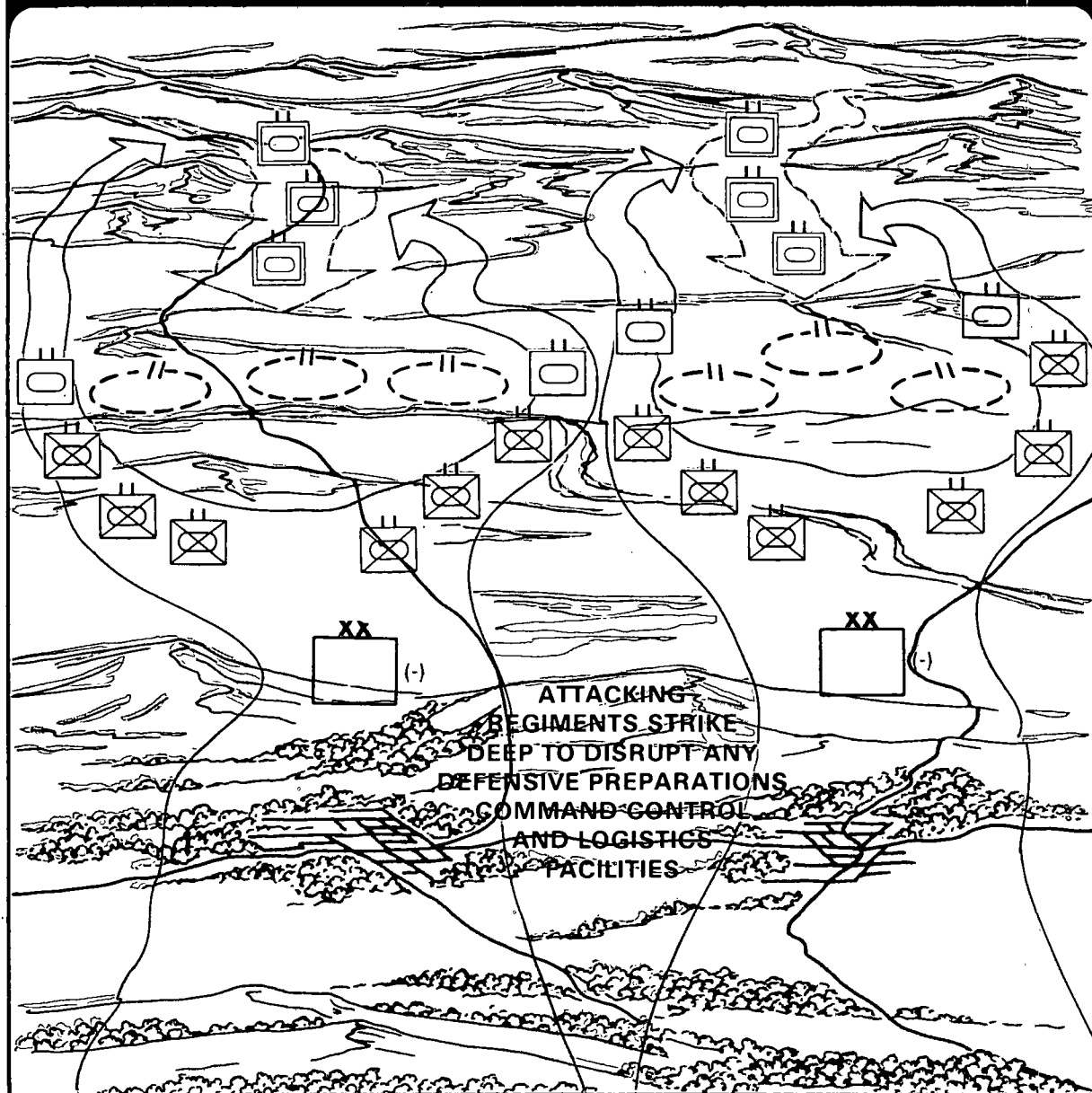
To Threat commanders, surprise is a way of reducing losses. Simply put, surprise can be a substitute for mass. By using surprise, one can reduce losses expected in an attack against well-set-up defenses that feature deep belts of defending antiarmor forces.

In a preemptive maneuver the operative tactic is a deep thrust. *A preemptive maneuver may be launched by several regiments conducting deep thrusts on*

multiple axes—regimental axes reinforced by attack helicopters, field artillery, and perhaps surface-to-air missile units. Using all measures to achieve surprise, a preemptive maneuver calls for the attacker to attack before the defenses can get “set”; strike deep to establish the depth of a penetration; engage the defender in a series

of meeting engagements before his forces can take up good defensive positions; and disrupt defensive preparations by attacking vulnerable command control and logistical facilities. Having caught the enemy off guard, follow-on forces move into the penetration to destroy bypassed enemy units and to generally exploit success.

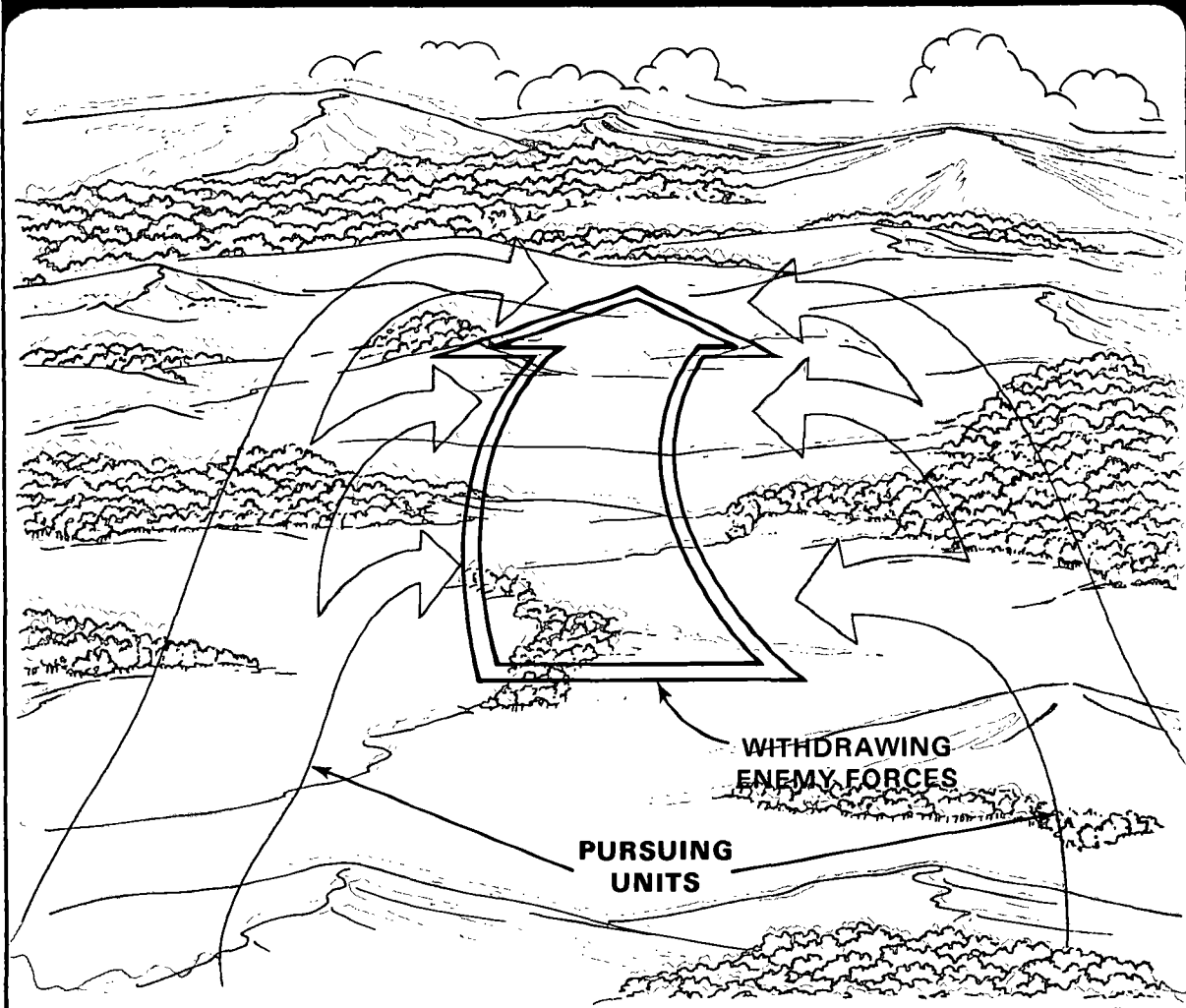
THREAT PREEMPTIVE MANEUVER



THE PURSUIT

The pursuit is an offensive operation designed to complete destruction of the enemy. Rather than follow a retreating enemy, pursuing units move along routes parallel to the enemy's retreat, attempting to out-distance elements of the enemy force, cut withdrawing columns into segments, and destroy them. Helicopters are employed to locate and engage retreating units and guide pursuing forces. Airborne, airlanded, and airmobile forces are used to control critical terrain and block or slow down enemy withdrawal.

A TYPICAL THREAT PURSUIT OPERATION



PREPARING FOR DEFENSIVE OPERATIONS

The commander estimates the situation and, assisted by his staff, decides what is to be done. He expresses this as his concept of the operation. The concept is in the detail necessary for his staff to understand precisely how he intends to conduct the battle. Staff preparation of plans and orders is based on the concept. As a minimum, the brigade commander must describe:

- Where the defense is to be conducted.
- Organization of the main battle area.

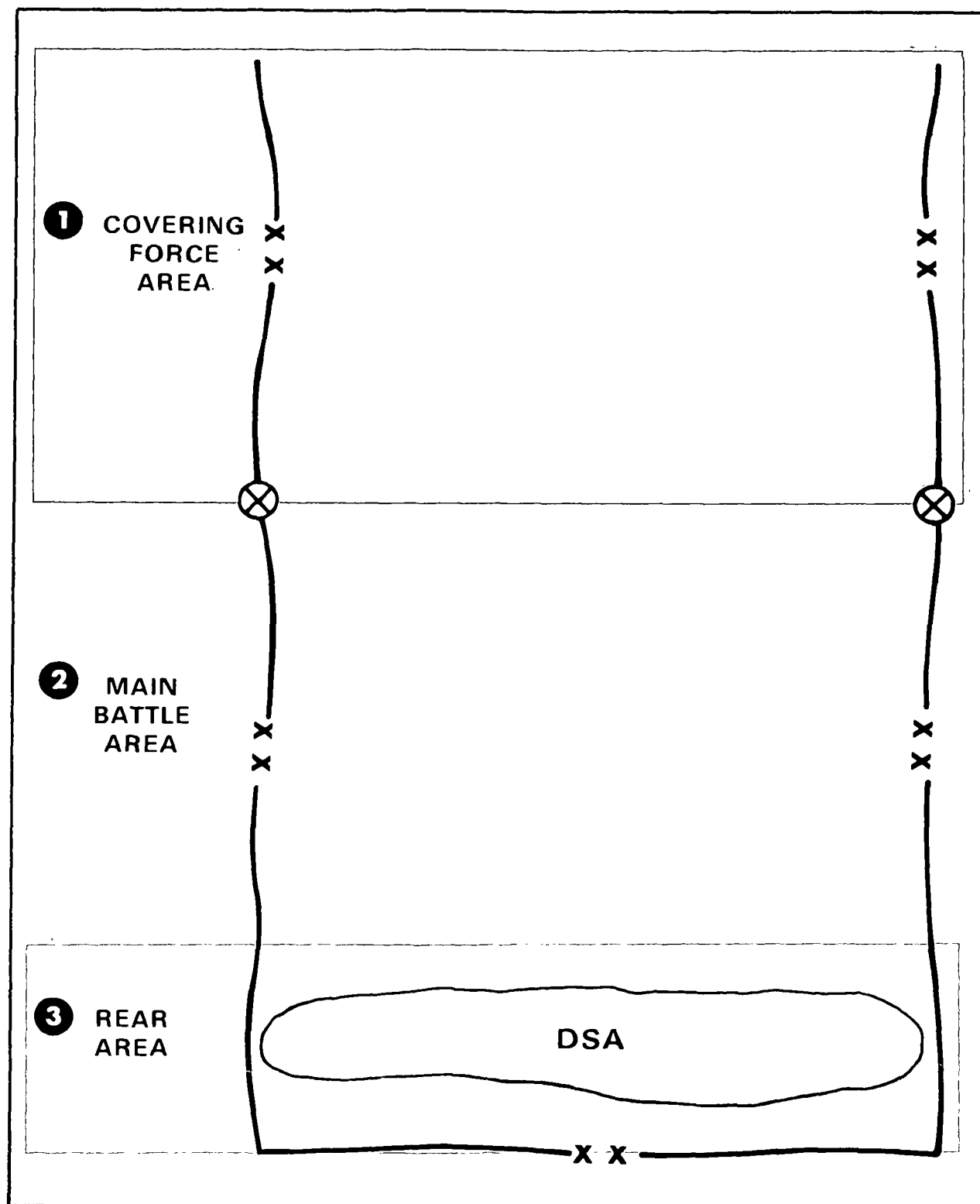
The division normally assigns the brigade a battle area in which to operate. Before describing how the brigade commander organizes and conducts defensive operations, it is necessary to describe how the defensive battlefield is organized.



The battlefield is normally organized into three areas:

- 1 Covering force area (CFA)
- 2 Main battle area (MBA), and
- 3 Rear area.

1 Covering Force Area. The CFA begins along the expected line of initial contact and extends rearward to the forward edge of the main battle area (FEBA). The mission of the covering force is to find the enemy and fight him with sufficient force to cause him to deploy, plan an attack, concentrate forces to attack, and thus reveal the location and direction of his main effort. In order to do this, the covering force must



strip away enemy reconnaissance units, defeat the advance guard, force the enemy to deploy his main body, and cause the enemy to bring up artillery and second-echelon forces to organize a deliberate attack. As the enemy shifts forces, brings up artillery, and masses for a main attack, he will reveal how strong he is and where he intends to attack. A covering force also seeks to keep the actual location of the main battle area from the enemy. To do this the covering force may have to fight forward of the MBA until a specified time so that MBA preparations can be completed. When this is so, that time must be stated, along with other instructions, in the covering force mission.

The covering force takes up the fight as far forward of the MBA as possible. Its battalions and squadrons fight from a series of coordinated, mutually supporting battle positions. These positions are sited to make maximum use of protection offered by the terrain and are designed to minimize the vulnerability of the defender's weapon systems while maximizing their effectiveness. Therefore, to units in the covering force itself, the battle is very much like the action of any battalion in the MBA. When directed to do so, the covering force hands off the enemy to MBA forces, then moves to a designated area in the MBA and prepares for operations there. Normally this will be a battle position deeper in the MBA where there will be some time to rearm, refuel, reorganize, and prepare to fight again.

It is obvious that the size and composition of the covering force depends on the mission, enemy, terrain, and available forces. These factors take on added significance and complexity depending on the attack mode chosen by the enemy, depth of the area available for covering force operations, and the time required by MBA defenders to get set for action. *The covering force is normally tank heavy.* A covering force operating in front of a division could well consist of up to four or five tank-heavy battalion task forces

or cavalry squadrons, attack helicopter, field artillery, air defense, and engineer units. The covering force is normally controlled by either the division or corps; however, in some circumstances, it may be the brigade. In the latter case, the division should prescribe its organization and operation in some detail. Provisions must be made to change command arrangements in the course of battle as enemy strength and intentions are developed.

2 Main Battle Area. The decisive battle is fought in the main battle area where forces are concentrated to destroy the enemy main attack. Due to concentration, forces will usually be unequally distributed laterally. Thus, there will be differences in the way combat forces fight the defensive battle, depending upon whether they are in the area where forces are concentrated or where forces are economized. In the main battle area, tank-heavy task forces are concentrated in depth along the major avenues of approach into the area to be defended. However, some main battle area brigades can expect to be organized initially with mechanized infantry heavy task forces in situations where a strong covering force is established. When they become available, task forces from the covering force join the fight in the MBA.

3 Rear Area. Divisions will control the area and forces behind brigades. The division main command post and supporting units not located in the MBA normally are located in the division rear. Since units in reserve will usually be committed to the fight in the MBA by placing them under the operational control of brigades, they normally will be located in the MBA from the outset. Position areas designated to the rear of brigade battle areas may be established for combat support and combat service support units.

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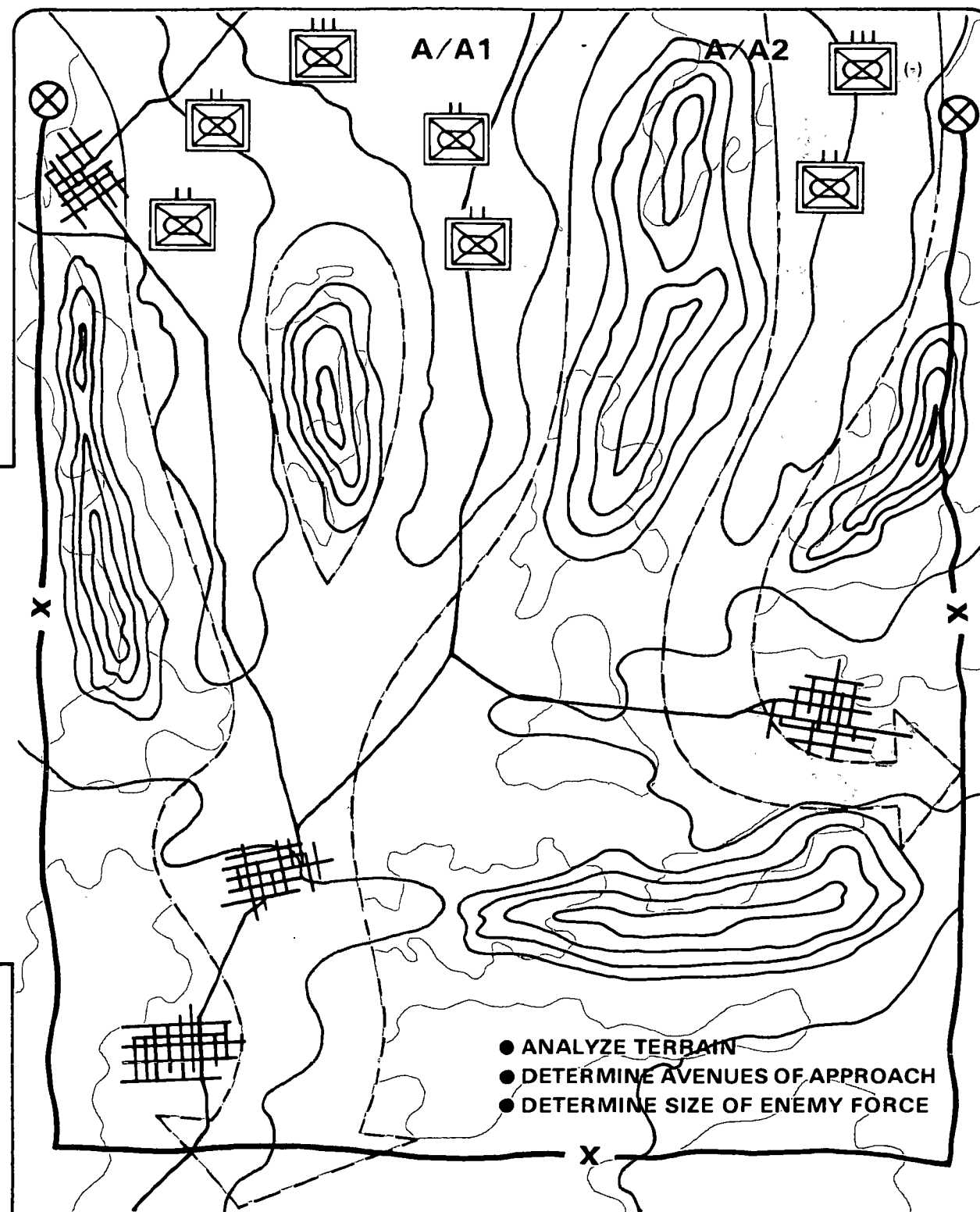
The brigade commander takes the following steps in organizing and conducting defensive operations. He must—

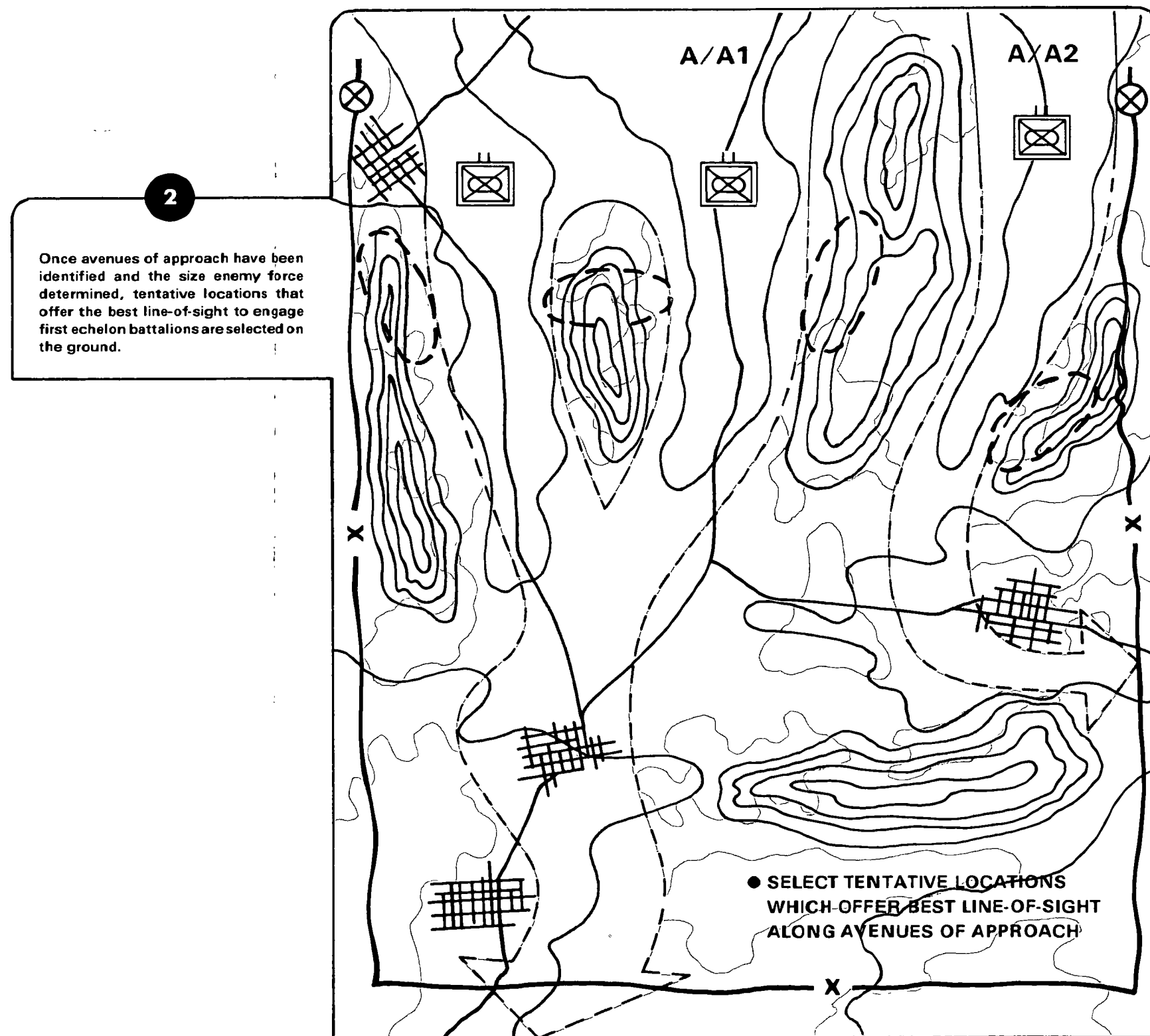
- 1 Fit forces to terrain
- 2 Select tentative locations
- 3 Identify targets
- 4 Position forces
- 5 Imply obstacles

1

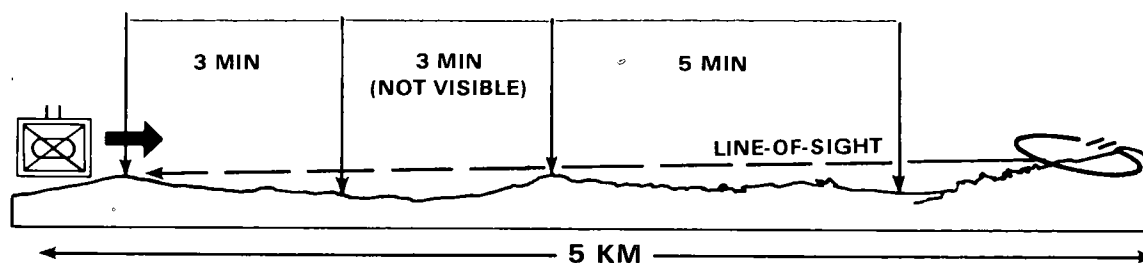
The brigade commander's first task is to fit his forces to the terrain. To do this, it is necessary to thoroughly study the terrain over which the battle is to be fought. A ground reconnaissance is essential. All avenues of approach into the brigade area are thoroughly studied.

The enemy strives to quickly gain deep objectives in the defender's rear. Avenues of approach must be identified with this in mind. Three divisions typically attack with two first-echelon regiments abreast. They rely heavily on mass end momentum to penetrate enemy defenses. Therefore, the most likely avenues of approach are those which will accommodate formations of regimental size and larger.





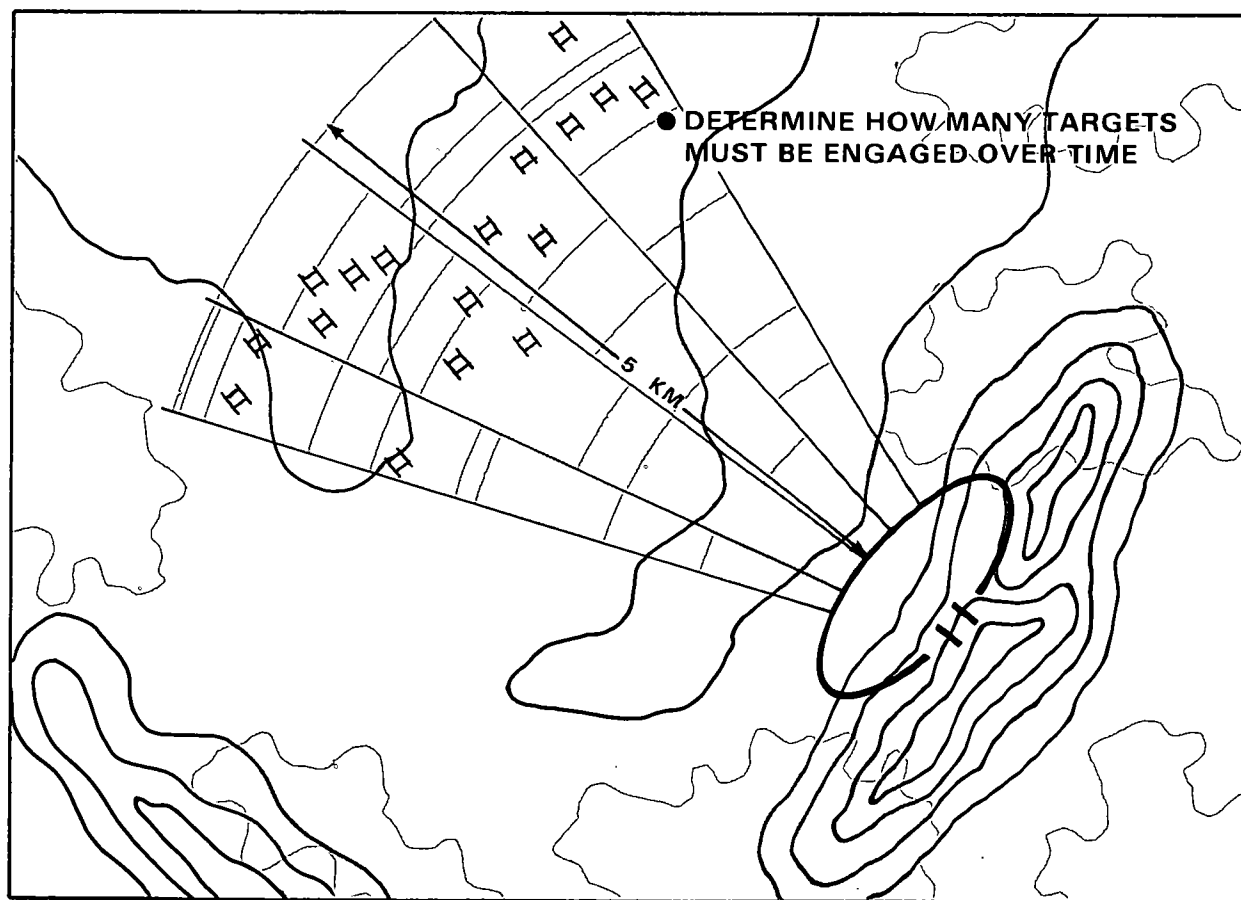
● DETERMINE AMOUNT OF TIME
TARGETS VISIBLE BASED ON
LINE-OF-SIGHT

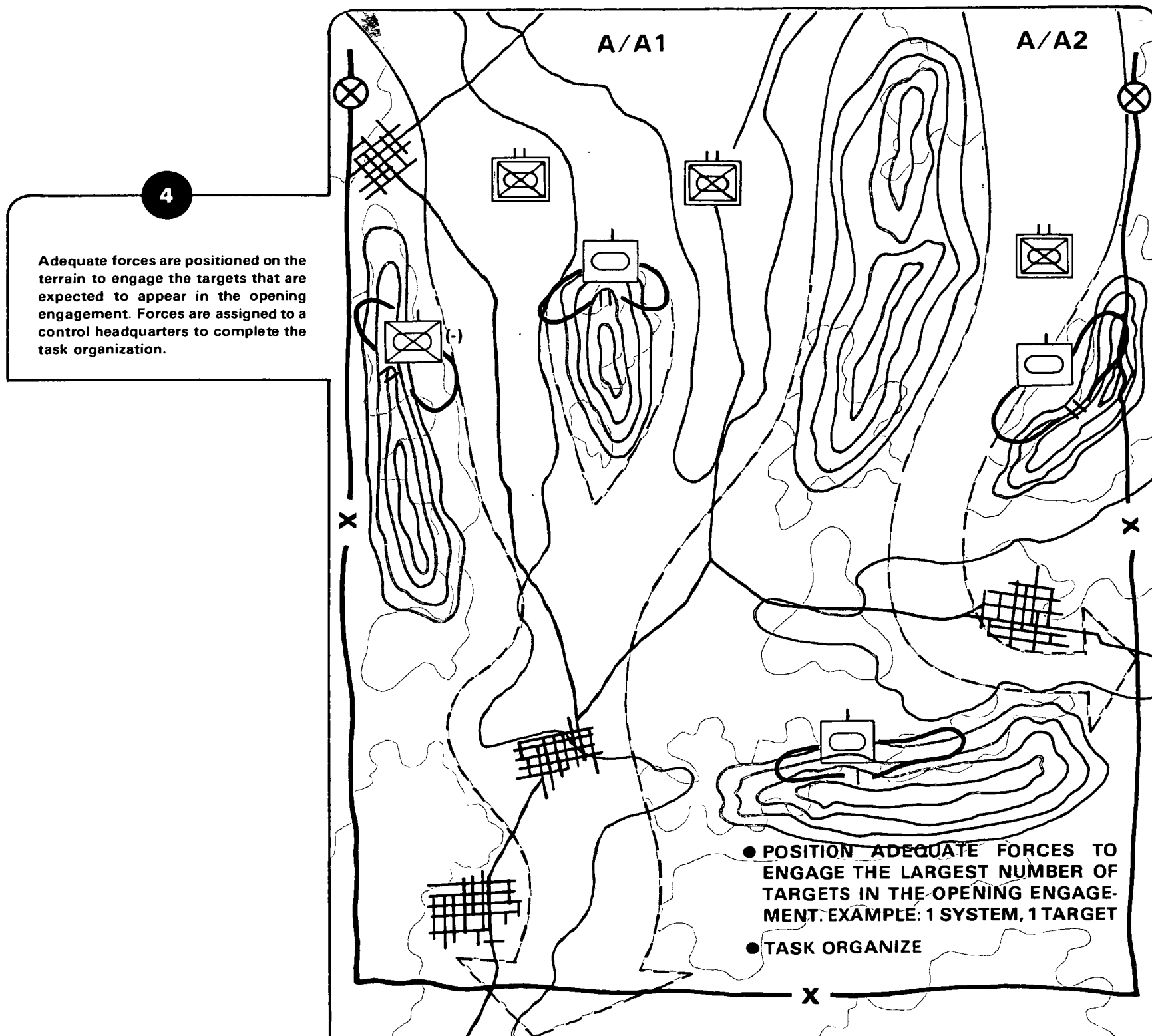


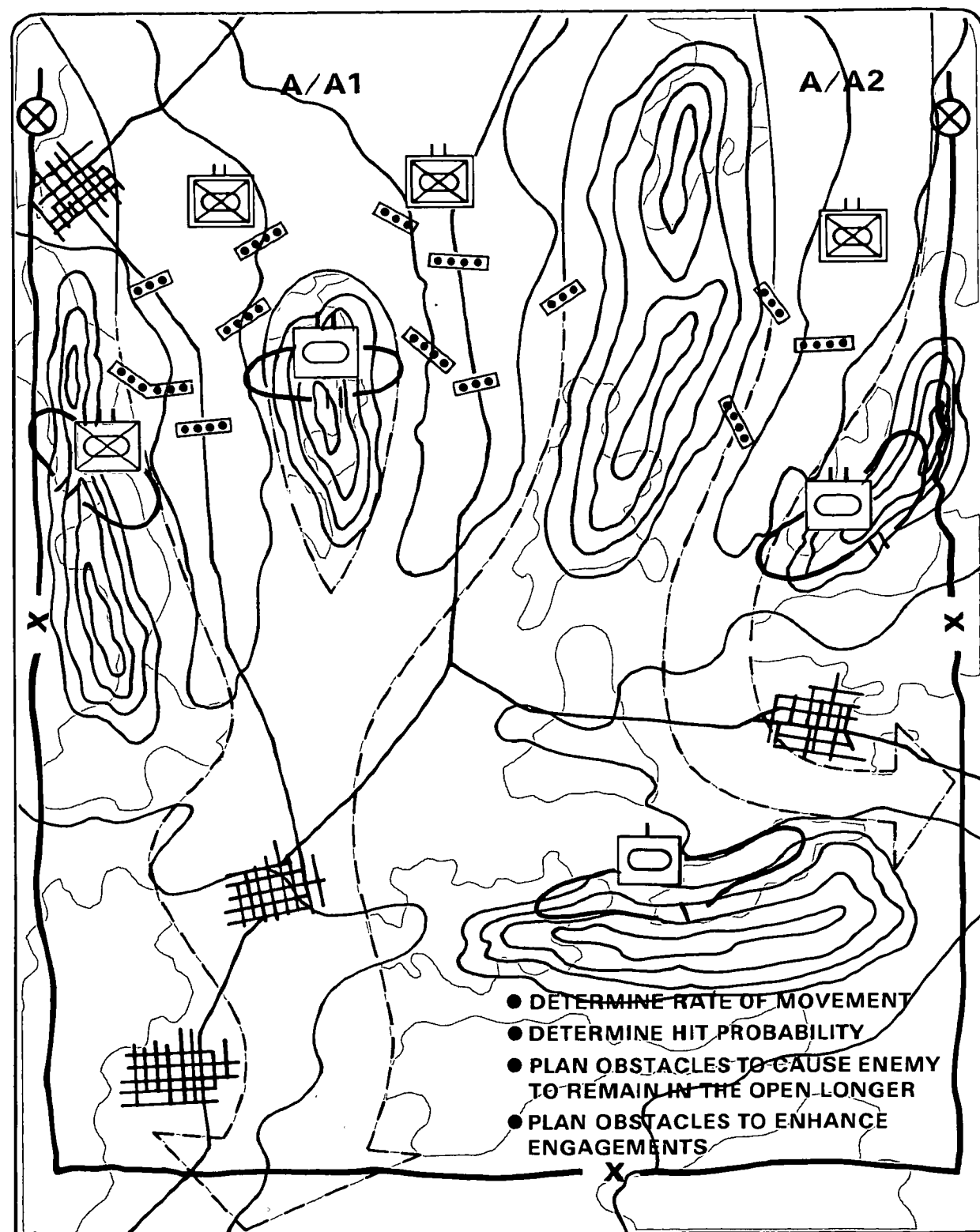
3

The defender then determines how long targets are visible based on line-of-sight from these tentative locations. The object is to find terrain from which the greatest number of enemy combat vehicles can be engaged. The number of targets that must be engaged over time is then identified.

● DETERMINE HOW MANY TARGETS
MUST BE ENGAGED OVER TIME







5

The defender must then calculate the expected rate of movement of enemy forces along the avenues of approach, the hit probability of his weapons, and the rate at which his weapons can be destroyed. This information helps the defender determine how many additional nonorganic weapons are needed and the number and location of obstacles needed to cause the enemy to be visible and exposed longer. Obstacles are then implaced to enhance target engagement.

While the outcome of battle cannot be predicted, these factors help determine the general number of weapon systems required to defeat the enemy along a specific avenue of approach. This process also suggests ways to improve the defense along an avenue of approach. Based on the estimated number of weapon systems necessary to defeat the enemy, the brigade commander task-organizes his battalion task forces as described in **Chapter 2, Preparing for Combat Operations**.

Generally, tanks overwatched by long-range antitank weapons are employed in more open terrain; short-range antitank and other infantry weapons are employed in urban, wooded, or less trafficable areas. The decision on how to cross-reinforce, or whether to do so, depends on how the commander decides to fight the battle. The brigade commander may decide to fight tank and mechanized infantry battalions without cross-reinforcing. However, repeated requirements for close interaction of tanks and mechanized infantry will normally lead the brigade commander to organize and employ cross-reinforced battalion task forces.

ORGANIZATION OF THE COVERING FORCE AREA

The division will specify if the brigade is to organize a covering force. However, in most cases, the division commander or corps commander will organize and control covering forces. *One of the primary purposes of covering force operations is to fight with sufficient force to cause the enemy to reveal the direction and strength of his main effort.* Once this information is known, forces are moved to concentrate. Brigades are simply not organized to do this. When the division or corps is responsible for covering force operations, the brigade should expect to detach one, or sometimes two, battalions to the covering force. These battalions and perhaps others rejoin the brigade when covering force operations are completed.

When the brigade commander organizes a covering force, he will task-organize and position his forces as previously described—study the terrain, identify avenues of approach, and determine the number of weapon systems required to fight the enemy on each avenue of approach. The brigade should expect to receive additional forces from division, including armored cavalry. The brigade commander organizes the covering force around tank-heavy battalion task forces or armored cavalry squadrons.

Field artillery battalions are attached to or placed in support of the covering force in representative calibers. As a general rule, one medium battalion for each enemy regimental-sized avenue of approach is necessary. Additional heavy and medium battalions may also be provided, based on the brigade mission, forces available, and size of the enemy attack.

Field artillery support may be controlled by forming battalion groups or, in some cases, by a field artillery brigade provided from corps.

Some air defense artillery is also provided to support the brigade covering force. Vulcan platoons operate in the covering force area to shoot down enemy attack helicopters and remotely piloted vehicles.

When sufficient time and engineer forces are available, engineers operate in the covering force area to emplace obstacles and minefields to reinforce natural terrain obstacles.

Ground surveillance radars and remote sensor teams also operate with the covering force, as do collection and jamming elements. Electronic warfare operations are conducted to locate the enemy main effort and to locate enemy jammers so they can be destroyed. Jamming operations are conducted against enemy electronic command and weapon control systems in accordance with priorities established by the division commander.

CONTROL OF COVERING FORCES

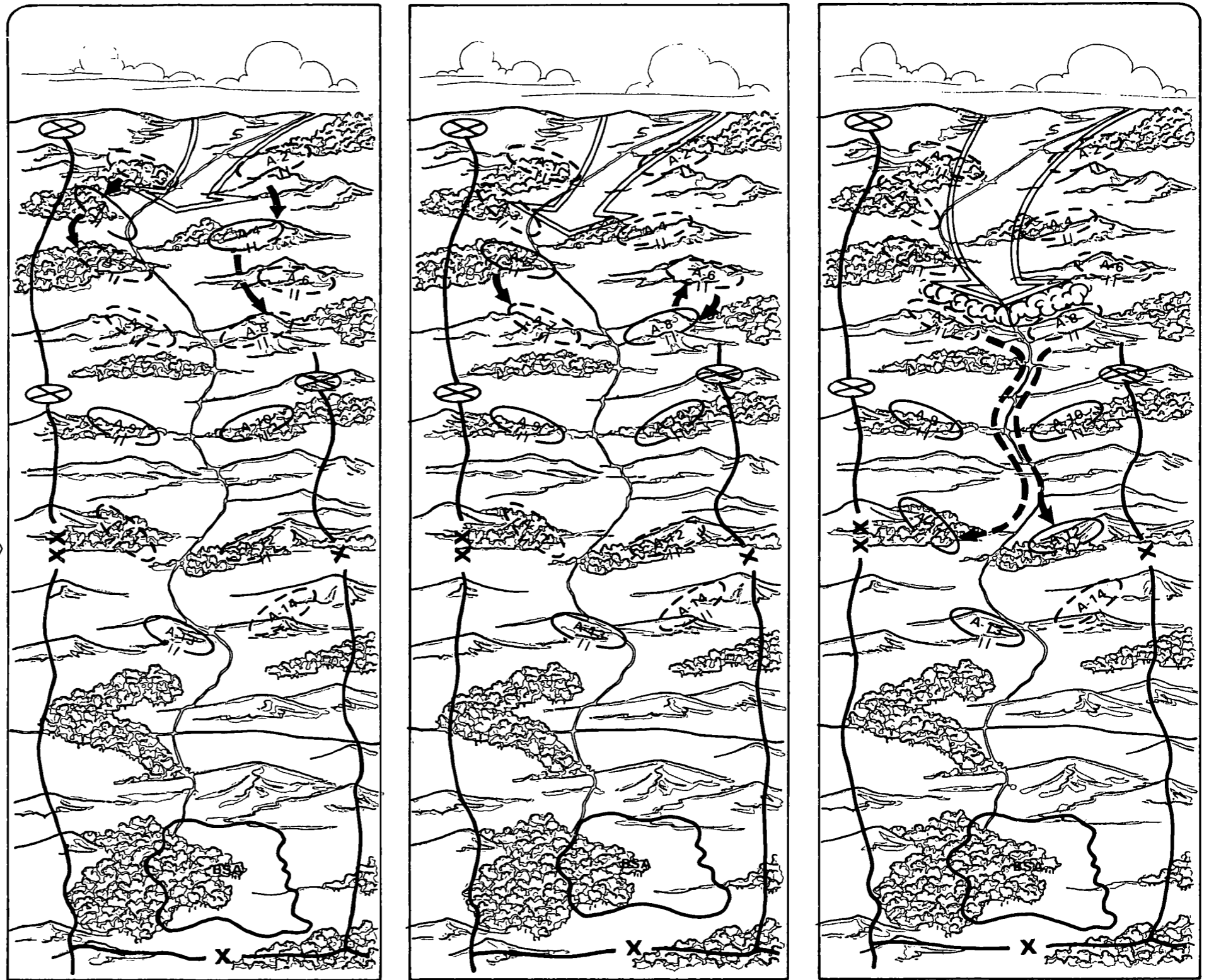
When division or corps initially controls the covering force, main battle area brigades assume control of covering force elements forward of the MBA when ordered to do so. The brigade then controls passage and integration of covering force units into the MBA.

Handoff of the battle from the covering force to MBA forces requires close coordination. Covering force battalions must retain freedom to maneuver while the brigade commander takes control and decides how to best position the forces when they pass into the MBA. The brigade must establish procedures for passage—contact points, passage lanes, routes to positions, resupply, and fire support coordination. *These actions must be completed quickly and efficiently to minimize the vulnerability of both MBA and covering forces.*

SEQUENCE OF COVERING FORCE HANDOFF

Details of the operation are much like those of a passage of lines described in chapter 3. Normally, the division designates brigades through which its subordinate units will pass.

When the brigade controls a covering force, the brigade commander may use a tactical command post or he may designate his executive officer, S3, or the commander of one of the battalion task forces. It depends on the terrain, the width and depth of the area, the number of battalions or squadrons available, and the ability to communicate. Maneuver of covering force battalions is controlled by battle positions, boundaries, or a combination of both.



ORGANIZATION OF THE MAIN BATTLE AREA

Once the division commander has determined where he intends to employ his forces, brigades are designated to control battalions defending in the MBA. The division commander designates battle areas called sectors

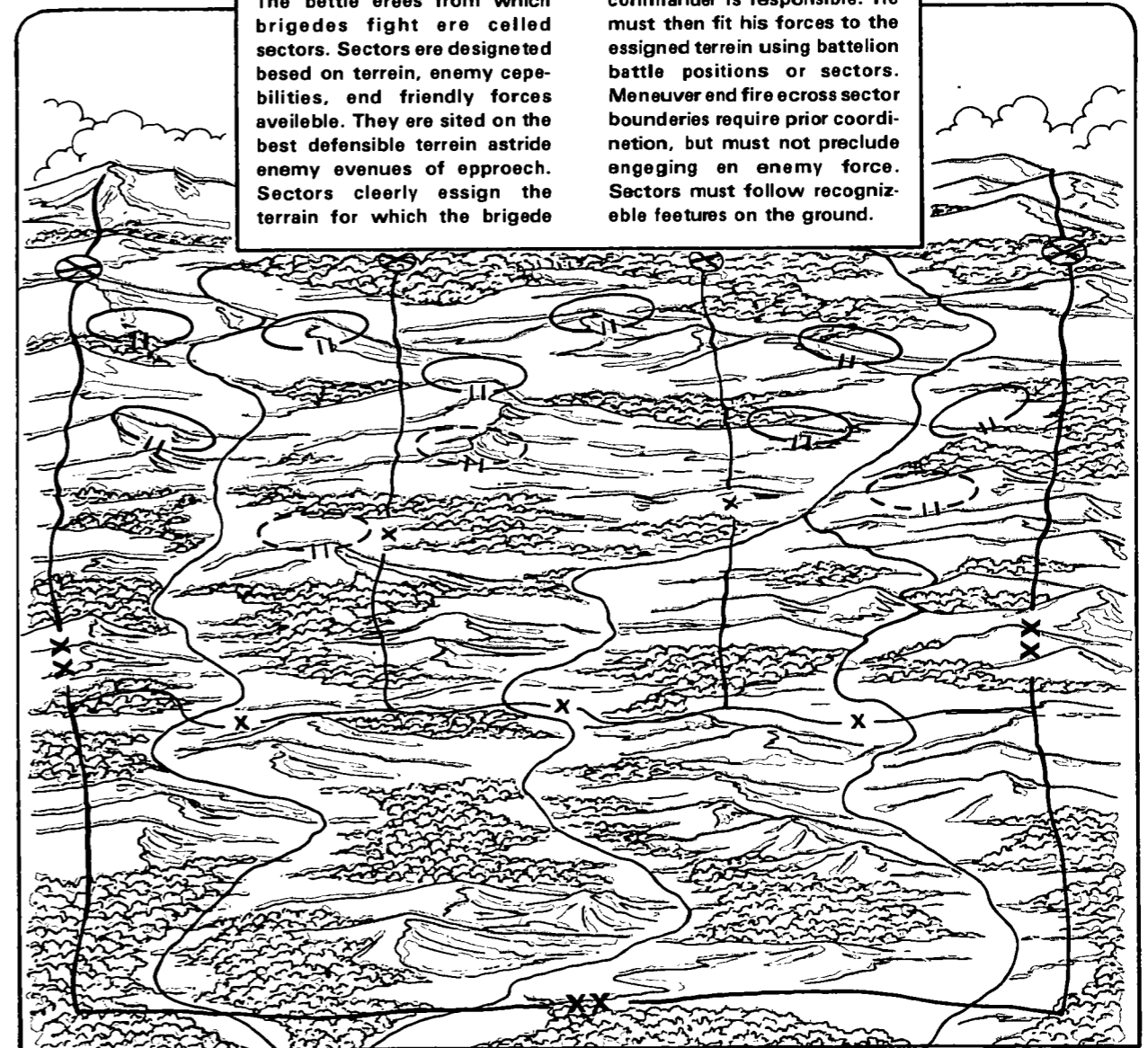
in which brigade commanders are expected to fight their forces. Brigade commanders organize tank and mechanized battalions for combat as described in Chapter 2, Preparation for Combat Operations.

**COVERING
FORCE
HANDOFF**

SECTORS

The battle areas from which brigades fight are called sectors. Sectors are designated based on terrain, enemy capabilities, and friendly forces available. They are sited on the best defensible terrain astride enemy avenues of approach. Sectors clearly assign the terrain for which the brigade

commander is responsible. He must then fit his forces to the assigned terrain using battalion battle positions or sectors. Maneuver and fire across sector boundaries require prior coordination, but must not preclude engaging an enemy force. Sectors must follow recognizable features on the ground.



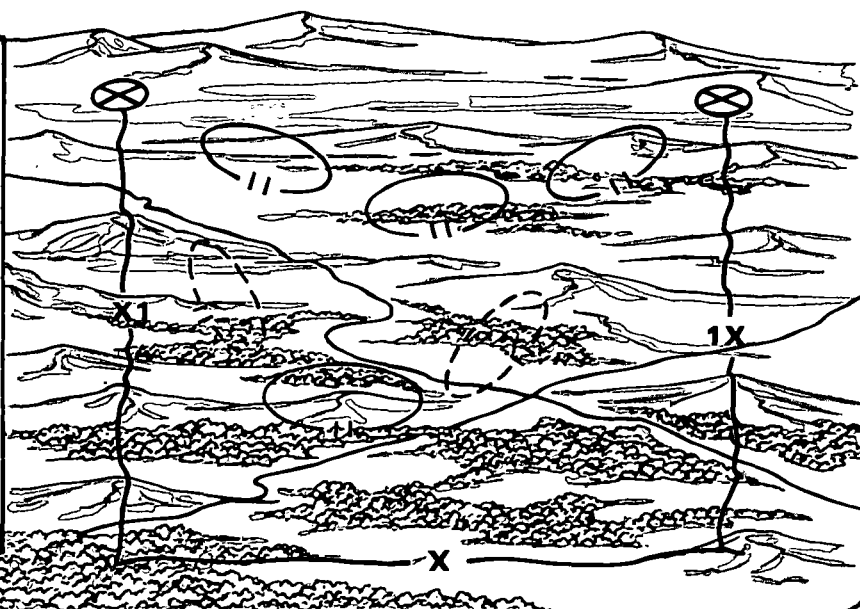
As a general rule, the brigade commander selects battle positions for his task forces. Battle positions are used when the brigade commander wishes to retain control over maneuver of his task forces. This is most desirable when it is necessary to rapidly concentrate task forces, and terrain is open with good fields of fire. By establishing battle positions, the brigade commander controls

maneuver and prescribes primary directions of fire.

At other times, the brigade commander may designate sectors to give battalion task forces more freedom to maneuver. This may be desirable to cover multiple avenues of approach, a single avenue of approach in depth, or for economy-of-force areas.

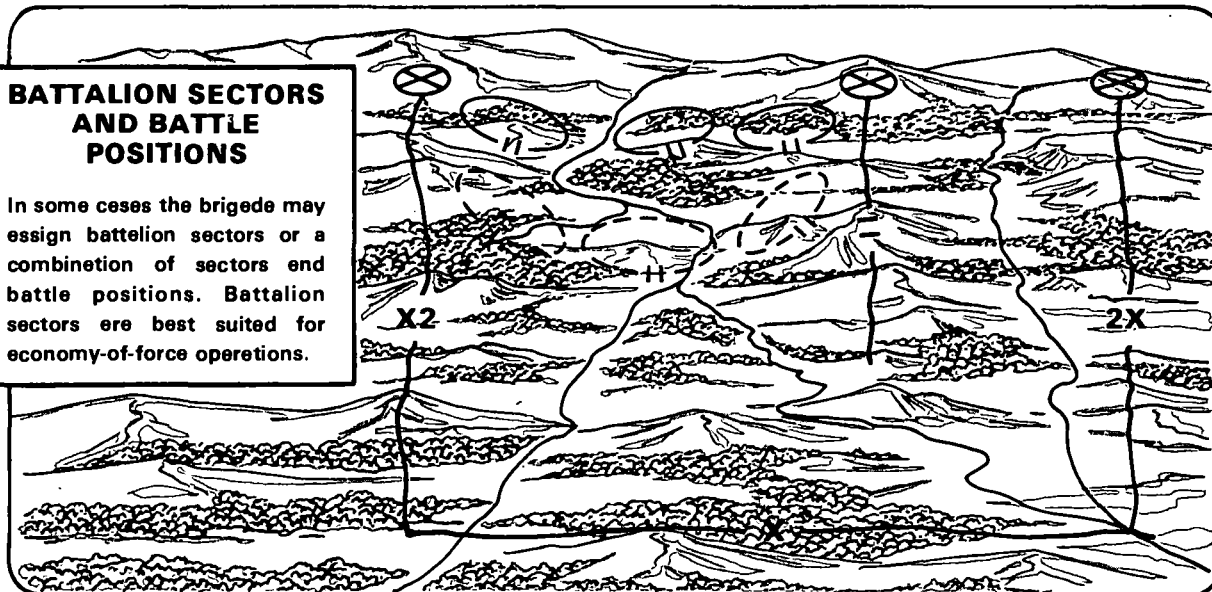
BATTLE POSITIONS

Battle positions are selected on the basis of terrain and weapon analysis. Normally the brigade will designate battle positions in the brigade battle area and assign them to battalions. The brigade commander directs the fight by specifying which battle position his battalions will fight from, and what they will do there—defend, attack, strong-point. A system for identifying battle positions should be designated in divisional standing operating procedures.



BATTALION SECTORS AND BATTLE POSITIONS

In some cases the brigade may assign battalion sectors or a combination of sectors and battle positions. Battalion sectors are best suited for economy-of-force operations.



Brigade and battalion commanders identify and reconnoiter battle positions in depth throughout their operational areas. These positions can be selected for occupation by units as large as a battalion task force and as small as a platoon. Brigade commanders direct the fight by specifying which battle position their units will occupy and what they will do there.

Battle positions must provide unobstructed fields of fire into places where the enemy will likely be. Where such fields are not naturally provided, they must be created. *It is desirable to choose positions from which flanking fire can be delivered at optimum weapon ranges.* At the same time, battle positions must provide cover from fires of following enemy echelons, concealment, and concealed routes in and out so units can occupy them quickly without unnecessary exposure and vacate them when necessary. Battle positions must be mutually supporting.

When possible, long-range antitank weapons and missile firing tanks are located to engage enemy forces beyond 2,000 meters, conventional gun tanks to engage in 1,500-2,500-meter range, and shorter range antitank systems to engage as near as possible to their maximum effective range. These weapons are used to engage an enemy from one set of firing positions, then move to alternate ones or to new battle positions as the enemy fires and maneuvers in return. *Capitalizing on surprise fire and first shot advantage, each weapon in range must hit one or two enemy vehicles in each engagement, then relocate quickly before return fire can fix or destroy it in position.*

Every advantage offered by the terrain is used. Natural obstacles must be reinforced, extended, and at critical times covered by fire. Development of obstacles which tend to force an attacking enemy away from cover and concealment and into open ground should be a high priority.

Battle positions are occupied, vacated, and reoccupied as the battle develops. The division commander and brigade commanders plan the maneuver of battalion task forces from one battle position to several others so, when the battle commences, forces can be concentrated quickly and redirected just as quickly.

Since the defender cannot be strong everywhere, some risks must be taken. This is particularly true when forces are moved to concentrate against the main enemy effort. Less threatened areas can be covered by battalion task forces operating over wider areas or by cavalry in the case of a separate brigade, and by ground surveillance radars and remote sensors. Obstacles can also be employed.

A field artillery medium-cannon battalion normally is in direct support of the brigade. A direct-support battalion is often reinforced by another medium or heavy battalion. Infrequently, a field artillery brigade may operate in direct support of the brigade.

The brigade operates under the air defense umbrella of a Hawk missile battalion operating in direct support of the division. Sometimes, a Vulcan platoon, or perhaps more than one, supports the brigade. When this is the case, it should be used to protect such installations as the brigade command post or brigade trains. More often the brigade will have to rely on its units' Redeye missile systems for air defense.

Engineer units in support of the brigade construct obstacles to reinforce natural terrain, strengthening the defense. Slowing the enemy rate of advance in order to engage his tanks and other armored vehicles is particularly important. Engineers also assist combat units in preparing vehicular fighting positions and routes to provide for lateral movement by the defender and help close those routes when no longer needed.

Some combat electronic warfare and intelligence elements normally operate in the brigade area. They may be under division or brigade control. In any case, procedures must be established to get information from such elements. Of particular importance are enemy command control nets between battalion and regiment and weapons control emitters. These can be attacked by jamming or by fire. *Ground surveillance radars are most often employed with battalions, although teams might be used in economy-of-force areas.*

RESERVES

When the division establishes a reserve, brigades will not usually do so for two reasons. *First*, when fighting outnumbered, it is important to get as many weapon systems into the battle as quickly as possible in order to destroy and disrupt the enemy as early and as quickly as possible. *Second*, mobility of armored and mechanized forces and attack helicopters should enable the commander to concentrate forces rapidly. When the main effort has been identified, forces are concentrated primarily by movement laterally, or from the rear. If the division does not establish a reserve, the brigade commander may do so.

CONCENTRATION OF FORCES

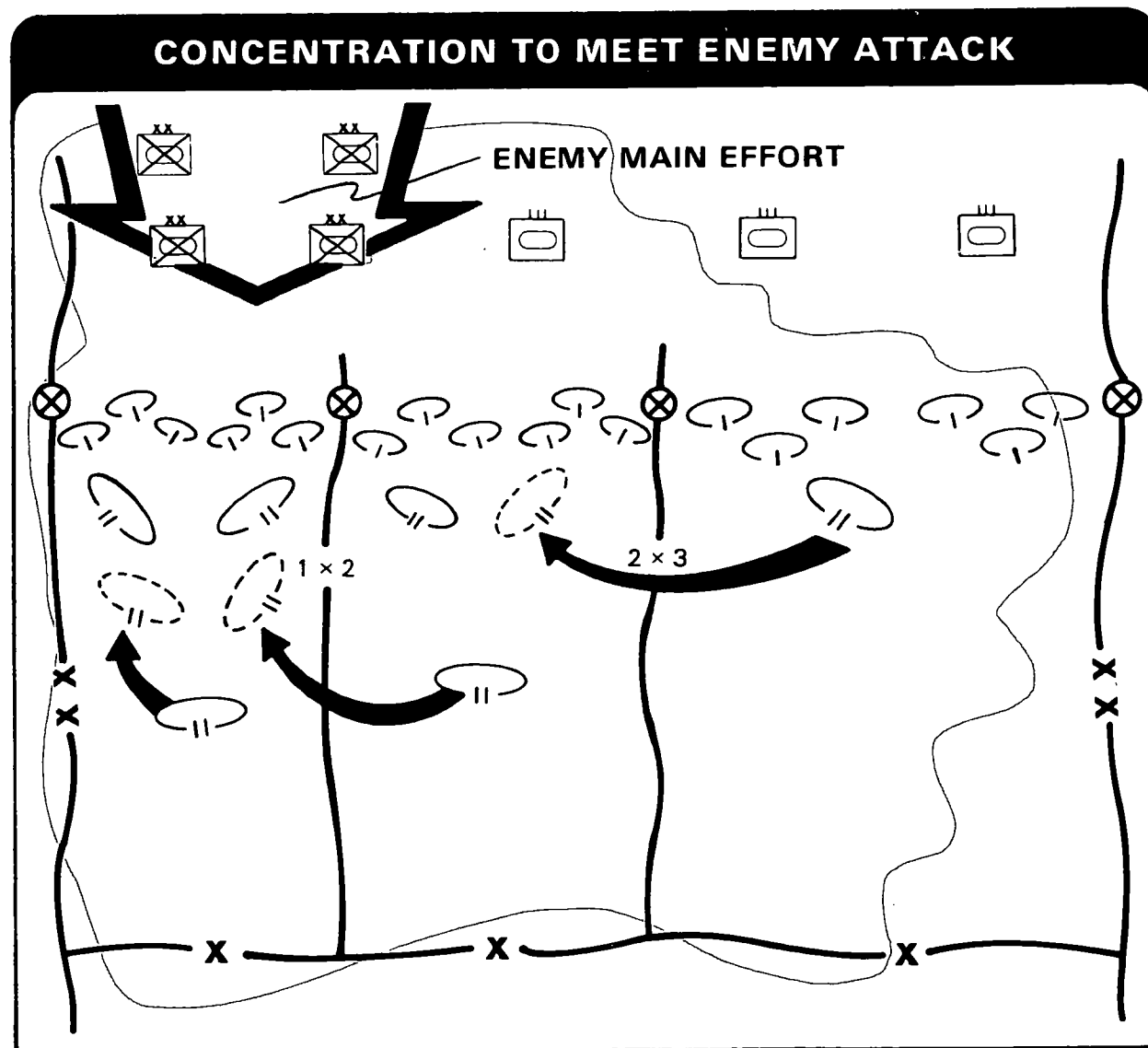
Once the division commander has a good idea of where the enemy main effort will be made, he begins to concentrate his force. Maneuver battalions are moved laterally and forward to reinforce in the area where the main effort is expected.

When it is apparent that reinforcement is necessary, the brigade commander must concentrate forces under his control (if they are not already concentrated), and prepare for the arrival of additional battalions.

As they plan their battle, the brigade commander and staff should consider how reinforcing battalions should be integrated into the defensive scheme, where they will be positioned, routes they will use to get there, and fire and maneuver command control arrangements. Positioning and movement of reinforcements can be speeded up by designating routes and by providing personnel at contact points to lead reinforcing units to positions and to orient them on the situation.

The brigade commander, or perhaps the executive officer or S3, can meet commanders of units en route to tell them what to do when they arrive in their positions.

Procedures for command control, supporting fires, and logistical support must be set up in advance. Sufficient preparation must be made to accept additional combat and combat service support units as well as maneuver forces.



COUNTERATTACK

The brigade commander maneuvers his battalion task forces to concentrate their fires where the enemy is most vulnerable. He should constantly seek an opportunity to counterattack and destroy or disrupt the enemy. Brigade counterattacks are normally conducted by battalions. The brigade commander should control the attack forces. Most often counterattacks are hasty attacks which seek to take advantage of an opportunity. The decision to counterattack must be taken very carefully for when he gets up out of the ground, the defender forfeits many of his advantages.

As is the case in any attack, counter-attacking units seek to avoid enemy strength. When counterattacking against first-echelon forces, units maneuver only to the extent necessary to place effective fire on the enemy. This should require no more than movement along covered routes from one battle position to another. If the brigade is to stay and defend against another enemy echelon, the counterattacking force must complete its tasks and regain good defensive positions before overwatching or following enemy echelons can interfere.

In planning a counterattack, the brigade commander must carefully consider the enemy situation and, as precisely as possible, calculate time and distance factors relating to following enemy echelons. Then he must determine which units can attack, where they are located, where they must position after the counterattack, and what suppression is necessary to isolate the enemy to be attacked.

FIRE DISTRIBUTION

Fire distribution begins at brigade with the positioning of battalion task forces. Before positioning units, the brigade commander estimates how many weapon systems are required to destroy the number

of enemy expected on each avenue of approach and task-organizes his command.

It is also necessary to clearly designate areas of responsibility so that all enemy targets are engaged and so that maneuver forces and fires can be moved about as the battle develops. A common system for designating these areas permits the fires or forces of two or more units to be concentrated in a specific area or areas. These areas of responsibility should be planned to cover the terrain out to a limit where enemy weapon systems can first be engaged.

Such a system also permits the rapid integration of fires from reinforcing units which may be attached to the brigade. Obstacles, attack helicopter fires, artillery, and close air support are integrated into the fire distribution plan. Obstacles are designed to slow the enemy, disrupt his attack schemes, and generally to improve the defender's engagement opportunities. Scatterable mines are deployed to reinforce existing obstacles or to slow and disrupt enemy forces which have avoided obstacles.

Attack helicopters and USAF close air support aircraft should be used together, employing joint air attack tactics to suppress and destroy air defenses and to destroy armored vehicles. Field artillery suppresses, destroys thin-skinned vehicles, separates infantry from tanks, and lays down smoke.

STRONGPOINTS

In some cases, division or brigade commanders may direct that a *strongpoint* be emplaced by a mechanized unit—usually a battalion. The strongpoint is essentially an antitank "nest" which cannot be quickly overrun or bypassed by tanks. It can be reduced by enemy infantry only with the expenditure of much time and overwhelming forces. A strongpoint is located on a terrain feature critical to the defense, or one which must be denied to the enemy. It is the cork in

a bottleneck formed by terrain obstacles and units.

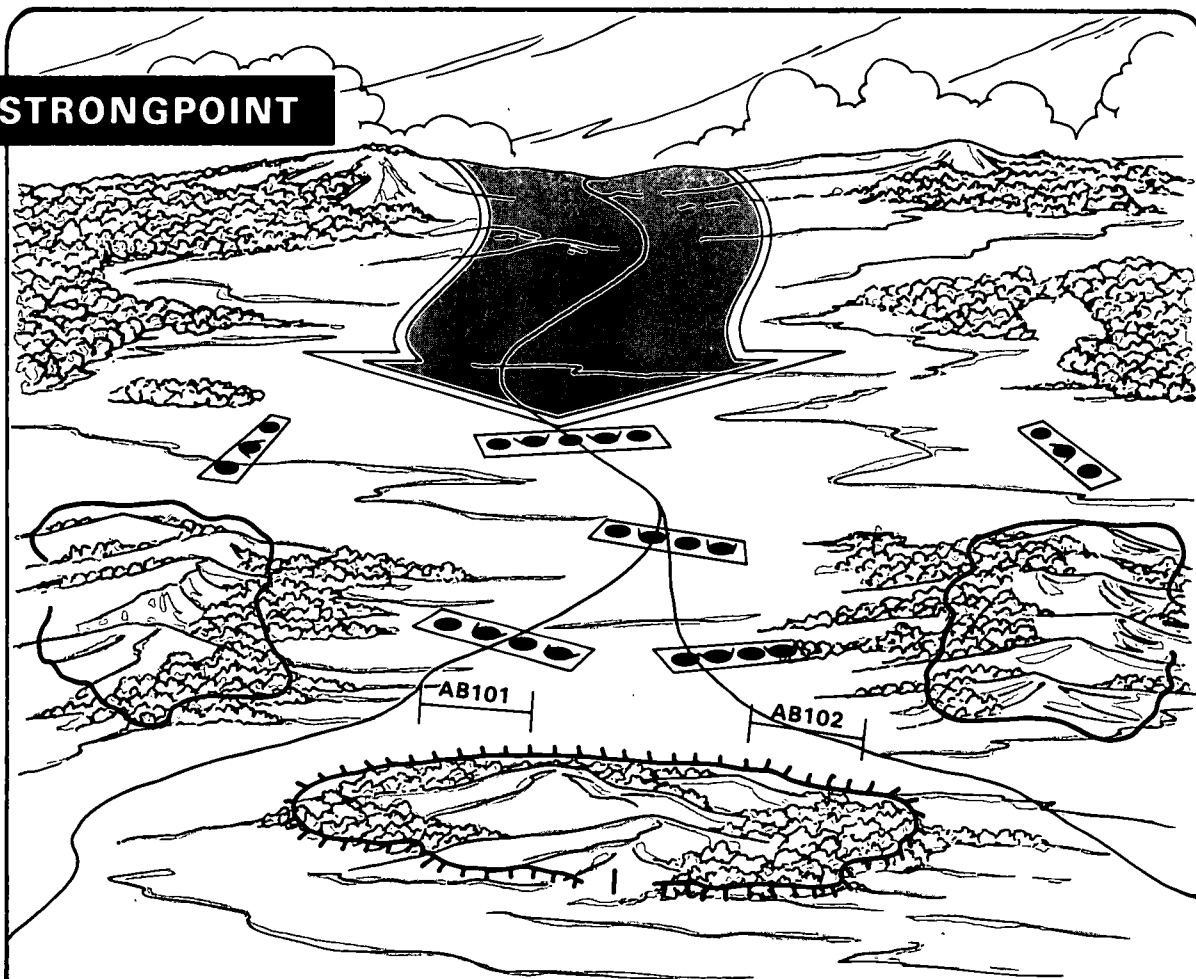
A strongpoint position should be fortified as extensively as time and materials permit. All weapons should be dug in with overhead cover in primary and alternate positions. Communications trenches and wire lines should be installed to permit control of forces and some movement of weapons under fire. Indirect supporting fires should be planned in detail.

A strongpoint is not routinely established. It is established only after the commander determines that a strongpoint is absolutely necessary to slow the enemy or prevent a

penetration of his defensive system. The decision must be carefully weighed.

- Considerable time, barrier material, and engineer support are necessary to develop an effective strongpoint.
- The force that establishes the strongpoint may become isolated or lost.
- The force that establishes the strongpoint loses its freedom to maneuver outside the strongpoint.
- The force that establishes the strongpoint must be given sufficient time to build the position—the more time the better.

STRONGPOINT



COMMAND CONTROL

Oral and written instructions and overlay graphics are used to lay out the brigade defense scheme. Graphics should be comprehensive, but flexible enough to be used throughout the battle in response to fragmentary orders.

Battle positions and sectors can be used in several ways depending on how the commander intends to fight the battle. Battle positions have the advantage of insuring best use of specific terrain in concert with the brigade commander's battle scheme.

THE BRIGADE COMMANDER NORMALLY COMMANDS FROM A TACTICAL COMMAND POST LOCATED NEAR UNITS CONTROLLING MAJOR AVENUES OF APPROACH INTO THE BRIGADE BATTLE AREA

The brigade commander normally commands from a tactical command post located near units controlling the major avenues of approach into the brigade battle area. The brigade tactical command post must provide the commander the command control capabilities to continuously watch the enemy in real or near real time, to know where his units are and what they are doing, to know what is happening in adjacent unit areas, and to be able to direct concentration of forces and fires.

ECONOMY-OF-FORCE OPERATIONS

A brigade conducts economy-of-force operations when directed to do so, or when the brigade commander determines that some risk can be taken in part of his area in order to concentrate forces elsewhere. *The brigade itself may act as an economy of force for the division; a battalion of the brigade might be assigned an economy-of-force mission for the brigade.* Economy of force is a mission demanding the utmost in command control and mobility. The economy force must operate independently. High mobility forces—air cavalry and attack helicopters—are extremely helpful in economy-of-force operations. Economy-of-force units should be provided enhanced surveillance means to extend early warning range.

MOBILITY AND COUNTERMOBILITY OPERATIONS

In the defense, engineers concentrate on countermobility. However, it is necessary to open and maintain routes for rapid movement by brigade forces from one battle position to another, and for supply, maintenance, and recovery.

Should it be necessary to cross a water obstacle while moving from one battle position to another, battalion task forces conduct hasty crossings. To the extent possible, this should be planned for in advance, with suitable crossing sites selected and prepared. In any event, engineers must provide sufficient bridging for use in both the CFA and MBA and see to it that existing bridges are reinforced, repaired, or replaced with tactical bridging when necessary. River-crossing operations are described

in detail in FM 90-13, *River Crossing Operations*, and FM 5-100, *Engineer Combat Operations*.

Obstacles are used to increase target servicing opportunities and to increase the time the enemy is exposed to direct fires of the defending force. Natural obstacles in the brigade area should be reinforced, and man-made obstacles created whenever necessary.

In brigade operations, the most useful obstacles are those which impede vehicular mobility—especially the movement of tanks and other tracked vehicles. The most useful reinforcing obstacles are antitank ditches and randomly scattered mines. Employment of obstacles is described in FM 90-7, *Obstacles*.

The following principles must be considered when using obstacles in defensive operations:

■ **Obstacles should be used to move enemy forces out of cover and concealment into open areas covered by direct fires.**

■ **Obstacles planning begins concurrently with terrain analysis;** reinforcing obstacles must be integrated into the brigade tactical scheme.

■ **Obstacles should be sited to increase the time enemy weapon systems will be exposed to fires, direct and indirect.**

■ **Obstacles should be employed in depth,** one behind the other, along and astride avenues of approach every 200 to 500 meters.

■ **Obstacles should be far enough apart** so that each requires the enemy to redeploy his breaching equipment.

■ **Reinforcing obstacles should be camouflaged, concealed, or employed in such a way that the enemy is surprised when he runs up on them.**

■ **Obstacles should be covered by direct and indirect fires, sensors, or, if necessary, direct observation.**

■ **Concealed lanes and gaps through obstacles should be provided as necessary,** so that friendly units may move through the obstacles. These gaps must be covered by fire.

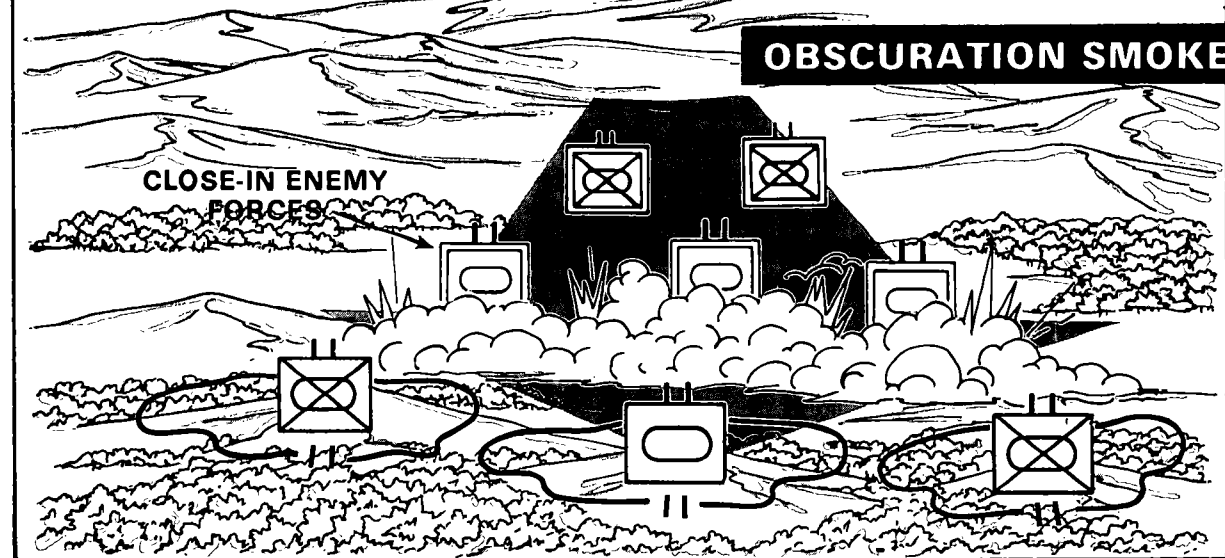
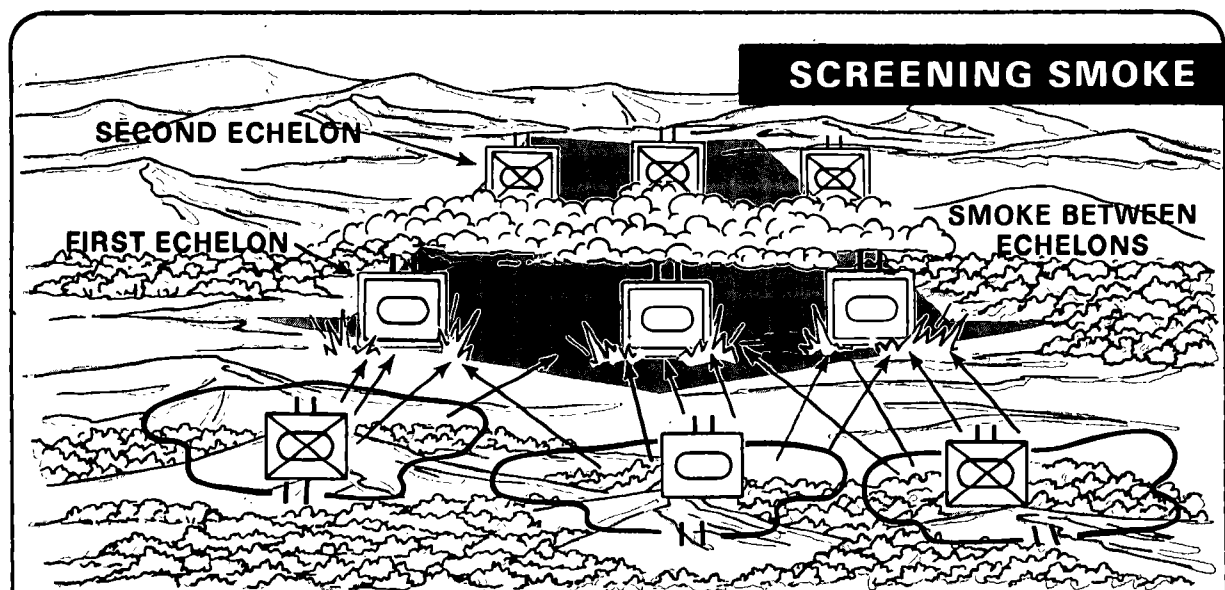
The brigade direct-support company, fire support coordinator, and S3 work together to prepare the obstacle plan.

SMOKE OPERATIONS

In the defense, screening smoke may be used between enemy first- and second-echelon battalions to conceal from them what is going on in the first-echelon fight, and to slow the rate at which they join the fight. Screening smoke may be used to enable elements of the brigade to disengage and redeploy while close to enemy forces.

Obscuration smoke may be used on close-in enemy forces, but not without risk. Close-in

smoke reduces opening engagement ranges and so decreases time available to engage targets in the attacking first echelon. Too many targets can present themselves in too short a time and the defensive system is overloaded. This must be avoided. The advantage of close-in smoke must be carefully weighed against the risk that the enemy will get too close, too quickly, with too many systems.



OPERATIONS DURING PERIODS OF LIMITED VISIBILITY

During daylight, intervisibility is affected by changing natural and man-made battle-field conditions. Weapons sited to take advantage of long-range fields of fire and observation during periods of good visibility may not be effective when fog, haze, smog, or smoke is present. Company and battalion commanders should therefore be prepared to move weapons to higher or lower ground to overcome the effects of such conditions.

In snow or heavy rain which degrade most vision systems, defenders must close in on the avenues of approach they are defending. Some sensors may be useful during rain and snow, and radar can sometimes penetrate.

Threat forces routinely continue attacks into the night to sustain momentum. If a hasty attack is stopped, the enemy may move to a deliberate attack. Threat forces use artificial illumination—flares, searchlights, and infrared equipment. With a full suit of passive gear, the defender has a significant advantage. *However, full exploitation of the advantage depends on ruthless light discipline in the passive equipped force.*

Enemy dependence on active infrared night-driving equipment results in slower movement and permits acquisition by friendly night observation devices. Adjustment of artificial illumination causes maneuvering forces to pause. Either way, defenders have more time to react, concentrate, and engage.

Threat active infrared equipment is effective up to about 900 meters. Passive equipped defenders can identify and engage targets well beyond this range, even in poor ambient light. Defenders can move in relative security beyond the range at which they can be seen to engage an enemy who cannot see them.

When units are equipped with modern night equipment, defense at night is generally conducted as in the day. When not fully equipped with night sights and goggles for vehicle commanders, friendly units may have to rely on artificial illumination to see the enemy well enough to destroy him. Initial use of artificial illumination should be carefully controlled to preclude premature disclosure of the defender's position.

OTHER DEFENSIVE OPERATIONS

RELIEF IN PLACE

When a relief in place is ordered for a defending unit, the relieving unit usually assumes the same responsibilities and generally deploys in the same configuration as the relieved unit. If time limits conduct of a relief, selected weapons and other equipment may be exchanged between the incoming and outgoing units. The headquarters ordering the relief should direct the extent to which such exchanges are made.

A relieving brigade commander insures his initial dispositions conform to the defensive scheme of the brigade being relieved. Generally, changes in the scheme of defense should be set aside until the relief has been completed. Time to begin and to complete relief and route priorities is specified and agreed upon. The relief should be conducted during darkness or other conditions of reduced visibility.

Unless otherwise specified, the relief is executed by stages, either from rear to front, or from front to rear, the sequence being determined by:

- Future missions intended for the unit being relieved.
- Strength and combat effectiveness of the outgoing unit.
- Ability of the enemy to detect and react to the relief.
- The area of operations.
- Size and type of units conducting the relief.

Relieving unit commanders to the lowest possible level are briefed in detail by their counterparts. Personal reconnaissance by relieving unit commanders is essential. The outgoing unit should provide liaison personnel who know the operational area.

The time when the relieving commander becomes responsible must be clearly established by mutual agreement or as directed by higher headquarters. Until command passes, the commander of the unit being relieved is responsible for the area and mission.

Normally, command passes when battalion task force commanders are in position and communications have been established. At that time units that have not been relieved can be placed under operational control of the relieving brigade commander.

Fire support is provided to relieving units by artillery units supporting the outgoing brigade. When all relieving units are in position, artillery units exchange responsibilities as necessary.

DELAY OPERATIONS

Delay operations are conducted when there are insufficient forces to attack or defend, and it is necessary to trade space for time. The tactics of delay operations are like those of

the active defense. However, while the purpose of the defense is to *stop* the enemy, the purpose of the delay is to *slow* the enemy or disrupt his advance, often for a specified time. Thus, *in a force delaying, some subordinate units may be attacking, some defending, some disengaging, some moving to other positions.*

The whole division may delay; or a brigade might delay while the remainder of the division concentrates elsewhere. A delaying force must simultaneously:

- Destroy as much of the enemy force as possible.
- Cause the enemy to plan and execute successive deployments of force and fire support.
- Preserve freedom of maneuver.
- Preserve the force to fight again.

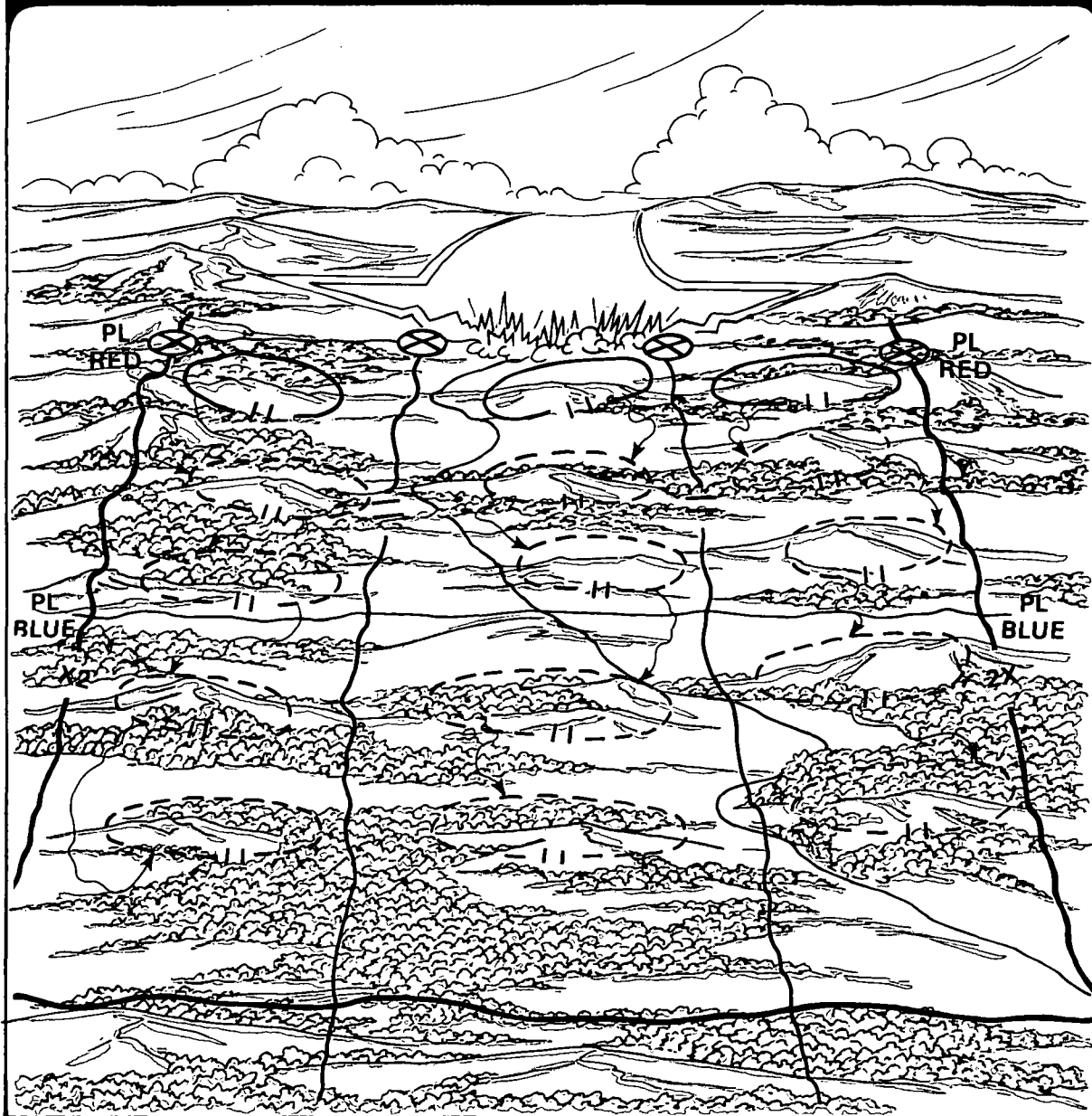
The normal operational scheme in the delay is to force the enemy to concentrate, again and again, against successive battle positions. Just as the enemy gets everything organized, when his artillery starts to fire and his ground units deploy and start to maneuver, the delaying force moves to its next set of battle positions. The enemy must then go through the same time-consuming process once again. In this process space is traded for time.

Sometimes it is necessary to delay the enemy in a specified area for a certain time. When this is so and sufficient maneuver space is not available, battalion task forces of a delaying brigade defend—holding terrain and conducting counterattacks.

If the brigade commander finds that he cannot successfully delay the enemy and still preserve his force, the division commander must be told. The division commander must elect to accept less time in exchange for preserving the force or risk losing all or part of the delaying force to gain the time he believes he needs.

The delay will be much more difficult to execute if the initiative is left to the enemy. A delaying brigade commander should therefore devise a scheme of operation that will seize the initiative, even if only temporarily and even if in a limited locale. Successful conduct of a delay requires the utmost in command control and mobility.

DELAY OPERATIONS



WITHDRAWAL OPERATIONS

A withdrawal is an operation in which all or part of a force disengages from the enemy. Its purpose is to move a force out of an area in order to employ it for another mission in another area.

In disengaging from the enemy, it is important to put distance between the disengaging force and the enemy as quickly as possible, preferably without the enemy's knowledge. Disengagement and withdrawal are best accomplished during darkness or other periods of limited visibility, even though command and control may be more difficult.

Timing of the decision to disengage is critical; made too late, the decision could be impossible to execute. In some cases, it might be less risky to fight an action to its conclusion than to break contact to fight elsewhere. Sometimes it may be necessary for part of the force to attack, or conduct a feint or demonstration in order to allow the remainder to disengage.

The larger the disengaging force, the more important become operations security

measures taken to keep the operation from being revealed to the enemy. Once the operation begins, it may be necessary to conduct deception operations to deceive or confuse the enemy. **Deception operations are described in FM 90-2, Tactical Deception.**

As a general rule, *once disengagement has begun, a smaller force is left to cover the withdrawal of a larger force.* Its purpose is to prevent the enemy from reengaging the withdrawing force and to deceive the enemy into believing that friendly dispositions are unchanged. This covering force may have to attack, defend, or delay. A division commander could cover a withdrawal with a brigade; the brigade commander could cover a withdrawal with a battalion or perhaps a company team.

Normally a brigade will be employed as a covering force to permit withdrawal of the rest of the division. If the brigade is part of the disengaging and withdrawing force, a battalion of the brigade normally will cover the withdrawal.

CHAPTER 5

Combat Support

GENERAL

Combat support, such as fire support from field and air defense artillery, USAF fighter bombers, and Army aviation; engineers; combat intelligence and electronic warfare; signal; and military police, is provided the brigade by divisional and nondivisional units. Command control of combat support units supporting the brigade is based on unit mission and customary support relationships specified by division.

Units in *direct support* (DS) of the brigade respond as a first priority to brigade requirements and as a second priority to the needs of the division or larger force of which the brigade is a part. A field artillery battalion in DS of the brigade, for example, establishes communications and provides fire support officers to the brigade and its battalion task forces. The brigade commander sets priorities for fire support of his task forces. The brigade may also receive support from divisional or corps *general support* (GS) units. Divisional GS units support all brigades of the division.

Attachment and operational control, each described as a status rather than a mission, make the supporting unit totally responsive to the supported unit's needs. In the case of an attachment, the supported unit must also provide combat service support for the attached unit.

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ALLOCATION AND EMPLOYMENT

A light- or medium-cannon battalion is normally found in a separate brigade. A divisional medium-cannon battalion usually fires in direct support of a divisional brigade. Infrequently, a corps field artillery brigade may operate in direct support of a brigade. *A field artillery brigade is normally organized with two to four battalions of medium- or medium- and heavy-caliber cannon or missile systems.* Additional field artillery support may be provided by reinforcing the fires of brigade DS artillery with the fires of one or more field artillery battalions.

Fires of field artillery battalions operating in general support of the division can also be made available to the brigade when necessary. Field artillery is used to suppress enemy indirect-fire weapons and antitank guided missile teams, to keep enemy tanks buttoned up with overhead fires, to lay down smoke to blind enemy observers and gunners, and to separate infantry from tanks.

In a movement to contact, the fires of a supporting field artillery battery may be dedicated to a battalion or a company by the brigade commander. In such cases the battery responds directly to the needs of the battalion or company commander.

Direct support unit commanders select firing positions for their units and for reinforcing units. They work with the brigade S3 and commander to insure that firing positions will not interfere with positioning of maneuver battalions.

MORTARS

In addition to direct- and general-support field artillery, brigade fire support means include a 107-mm mortar platoon in each battalion and 81-mm mortars in each company. The primary mission of mortars is

to provide smoke and illumination. They can also suppress enemy gunners with high-explosive ammunition.

OFFENSIVE AIR SUPPORT

Offensive air support is provided to the brigade through allocation of aircraft sorties by a superior headquarters. A sortie is one aircraft flying one round-trip mission to and from its home base. Two categories of offensive air support are a part of brigade operations:

- ***Tactical Air Reconnaissance*** is acquisition of information from observers or sensors mounted in Air Force aircraft.
- ***Close Air Support (CAS)*** is the attack of enemy forces by fighter bombers whose proximity to friendly forces requires integration of each air mission with the fire and maneuver scheme of friendly forces.

A third category, **battlefield air interdiction**, is also important. Normally conducted against second-echelon forces, it does not require integration with brigade fire and maneuver schemes.

In order to simplify planning, CAS missions are conducted against those enemy targets located short of the FSCL, while battlefield air interdiction is conducted against enemy targets located both short of and beyond the FSCL.

The basic differences between close air support and battlefield air interdiction operations lie in the immediacy of the enemy threat to the fire, movement, and security of friendly forces, and on how far the enemy threat is from the friendly forces. Battlefield air interdiction operations are conducted against targets that are less of an immediate threat and are not in the proximity of friendly forces.

Tactical air reconnaissance is conducted out to distances beyond the range of target-acquisition systems normally available to the brigade. *Tactical air reconnaissance can be particularly useful in locating second-echelon forces and reserves.*

Close air support aircraft attack tanks, armored vehicles, and other targets and may operate with US Army attack helicopter units in joint air attack team operations to attack the same target array. The combination of attack helicopters and USAF fighter bombers is particularly deadly. Operating together, both systems kill at a higher ratio and survive at a higher ratio than when fighting alone.

In order for attack helicopter and USAF aircraft to operate, enemy air defense systems must be suppressed. Electronic support measures and other target-acquisition means should locate enemy air defense systems. *Field artillery and electronic countermeasures should be used to suppress enemy air defenses. Attack helicopters of the joint air attack team can also suppress enemy air defenses, although this is a less desirable solution.* Enemy air defense suppression operations are normally planned and controlled by division or other higher headquarters, although the brigade may participate in the planning. It may also be necessary to use the fires of brigade-supporting artillery to suppress enemy air defenses for close air support operations in support of the brigade or nearby forces.

NAVAL GUNFIRE

When operating by a coastline, naval gunfire support ships within range may also support the brigade. *Naval gunfire is employed as is field artillery.* Shore fire control parties (SFCP) of US Navy and Marine Corps personnel may be attached to the brigade's battalions. These parties are organized with liaison teams to operate with battalion fire support elements, and with

spotters to operate with company teams. *A liaison team will normally be provided the brigade fire support element.*

FIRE SUPPORT PLANNING AND COORDINATION

In battle the brigade commander does not have time to personally integrate the fires of indirect- and direct-fire weapon systems. His fire support officer, a member of the supporting field artillery unit, does this for the brigade commander. The supporting field artillery unit commander is the brigade fire support coordinator (FSCOORD); the fire support officer is his representative, charged with planning fire support and with much of the coordination of ordnance delivery by indirect-fire weapons. *Fire support officers from the supporting artillery unit are also located in each battalion task force.*

Fire support teams (FIST) operate with company teams. The FIST is organized to provide forward observation for all indirect fires—artillery and mortars—firing in support of its assigned company. A USAF tactical air control party (TACP) also operates with the brigade and with each battalion. The TACP—an air liaison officer, forward air controller, and communications personnel—works with the brigade S3 air and fire support officer to plan for and coordinate offensive air support for the brigade. Air strikes are normally controlled by forward air controllers, although US Army FIST chiefs are trained to do so when necessary. **FM 100-26, The Air-Ground Operations System**, contains details of the air ground systems.

Fire Support Planning. Fire support planning begins with the brigade commander's guidance and ends as the operation ends. The fire support plan describes how fire support is to be allocated to battalions; how to obtain support; priorities of fire; march routes; restrictions on fires or positioning; and other items as necessary.

Seldom is a complete written fire support plan prepared. If it is, it may be set forth in paragraph 3 of the operations order or published as an annex. The format is prescribed in **FM 6-20, Fire Support in Combined Arms Operations**. Most often, the plan will simply be a target list with any additional information necessary to understand the fire support concept.

Target lists are prepared by battalion fire support officers (FSO) and passed to the brigade support officer. He eliminates duplication and adds targets of special interest to the brigade commander. The brigade FSO may change the fire support means requested by a battalion for certain targets. When this is done, he notifies the battalion FSO. The brigade commander reviews the fire support plan, and it is provided to supporting field artillery battalions and to maneuver battalions. *Lists of targets to be fired on by division artillery are forwarded to the division fire support element.*

The brigade commander relies primarily on a tactical air control party to assist in planning and coordinating his requirements for offensive air support. *Close air support must be integrated with the fires of tanks, artillery, mortars, ATGMs, and attack helicopters used by the brigade.* For CAS to be effective, special procedures are required. One such procedure incorporates planned fires on predesignated target zones (PTZ). The PTZ identifies approaches into and exits from these target zones; designates attack profiles; and lists the initial, release, and pop-up reference points.

Predesignated target zones are planned; *in defense*, they are generally near battle positions or areas in which ground forces fight. *In the offense*, they are generally against enemy defensive positions, assembly areas, and along major avenues of approach. Time permitting, target folders should be prepared for each PTZ and made available to each TAC fighter wing and reconnaissance

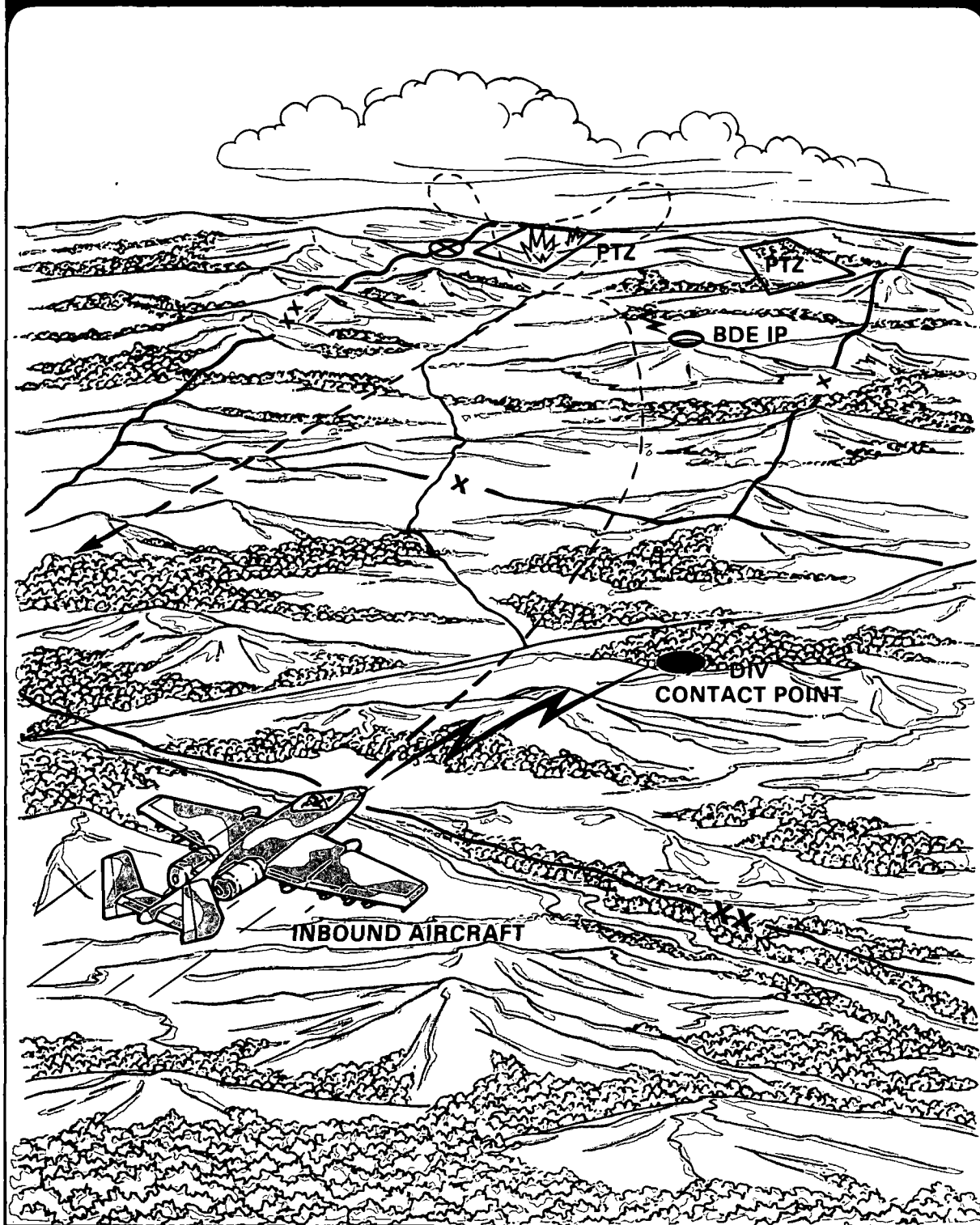
wing, to airborne and ground forward air controllers (FAC), and to maneuver unit commanders of brigade and battalion. Target folders, prepared jointly by Air Force and Army planners, show low-level routes from air bases to PTZs and designated points along those routes.

The location, composition, activity, and movement of enemy forces and their arrival in PTZs must be known in order to attack them at the proper time.

- **In the offense, tactical air reconnaissance is used to identify, locate, and track major opposing force reserves in order to target them for attack in the PTZ. PTZs are planned along routes which the enemy could use or in areas where he would logically establish defensive positions to counter our attack.**
- **In the defense, tactical air reconnaissance is used to determine the location and direction of the enemy main effort, and to target enemy first- and second-echelon regiments as they enter PTZs.**

The following illustration shows an aircraft inbound to the division contact point with a predesignated target. At the division contact point, if no radio contact can be made with any of the various controlling relay agencies, the mission would proceed to the brigade initial point (IP) and then continue inbound to the PTZ where the aircrew would attempt to visually acquire the predesignated target, release ordnance, and return to base. If radio contact can be made at the division contact point, the aircrew will be given clearance to attack the predesignated target, or it may be given a brigade IP for attack of a high-priority target, either preplanned or immediate CAS. The fighter passes the division contact point en route to the specific brigade IP servicing the PTZ to be attacked.

CAS ENROUTE WITH PREDESIGNATED TARGET



**REQUESTS FOR CAS ARE
ENTERED INTO USAF
COMMUNICATION CHANNELS
AS QUICKLY AS POSSIBLE**

If communications permit, the airstrike will be conducted using normal FAC procedures. If communications are marginal, the FAC can relay essential target information or simply give clearance to attack.

Suppression of enemy air defenses is also planned. These careful preparations are necessary to reduce aircraft exposure to hostile fire and minimize ground-to-air communications—forward air controller to pilot—necessary to bring the strike in.

Requests for immediate close air support may originate as low as a platoon. However they originate, air requests are entered into USAF communications channels as quickly as possible and routed directly to the tactical air coordination element located in the corps tactical operations center. *The request is monitored at each level of command and, unless some intermediate headquarters objects, it is approved providing aircraft are available.*

During offensive operations, fire support is planned along the route of march, in front of, on top of, and beyond the objective to suppress enemy gunners and to degrade enemy ability to maneuver, control fires, and to resupply. A preparation may be fired. Preparation fires are usually delivered in prearranged sequence to break up enemy defenses prior to the arrival of attacking forces. *The decision to fire a preparation is most often made by the division commander, although sometimes one may be ordered by the brigade commander.* Factors which influence such a decision:

- Will the anticipated effect of the preparation offset loss of surprise?
- Have sufficient targets been identified to warrant a preparation?
- Is sufficient fire support available?
- Can the enemy recover before fires can be exploited?

During defensive operations, fire support is planned along avenues of approach to disrupt the enemy attack. Final protective fires may also be planned in support of battle positions or strongpoints. When this is done, the brigade commander allocates these fires to his battalions.

Finally, the availability or nonavailability of fire support can affect the scheme of maneuver. A scheme of maneuver that depends upon heavy fire support will not work if the fire support is not available.

Fire Support Coordination. The fire support officer, brigade S3 air, and the TACP work together to coordinate fire support for the brigade. In selecting the best weapon to attack the target, they consider:

**THE FSO, S3 AIR, AND TACP
WORK TOGETHER TO
COORDINATE FIRE SUPPORT
FOR THE BRIGADE**

- **Characteristics of the target and desired effect.**
- **Capabilities and limitations of available weapons.**
- **Most economical means.**
- **Availability of ammunition.**
- **Response time.**
- **Safety of friendly troops.**

The brigade commander may restrict the manner of attacking targets. Seldom will sufficient ammunition of all types be available to him. Perhaps the most important consideration for the brigade commander and his FSCOORD is the ammunition controlled supply rate (CSR). The CSR, usually expressed in rounds per weapon per day, is that rate of consumption that can be allocated based on ability to resupply. *The CSR impacts directly on how best to attack the target and provides a basis for firing restrictions.*

Several measures are used to coordinate fire support. Those of immediate interest to the brigade are:

- ☐ **Coordinated fire lines (CFL)**—Lines beyond which field artillery, mortars, and naval gunfire ships may fire at any time without additional coordination.
- ☐ **Restrictive fire lines (RFL)**—Lines established to coordinate fires between converging or adjacent friendly forces.
- ☐ **Restrictive fire areas**—Areas where fires which exceed restrictions will not be delivered without prior coordination with the establishing headquarters. A restrictive fire area may be established at battalion and higher levels and is generally sited on identifiable terrain to facilitate recognition from the air.
- ☐ **Forward line of own troops (FLOT)**—A line which indicates the most forward positions of friendly ground forces at a specific time.
- ☐ **Fire support coordination lines (FSCL)**—A line established at division or corp level, forward of which all targets may be attacked by any weapon system without danger to, or additional coordination with, the establishing headquarters. This line applies to all conventional, improved conventional, special ammunition, and their effects, delivered by any means. The purpose of this line is to expedite the attack of targets beyond that line. It is located on identifiable terrain easily recognized from the air.

Fire Request Channels. Most targets for brigade fire support units originate with fire support teams operating with maneuver company teams. *Requests for immediate fires are forwarded to the delivery unit by the fastest means available.* Planned target requests are forwarded through each level of command to the level where appropriate action can take place.

Fire support is described in detail in FM 6-20, **Fire Support in Combined Arms Operations**.

AIR DEFENSE ARTILLERY SUPPORT

The brigade commander establishes air defense priorities in his operational area. Man-portable air defense missile systems are found in infantry, airborne, and airmobile battalions and in most units normally support the brigade. The brigade is generally under the umbrella of a Hawk missile battalion operating in support of the division. Infrequently, a Chaparral unit or, in the case of a separate brigade, a Hawk unit, may operate with the brigade. Such weapon systems are best employed to protect

relatively fixed installations—command posts or brigade trains.

In divisional brigades, Vulcan batteries or platoons are often placed in direct support of a brigade; those operating with the brigade may support the brigade as a whole or be placed in direct support of a subordinate battalion. Vulcans operating under brigade control may be used to protect the command post and brigade trains. Infrequently, Vulcans may be used in a ground support role; however, this should not be done routinely since Vulcans consume large amounts of ammunition very quickly.

Air defense weapons operate under controls established by the senior air defense command in the theater of operations or other authorized command. Controls are expressed as weapon status:

- **Weapons Free**—May fire at aircraft not positively identified as friendly.
- **Weapons Tight**—Fire only at aircraft positively identified as hostile according to announced criteria.
- **Weapons Hold**—Do not fire except in self-defense.

COMBAT ELECTRONIC WARFARE AND INTELLIGENCE (CEWI) SUPPORT

A divisional intelligence company normally operates with a divisional brigade. Similarly, such a company is assigned to a separate brigade. *These companies are organized to gather information through electronic support means and to attack enemy electronic emitters by jamming.* Good targets for attack by jammers are enemy battalion-to-regiment command control and fire direction nets. CEWI units can also conduct operations security surveys to locate weaknesses in brigade operations security procedures. While ground surveillance radar teams are assigned to separate brigade CEWI companies, teams are normally provided to divisional brigades by the divisional CEWI battalion. Some or all radars may be retained under brigade control; most often, however, they are attached to battalions. Prisoner of war interrogation teams may also operate in support of the brigade.

**GOOD TARGETS FOR ATTACK
BY CEWI JAMMERS ARE
ENEMY BATTALION-TO-
REGIMENT AND FIRE-DIRECTION
NETS**

ENGINEER SUPPORT

A divisional engineer company usually operates in support of a divisional brigade, while a separate brigade has an assigned company. An engineer company may support the brigade as a whole, or its platoons may support battalion task forces.

In the offense, it is normal to attach a platoon of engineers to each leading battalion task force. Here mobility operations have priority—bridging gaps, opening roads, and breaching minefields.

In the defense, countermobility is generally the priority—emplacing minefields; preparing tank ditches and other barriers and obstacles. With their earth-moving equipment, engineers can quickly dig tank, howitzer, and ATGM ramps as positions.

AVIATION SUPPORT

A brigade may use US Army aircraft for command control, reconnaissance, or to move troops, supplies, and equipment. A separate brigade has its own aviation section, with six observation and two utility helicopters. All other aviation support must come from outside the brigade.

A divisional brigade gets its combat support aircraft from the divisional aviation battalion. *A brigade support section of five observation helicopters and one utility helicopter is usually placed under operational control of the brigade.* The section is used for liaison, reconnaissance, and, sometimes, command control. Normally, however, against an enemy with a fully developed air defense system, helicopters cannot be used routinely for command control.

Helicopters to move troops and equipment or to resupply brigade units are provided by the aviation battalion's combat support aviation company. If for some reason USAF tactical airlift is needed, it is obtained by the division to support the brigade.

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) RECONNAISSANCE AND DECONTAMINATION SUPPORT

When it is necessary to do so, the divisional nuclear, biological, and chemical company

supports the divisional brigade. A detachment, provided by a higher command, supports a separate brigade. In any event, such units can reconnoiter terrain to determine the extent of any radiation, biological, or chemical hazard. They can also establish equipment and personnel decontamination stations and provide for clothing exchange. Such units have a limited terrain decontamination capability. These operations are described in **FM 3-87, Nuclear, Biological, and Chemical (NBC) Reconnaissance and Decontamination Operations.**

SIGNAL SUPPORT

A signal company is assigned each separate armored and mechanized brigade. Signal support to divisional brigades is provided by the divisional signal battalion. Brigade communications are described in **Chapter 7, Command Control of Combat Operations.**

MILITARY POLICE SUPPORT

The brigade may require military police support for prisoners of war, refugee control, traffic control, and maintenance of law and order. A military police platoon is assigned to a separate brigade. A platoon from the division's military police company is normally placed in support of a divisional brigade.

CHAPTER 6

Combat Service Support (CSS)

GENERAL

A divisional brigade does not have organic combat service support units. It does have a personnel staff officer (S1) and logistics staff officer (S4) to coordinate brigade combat service support operations. A separate brigade has an assigned support battalion to provide for most of its combat service support. Because of the significant difference in combat service support for the two types of brigades, they are described separately.

DIVISIONAL BRIGADE

Combat service support is provided to the divisional brigade by *division support command* (DISCOM) and by *corps support command* (COSCOM) units. DISCOM and COSCOM units supporting a brigade are organized into brigade trains which are located in the brigade support area. The brigade S4 is in charge of the brigade support area. Here he coordinates support operations for units of the brigade. While elements of battalion field trains may operate in the brigade support area, the size and security requirements of such a collection of vehicles dictate that the battalions normally will retain control and service their own trains—combat and field.

Brigade trains are organized around forward area support elements provided by the DISCOM. The DISCOM commander, working with the brigade S4, forward area support coordinator, division G4 and G1, and DISCOM battalion commanders, tailors

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DISCOM *forward area support teams* (FAST) (identified as **forward support elements** in FM 71-100) based on operational requirements of the brigade. Although the organization of the FAST may vary from time to time, each element generally has a forward support maintenance company, a forward supply section from the supply and transport battalion, and a medical company.

The FAST may also include: ***maintenance support teams*** from the maintenance battalion's heavy maintenance company, missile support company, and transportation aircraft maintenance company; ***elements of the supply and transport battalion motor transport company***; and ***graves registration, bath, and clothing exchange elements***.

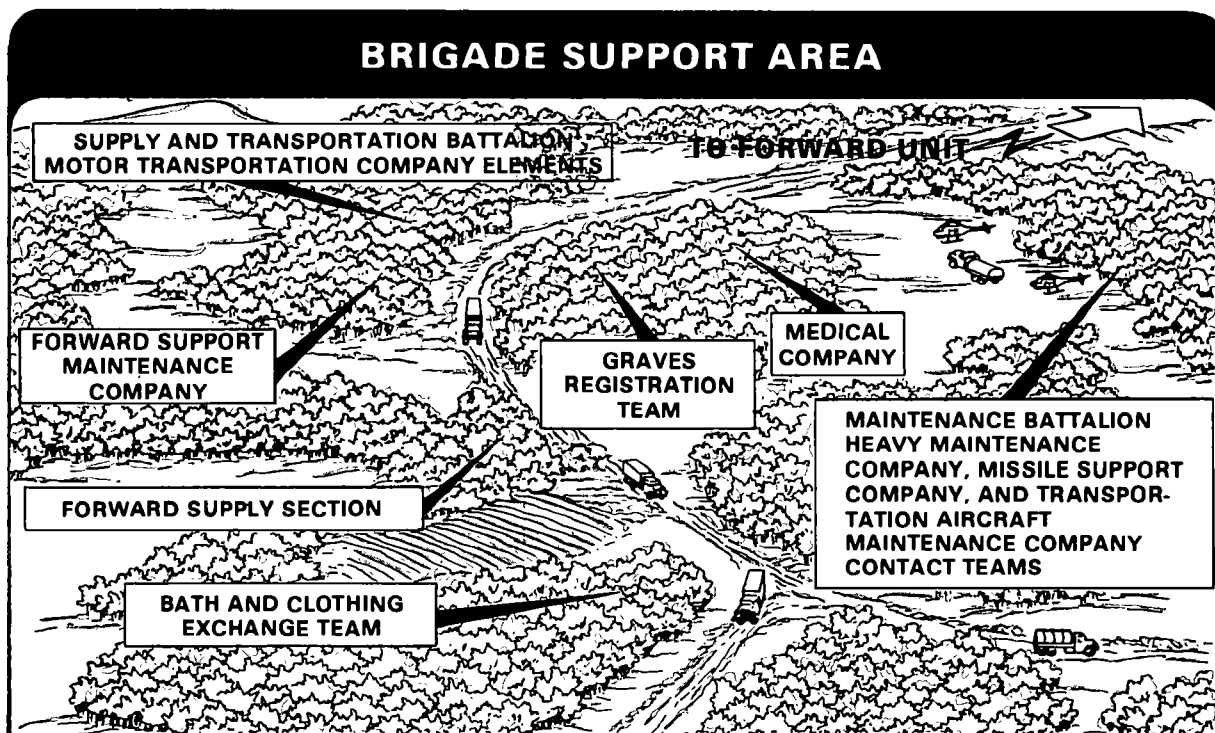
The FAST operates from brigade support areas with some elements, such as maintenance support teams, operating with battalion task force trains. Other DISCOM units are normally located in the division support area. *The brigade support area should be located as far forward as necessary to provide*

timely support. As a general rule, the brigade support area should be out of range of enemy field artillery, although this is not always possible. It will be located further to the rear during defensive operations than during fast-moving offensive operations.

A good brigade support area is located outside of enemy artillery range. It also has:

- Space for dispersion.
- Good cover and concealment.
- Suitable road nets.
- Solid ground for vehicles.
- Available water.
- Helicopter landing sites.

Built-up areas provide cover, concealment, and shelter and are good locations for brigade trains. Buildings near the edge of the area should be used to preclude entrapment in the center of the built-up area.



A DISCOM forward area support coordinator (FASCO) coordinates the efforts of DISCOM units supporting the brigade. It is frequently necessary to place these units under the operational control of the FASCO, particularly during fast-moving operations. The FASCO works with the brigade S4 and S1 and DISCOM battalion commanders to see that brigade combat service support needs are met.

ARMING

When preparing for combat operations, the brigade S3 works with the brigade S4 and battalion task force operations and logistics staff officers to estimate ammunition requirements. These requirements are normally stated in terms of a required supply rate (RSR), expressed in rounds per weapon per day by type weapon. The RSR is based on the type of operation to be conducted and the number of enemy targets to be engaged. FM 101-10-1, *Staff Officers' Field Manual—Organizational, Technical and Logistical Data*, contains detailed ammunition consumption data. However, it is necessary to modify the published data using experience factors and as a result of a detailed analysis of type and number of enemy weapon systems that must be destroyed; and of anticipated friendly ammunition losses in stowed and bulk loads due to enemy action.

Sometimes the division or higher headquarters establishes a controlled supply rate for specific types of ammunition which should be less than the required supply rate. It is used when the higher command cannot supply as much ammunition as the brigade believes it will need. When this is the case, the brigade commander, working with his S3 and S4, establishes priorities for distribution of controlled ammunition. In the event that the controlled supply rate is considerably short of anticipated requirements, adjustments in the tactical plan may be necessary.

A unit basic load is the amount of ammunition that a unit requires to sustain itself in combat until it can be resupplied. The basic load is prescribed for all identical units of command. The basic load must be fully mobile, using the unit's transportation. It is based on such factors as type and number of weapon systems in the unit and expected expenditures.

Status of unit basic loads must be monitored and an estimate made of the ability of brigade units to replenish basic loads once the operation has started. If basic loads are insufficient to support the operation until they can be replenished, appropriate steps must be taken to resupply or redistribute ammunition.

During peacetime, the location of a unit basic load will vary from unit to unit depending on mission and availability of storage facilities. Some units have basic loads stowed aboard combat and cargo vehicles. Ammunition that cannot be kept loaded for safety or other reasons is stored under unit control in nearby basic load storage areas. Other units' basic loads may be stored in prestock points some distance away from their garrison and under control of an ordnance ammunition unit. *The quicker a unit can load up, the faster it can deploy*; therefore, it is necessary to insure that stored ammunition is identified and segregated by unit, not by type ammunition, and that it is readily accessible. *It is also necessary to periodically exercise the ability of brigade units to load up their ammunition according to loading plans.*

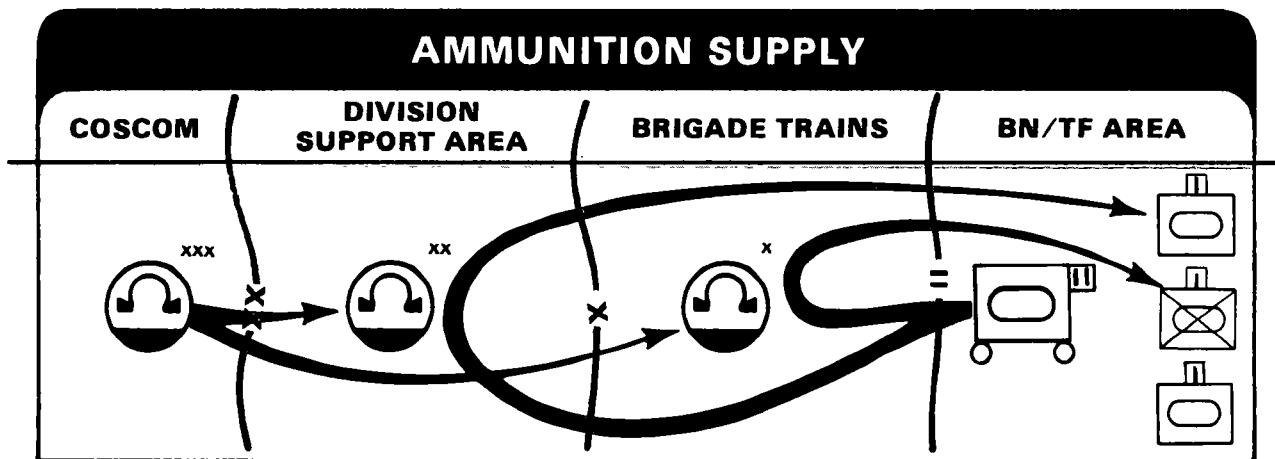
For a number of reasons, the capability of tank and mechanized battalion task forces and field artillery battalions to replenish their basic loads is limited. Battalion cargo vehicles are not suited for long-distance hauling. The high volume-to-weight ratio of some munitions, for example, ATGM, further

limits the number of rounds that can be carried by units armed with that weapon.

The division G4, working with the COSCOM, should see to it that corps ammunition supply points are located as far forward as possible. Delivery times to battalions can also be shortened by:

- Positioning some semitrailers loaded with high usage ammunition—tank ammunition and ATGM for example—in brigade support areas. These supply points are called ammunition transfer points.
- Positioning small stocks of ammunition in covered and concealed areas near unit battle positions or positions expected to be occupied as the battle unfolds during defensive operations. However, these stocks must be carefully planned to avoid the need to destroy or abandon ammunition.
- Having DISCOM or COSCOM units deliver ammunition directly to battalion task forces.

Once the operation begins, the S4 monitors ammunition consumption and works with task force, S4s, and the FASCO to replenish, adjust, and redistribute stocks to support the operation.

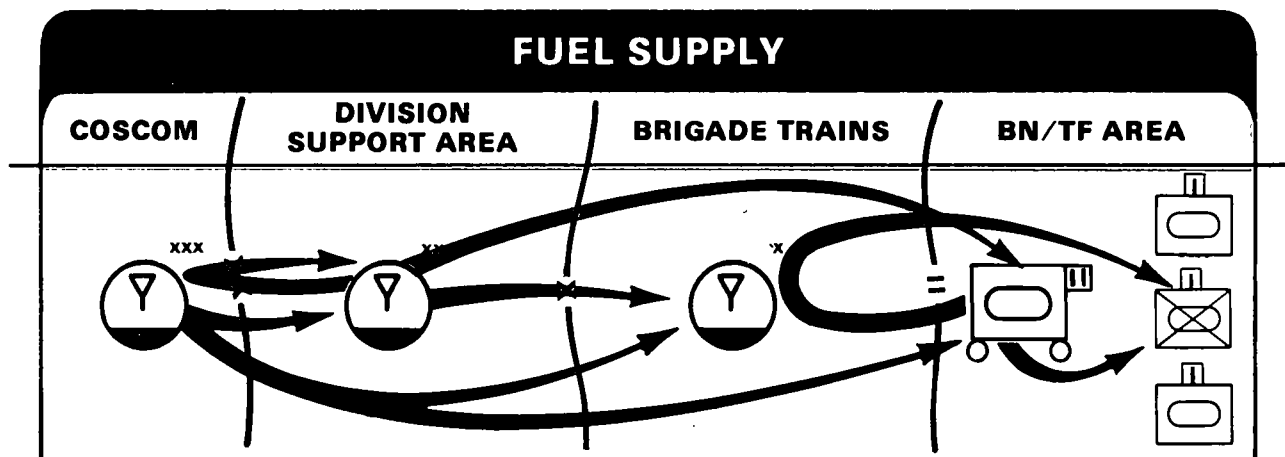


FUELING

Fuel requirements are developed at the division materiel management center based on consumption experience, equipment to be used, and operations plans. Development of forecasts is coordinated with the brigade S4. Requirements are forwarded to the COSCOM materiel management center where they are used as a basis for fuel distribution.

When estimating fuel requirements, special circumstances which could result in unusually high fuel consumption rates should be considered. For example, vehicles operating over hilly terrain will consume more fuel than those operating on relatively level terrain. **FM 101-10-1, Staff Officers' Field Manual—Organizational, Technical and Logistical Data**, includes fuel consumption data. However, this data must be modified by operational experience.

As a general rule, COSCOM delivers *bulk* fuel to *fuel distribution points* located in the *division*. Whenever possible, fuel is delivered from the brigade support area to tank and mechanized battalion task force trains by DISCOM tankers. When necessary, COSCOM tankers can also deliver fuel directly to forward battalion task force trains. Once the operation begins, the S4 follows closely the status of heavily engaged units and, along with the FASCO, replenishes, adjusts, and redistributes stocks to support the operation.



REPAIR AND RECOVERY

Each forward support maintenance company operating in the brigade support area is tailored to the requirements of the supported brigade. Many forward support maintenance company mechanics are organized into maintenance support teams which work directly with tank and mechanized battalion task forces and field and air defense artillery battalions.

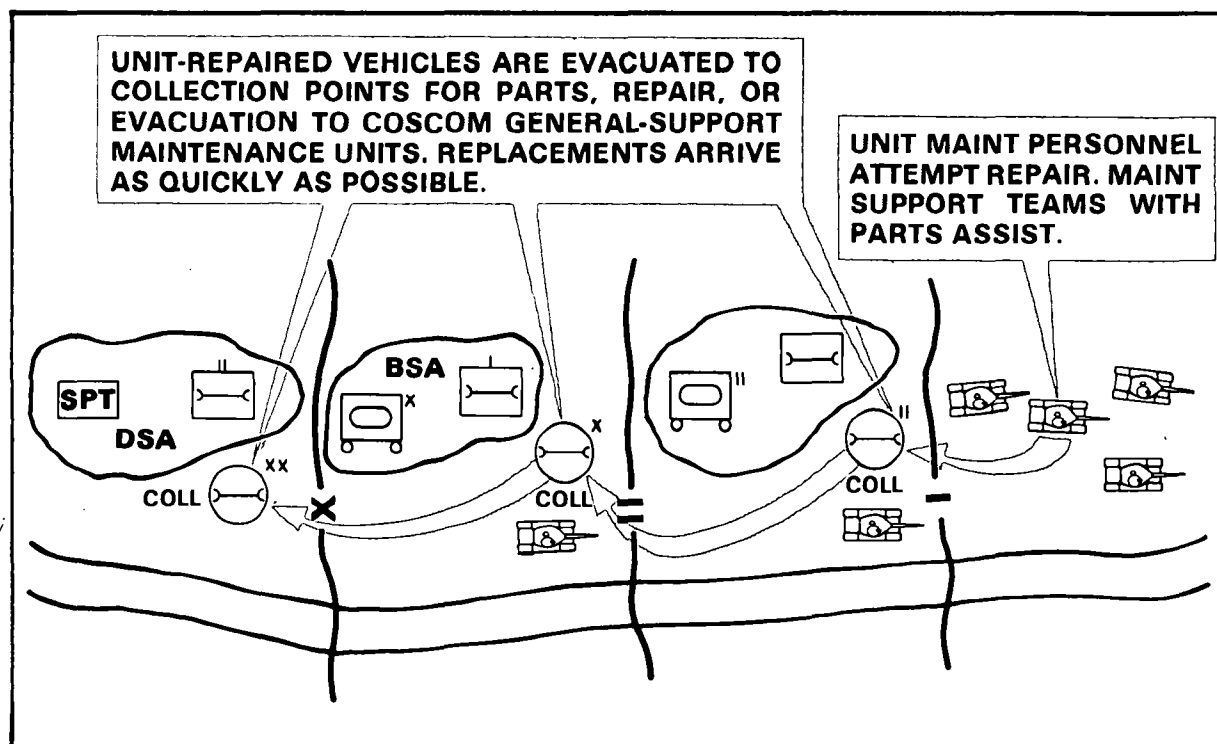
Missile maintenance support teams from the missile support company often operate with forward support maintenance companies. They may be attached to battalion task forces when their special skills are required.

Repair and recovery are accomplished as far forward as possible. When equipment cannot be repaired on site, it is moved only as far as necessary for repairs. It is sometimes necessary to cannibalize—to remove parts from damaged vehicles which cannot be immediately repaired—in order to return

other equipment to combat. Cannibalization decisions should be made as close to the site of damaged equipment as possible, by battalion maintenance officers working with forward support maintenance company personnel. However, *guidelines should be established to prevent uncontrolled cannibalization.*

When equipment cannot be repaired immediately in the forward area, it is moved to a collection point established by the division maintenance battalion for repair or to await evacuation to COSCOM general support maintenance units. *When equipment must be evacuated, it is important to provide a replacement as quickly as possible.*

The division commander has an operational readiness float which normally includes tanks, armored personnel carriers, radios, small arms, and wheeled vehicles. Whenever possible, replacements for repairable equipment come from this operational readiness float. *Equipment replacement can also come from war reserve stocks maintained by theater or corps.*



Replacement crews should join combat vehicles before they arrive in the brigade support area. However, it sometimes may be necessary to join replacement crews with vehicles in the brigade support area. The brigade S1 and S4 work with the division G1, AG, and G4 to see that crews and vehicles are made available and formed up quickly. This process is described under weapon system replacement operations in section II of this chapter and in Chapter 6, *Combat Service Support Operations*, of FM 71-100, *Armored and Mechanized Division Operations*.

OTHER COMBAT SERVICE SUPPORT

Supply. Determining requirements and requesting, receiving, processing, storing, and distributing items to fill these requirements are included in supply operations.

Brigade units stock some *combat-essential* supplies of their own. Their minimum stock levels are generally prescribed by division or, in some cases, by corps, or by Department of the Army publications.

Supplies are delivered to brigade units by division whenever possible. This is called *unit distribution*. In some cases, users must go after their supplies. This is called *supply point distribution*.

The division uses a combination of supply point and unit distribution to supply brigade units. Critical items in short supply may be delivered directly to brigade units by corps or theater support units. This method is most frequently used to provide major assemblies, ammunition, and fuel. *Warning levels should be established to indicate when an item or commodity is in critical supply and exceptional action is required to correct the situation.*

To facilitate supply management, supplies are grouped into ten major classes:

■ Class I	Rations and gratuitous issues of health, morale, and welfare items
■ Class II	Clothing, individual equipment, tentage, tool sets, kits, hand tool sets, administrative and housekeeping supplies, and equipment
■ Class III	Fuel, oil, and lubricants
■ Class IV	Construction materials
■ Class V	Ammunition
■ Class VI	Personal demand items sold through post exchanges
■ Class VII	Major equipment items such as tanks, armored personnel carriers, and attack helicopters
■ Class VIII	Medical
■ Class IX	Repair parts
■ Class X	Nonstandard items to support nonmilitary programs such as agriculture and economic development.

Class III, V, VII, and IX supply procedures were previously described in this chapter; medical supply procedures (Class VIII) will be described later.

- **CLASS I — RATIONS:** Brigade units carry 3-5 days' combat rations on their vehicles. During combat, they are the normal fare; however, when the situation permits, hot meals may be prepared.

COSCOM delivers rations to the division S&T battalion which operates Class I supply distribution points in the brigade areas. Within the brigade, supply point distribution is used.

○ CLASS II AND IV SUPPLIES are issued by the lowest echelon having the item. Normally, supply point distribution is used. Units submit requirements to forward supply elements in the brigade support area. Requests are forwarded to the division materiel management center for items not stocked by forward support elements, then to COSCOM for items not stocked by the division. The supply and transportation battalion or COSCOM delivers supplies to forward distribution points in the brigade support area. Class VI supplies are handled in generally the same way.

Water points are operated by the divisional engineer battalion. Brigade units normally pick up water at the nearest water point. *When necessary, the supply and transport battalion arranges for delivery of water to brigade units.*

Transportation. The brigade has no transportation of its own, except that necessary to support brigade headquarters operations. If additional transportation is required, the brigade S4 obtains it through the DISCOM movement control officer.

Services. Good finance, postal, recreation, religious, and legal services help morale.

- The division finance company organizes forward support teams to provide finance services to brigade units.
- Mail is normally delivered by transportation, such as ration vehicles, moving forward to combat units for other reasons.

□ Religious services are usually conducted for small groups by unit chaplains operating throughout the brigade. It is particularly important for chaplains to operate with forward units where their services are most often needed.

□ Legal services are provided to brigade units by the division staff judge advocate.

□ Laundry, bath, and clothing exchange is provided to brigade units when such service units are available.

□ Graves registration is accomplished by the supply and service company of the divisional supply and transport battalion. During the early stages of combat operations, graves registration platoons may not be available. So, some brigade personnel should be trained in recovery, identification, care, and disposition of remains. Remains are evacuated to collection points in the brigade support area, then to a collection point in the division support area. FM 10-63, *Handling of Deceased Personnel in Theaters of Operations*, contains additional information on graves registration procedures.

Medical. A medical company from the divisional medical battalion operates a clearing station in the brigade support area. Patients are evacuated no farther to the rear than their condition requires. Depending on the seriousness of their wounds, they may be evacuated from the battalion aid station to the brigade clearing station or directly to a corps combat support hospital. Patients evacuated to a brigade clearing station remain there only so long as it takes to treat and return them to duty or to prepare them for further evacuation.

It is important to clear the combat area of casualties quickly. Evacuation should be accomplished by air ambulance whenever possible. Ground ambulances are used when air evacuation is impractical or when there

are insufficient air ambulances. The divisional medical battalion provides medical supplies for unit aid stations of the brigade.

Rear Area Security. Seldom will sufficient combat units be available to protect brigade trains. The brigade S4 working with the FASCO and service support unit commanders located in the brigade support area must

provide for their own security. As a general rule, a perimeter defense is planned. The support area is divided into sectors, units are assigned specific sectors to defend, provisional rifle squads are organized, and observation posts positioned outside the perimeter to provide early warning. Internal communications and an alarm or warning system must be arranged.

SEPARATE BRIGADE

Separate brigade combat service support procedures are essentially the same as those for a divisional brigade. Organizationally, however, support for the two types of brigades is quite different. The divisional brigade gets direct support from DISCOM; the separate brigade from its own support battalion.

Differences between divisional and separate brigade combat service support operations are described in the paragraphs which follow. Separate brigade support battalion operations are described in more detail in FM 54-2, *The Division Support Command and Separate Brigade Support Battalion*.

A separate brigade support battalion is organized with:

- A headquarters and headquarters company for command control.
- An administration company to provide personnel and administrative support for the brigade.
- A medical company to treat and evacuate wounded.
- A supply and transport company to provide and move supplies.
- A maintenance company for recovery, repair, and evacuation of equipment.

From time to time other combat service support units may be attached to the brigade. Some examples:

- Aircraft equipment and missile maintenance support teams.
- Graves registration teams.
- Laundry, clothing exchange, and bath teams.

Most of the support battalion operates from the brigade support area under control of the support battalion commander and his staff.

ARMING

After supply rates are determined as previously described, the brigade ammunition officer converts his requirements into short tons and cubic feet of cargo. The brigade S4, working with maneuver battalion S4s, the brigade ammunition officer, and the supply and transport company commander, determines the status of unit basic loads and estimates the brigade's ability to replenish them once the operation has started.

If the S4 determines there is insufficient brigade transportation to replenish unit basic loads as fast as they are expected to be consumed, he should request additional transportation from the next higher level of command.

The S4 works with the higher command logistics officer to locate one or more ammunition supply points as close to the brigade's operational area as possible. An ammunition transfer point may be established in the brigade support area to move high usage ammunition. *If the brigade is on an independent operation, some ammunition may be held in reserve to provide for unforeseen circumstances.*

FUELING

As in the case of ammunition, once fuel requirements are forecasted the S4 must determine the best way to deliver fuel to brigade units. *Each brigade unit has some bulk fuel-carrying capability of its own.* Battalions are equipped with tankers and fuel pods mounted on cargo vehicles. The supply and transport company can also store bulk fuel. COSCOM medium-truck companies can provide additional tankers to meet brigade requirements.

As a general rule, support units of the next higher command deliver fuel to the brigade support area. *Whenever possible, fuel should be delivered direct to tank and mechanized battalion task forces by the support battalion's supply and transport company.*

Aviation fuel is normally delivered by support units of the next higher command to a forward arming and refueling point (FARP) which is established in the brigade support area by the brigade aviation section. Attack helicopter units operating with the brigade can establish FARPs of their own. However, fuel must be delivered to these points by the support battalion since attack helicopter units have very limited capability to do so.

When conducting independent operations, some bulk fuel, both vehicle and aviation, should be held in reserve for unforeseen circumstances.

REPAIR AND RECOVERY

As previously described, repair and recovery of combat vehicles are accomplished as

far forward as possible. If unit maintenance personnel cannot repair a vehicle:

- Additional parts or major assemblies are sent forward as required.
- Maintenance support teams are sent forward with parts and equipment to assist in repair.
- Vehicles may be moved farther to the rear to await parts or more highly skilled maintenance support teams from the next higher level of command. Cannibalization guidelines should be established by the brigade commander.

REPAIR PARTS

The maintenance company stocks repair parts and major assemblies based on authorized stockage levels. In peacetime it is necessary to stock a great many items not essential to combat operations. These stocks should be separated into combat-essential and non-combat-essential categories. In forward deployed separate brigades, even when not in combat, essential stocks can be loaded and issued from repair parts vans and stake and platform trailers so they are always mobile. In CONUS, this may not be practical. However, *plans should be made to load combat-essential stocks on vehicles in the event it becomes necessary to deploy for combat operations.*

Repair parts stocks are replenished from supporting units of the next higher command. As a general rule, requests for repair parts are processed through the COSCOM or division materiel management center.

The previous paragraphs have described repair and recovery operations primarily for major weapon systems. Evacuation to the brigade support battalion of other unserviceable items such as signal and engineer equipment, tentage, and clothing is the responsibility of using units. The support battalion further evacuates unserviceable

equipment to supporting general-support maintenance units. *This is usually done by back haul on COSCOM cargo vehicles.* In the brigade area, maintenance collection points are established for collection of unserviceable or abandoned materiel. Here disposition is determined by the supply and transport or maintenance company commander.

OTHER COMBAT SERVICE SUPPORT OPERATIONS

Supply. Brigade units usually obtain supplies from the next higher command through *unit distribution*. The brigade in turn uses a combination of *supply point and unit distribution* to supply brigade units.

- **Class III (fuel), Class V (ammunition), Class VII (major end items) and Class IX (repair parts)** supply procedures have been described.
- **Class I (rations).** Rations are delivered by the next higher command to Class I supply points in the brigade support area based on strength figures provided by the S1. Within the brigade, supply point distribution is used.
- **Class II (clothing, individual equipment, tentage, tool sets, kits, hand tool sets, administrative and house-keeping supplies and equipment) and Class IV (construction materiel)** are issued by the lowest echelon having the item. Normally, supply point distribution is used. Units submit requests to the supply and transport company. Requests are forwarded to the materiel management center of the next higher command for items not stocked by the supply and transport company. Class VI (personal demand) items are distributed with Class I supplies.

Brigade units normally pick up water at the nearest water point. When necessary, the supply and transport company arranges for delivery of water to brigade units.

Transportation. The supply and transport company of the support battalion has light and medium cargo and fuel vehicles to support brigade units. When there is insufficient transportation to meet brigade requirements, additional transportation is requested from the next higher command. *If transportation is in short supply, the brigade commander or S3 must establish priorities.* Utility helicopters found in the brigade aviation section can be used to move troops and supplies about the battlefield rapidly. When additional utility helicopters or assault support helicopters are required, they must be obtained from some higher level of command.

Services. Services are provided as for divisional brigades except as noted.

- The separate brigade administration company organizes finance teams to provide **finance services**.
- **Legal services** are provided by the brigade staff judge advocate general who supervises and is responsible for the proper administration of military justice and other legal matters.
- The brigade **medical company** evacuates patients and provides limited treatment to include emergency dental service. The company operates a clearing station in the brigade support area. Treatment and evacuation procedures are as described for a divisional brigade.

The medical company keeps brigade unit aid stations stocked with medical supplies (Class VIII). It in turn obtains supplies from a higher headquarters medical supply, optical, and maintenance unit. Resupply is most often done by ambulance returning to forward areas.

WEAPON SYSTEM REPLACEMENT OPERATIONS

The brigade S1 and S4 work together with the personnel and logistics staff officers of the division or next higher command to establish procedures for weapon system replacement. *The object of weapon system*

replacement operations is to obtain and distribute fully crewed, ready-to-fight weapon systems as rapidly as possible.

Procedures should provide crew and weapon replacement for those weapon systems the commander considers critical to his operation. It may be necessary to designate an individual to be the brigade weapon system manager for specific weapon systems. Before combat operations begin, casualty and combat vehicle loss estimates are drawn up and provided to higher headquarters. **FM 101-10-1, Staff Officers' Field Manual—**

Organizational, Technical and Logistical Data, provides some data upon which estimates can be based. As in the case of ammunition and fuel, data must be modified according to experience and judgment.

To determine weapon system replacement requirements, an accurate and timely weapon system status report is necessary. The brigade staff works with the next higher command staff to insure individual crewmembers or crew replacements can be moved rapidly to join a weapon, or otherwise join a unit.

Weapon system replacement can be accomplished in several different ways. For example:

When **personnel and weapon losses are low**, personnel replacements can be sent directly to their unit, and replacement weapons may be picked up in the brigade support area by unit crews.

When **personnel losses are low and weapon losses are high**, individual replacements may join unit crews and replacement weapons in the brigade or division support area. In such cases, the weapon is armed, fueled, test-fired, and moved to the unit.

When **personnel losses are high and weapon losses are low**, replacement crews should be transported directly to their battalions; some crews may pick up replacement weapons in the brigade or division support area.

When **personnel and weapon losses are high**, replacement crews are normally married up with replacement weapons in the brigade or division support area; weapons are armed, fueled, test-fired, and moved to battalions.

When there are insufficient weapon systems to meet requirements, the commander must establish assignment priorities.

CHAPTER 7

Command Control of Combat Operations

GENERAL

Good command control is essential to any military operation. Command control is a continuous process in which the commander must find out what's going on; decide what to do about it; tell someone to do it; follow up to see that it goes well.

Much information passes routinely according to brigade or other unit standing operating procedures (SOP) which should include requirements for routine reports, their conduct, format, and frequency. *Information essential to command control of a fast-moving battle usually requires special procedures and command attention.* This battle or combat information comes for the most part from units in contact. However, commanders of these units are usually the busiest; they have little time to report information to a higher headquarters other than requests for additional support. Nonetheless, the brigade commander must establish a system to get the necessary information to direct the battle.

The fastest way to get combat information about the brigade operation is to monitor command nets of battalion task forces and fire control nets of supporting field artillery. Monitoring must be supplemented by a situation report system whereby task forces and

other subordinate echelons pass certain critical information either as events occur, or at specified times or circumstances.

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As a general rule, the brigade commander must have near-real-time information of:

- Where his subordinate units are.
- What they are doing.
- What the enemy is doing as they see it.
- How the fight is going.
- What additional support is available—especially attack helicopters, close air support, more artillery.
- Fuel and ammunition status of units of the brigade—especially battalion task forces in contact and supporting field artillery.
- Combat vehicle losses of battalion task forces and supporting field artillery.

COMMAND POSTS

The brigade commander must situate himself where he can get the information he needs to control the battle. In an attack, this is most often with or near leading task forces. In the defense, he must often operate with or near the forces defending against the enemy main effort.

The brigade normally establishes a main command post and a tactical command post.

The **tactical command post**, sometimes called a command group, consists of not more than one or two command post vehicles or, preferably, radio-equipped armored personnel carriers. It is normally manned by the S3, S2, USAF air liaison officer, the brigade fire support officer, and the necessary NCOs, drivers, and communication personnel. Its signature—electronic, infrared, visual, and physical—should be no larger than that of a battalion command post. *The tactical command post must be mobile to allow the brigade commander the ability to command*

on the move. Since it operates near brigade forward elements, its normal mode of communication is FM secure.

From his tactical command post the brigade commander should be able to communicate with division over division high-frequency radio nets. *Normally, range limitations of FM radio systems will prevent the effective operation of a divisional FM command net.*

Occasionally it may be possible for the brigade commander to command from an appropriately equipped helicopter. However, on an armored battlefield against an enemy with a fully developed air defense system, helicopters should not be relied upon for command control.

The **main command post** of the brigade is usually located to the rear of battalion task forces, out of range of enemy direct fire and mortar fire where possible. It should be close enough to maintain FM communications with the command posts of subordinate elements. Since its location will often be within range of enemy artillery, its electronic and visual signature, too, must be no larger than that of a battalion command post.

Most of the brigade staff operates from the brigade main command post. The S3, S2, fire support, chemical, biological, and radiological sections, tactical air control party, combat electronic warfare, and intelligence and engineer elements will be present. *Communications with division are established by a forward area signal center platoon from the division signal battalion.*

The brigade main command post is primarily a *coordination, information, communications, and planning center*. It includes a tactical operations center (TOC) for operation and intelligence functions. The main command post should be arranged to facilitate

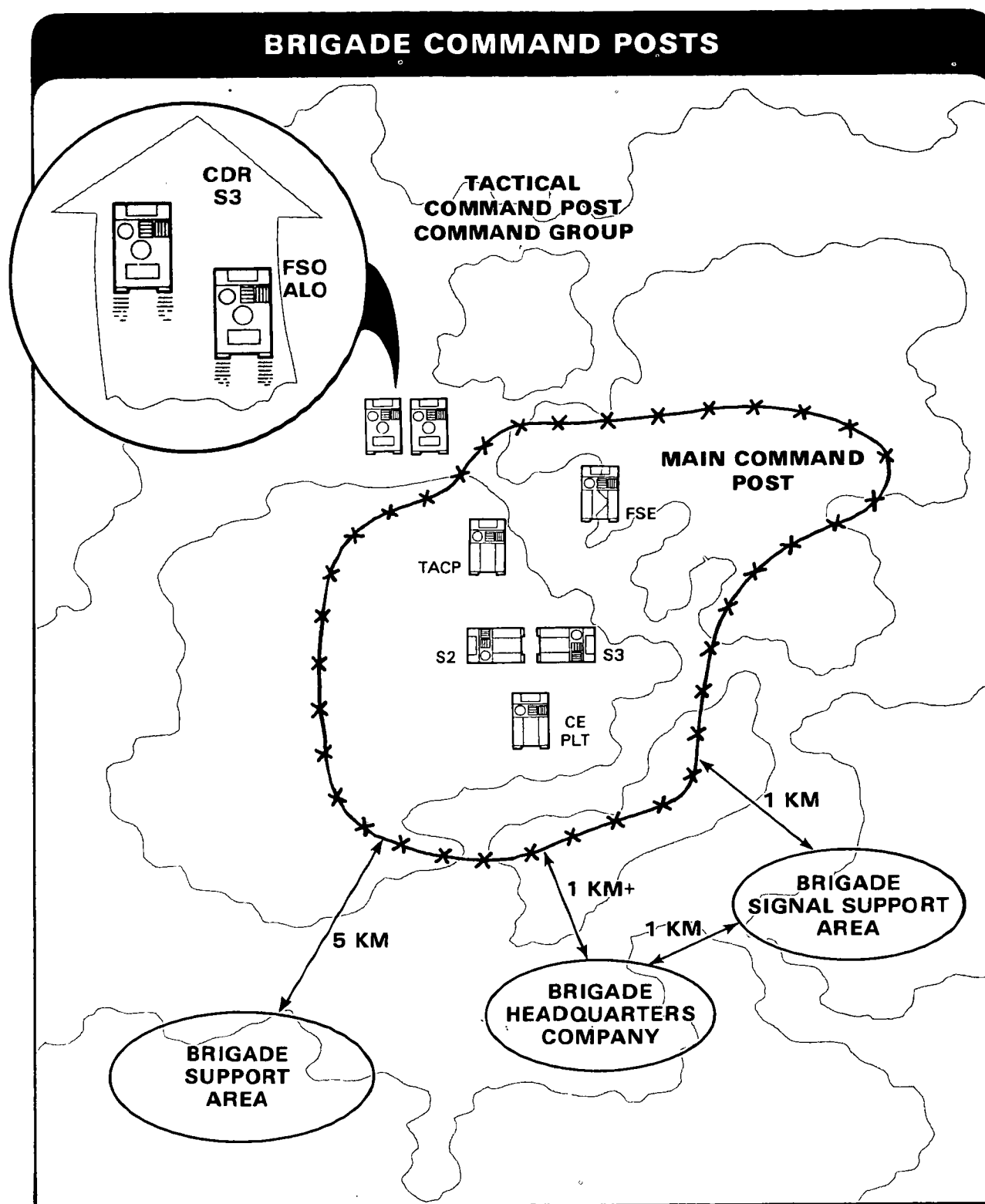
work and security, take advantage of cover, and permit quick displacement. *The arrangement should be prescribed in standing operating procedures.* The brigade main command post communicates with the brigade commander and subordinate battalion task forces over the secure FM brigade command net. The brigade MAIN also communicates with subordinate elements over the secure FM brigade intelligence net and the nonsecure FM administrative/logistics net.

Communications are maintained with division, when possible, on the secure FM division command/operation and division intelligence nets. Nonsecure single side band (AM) communications are possible over the division TOC net. Multichannel communications are provided to the brigade MAIN by the division signal battalion. Multichannel and voice communications are augmented by secure radio teletypewriter (RATT) nets, which include the division operations net and the division intelligence net. **FM 11-50, Combat Communications Within the Division, details brigade communication nets.**

Built-up areas are good locations for the brigade main command post for they provide good cover and concealment from enemy observation and fire. The command post can be located in a cellar, vehicles can be hidden in garages or barns, and light discipline can be enforced by covering windows.

When built-up areas cannot be used, the command post should be sited on a reverse slope to provide cover and concealment from enemy ground observation and fire and from enemy airborne and line-of-sight sensors.

Operations security of the brigade MAIN is important. It can be improved by using wire and messengers and by careful dispersal and siting of antenna systems away from the command post itself.



BRIGADE SUPPORT AREA

The brigade S4 and S1 normally operate from the brigade support area where they plan and coordinate brigade combat service support operations. **They operate as described in Chapter 6, Combat Service Support.**

ORDERS

Once the brigade commander has made his estimate and decided on a course of action, he *assigns tasks and missions* to subordinate units, task-organizes the brigade, and *allocates support*. When battle is joined he *directs the battle*.

The commander's decision, missions, and tasks for subordinate units must be communicated in clear, concise orders. Normally these will be mission-type orders. That is, they will set forth clearly what the commander expects his subordinate units to do. As a general rule, how a subordinate unit goes about accomplishing its mission is left to the discretion of its commander. There is, to be sure, a fine line between a detailed description of what must be done and the details of how the job must be accomplished. But the commander must himself insure that he has communicated clearly to his subordinates what they are to do; that he has given them enough resources to accomplish the job, and that he has restricted their execution only to the extent necessary to insure coordination of fires, maneuver, and support between subordinate units. By doing this, the commander allows his subordinates freedom of action appropriate to their professional ability, subject only to the control he feels it prudent to exercise.

Brigade orders are normally issued to battalion, separate company, or detachment commanders. *Bypassing normal channels of command is resorted to only in unusual and*

urgent situations. In such cases, both the commander issuing and the commander receiving the order should notify intermediate commanders of its contents as soon as possible. An order, as described in chapter 2, may be a complete operations order or a fragmentary order. *Fragmentary orders are most common in the brigade.* Whatever the type of order and however it is issued, it must be clear and explicit.

Detailed instructions for various contingencies, instructions that are a matter of training, and matters that are part of the unit SOP have no place in an order. *Meaningless phrases are to be avoided.* Clarity is more important than style.

Brigade orders should describe events only so far as they can be foreseen. Orders which attempt to regulate matters too far in the future result in frequent changes which overload communications, cause confusion and misunderstanding, and cause needless activity.

Orders issued by subordinate commands should not merely repeat brigade orders with local additions. New orders which apply directly to the echelon being addressed are necessary.

Following a standard procedure or logic is necessary when communicating orders to avoid omissions and misunderstanding. *To the extent possible, the logic of the five-paragraph field order should be followed.*

The brigade should have a *standing operating procedure* to regulate those normal operational matters that are routine or that lend themselves to definite standardized procedures. The brigade SOP should conform to the division SOP, and should concentrate on those functions which are the primary responsibility of the brigade—tactical maneuver and fires. Administrative and logistical SOP matters should be regulated by divisional SOP.

OPERATIONS SECURITY (OPSEC)

Operations security is an integral part of brigade operations. Brigade and battalion S2 and S3 work together to develop OPSEC measures.

There are three logical steps in the OPSEC planning sequence:

- 1 Determine enemy capabilities for obtaining information about the operation.**
- 2 Determine what information obtained by the enemy can compromise the operation, and when he would need it in order to react.**
- 3 Determine what protective measures are necessary and how they must be implemented in order to provide operations security.**

OPSEC measures include:

- **Physical security** — Use of security forces, barriers, and anti-intrusion devices to deny enemy access to facilities, areas, equipment, materiel, and personnel in order to protect operational information or activities.
- **Signal security** — The use of communications security methods (such as codes and secure radio equipment) and electronic security techniques (such as radio silence and proper positioning of radars and antennas) to prevent the disclosure of operational information.
- **Information control** — The control of written, verbal, and graphic information to prevent the disclosure of operational information.
- **Countersurveillance** — Measures (such as camouflage, cover, concealment) taken to preclude visual surveillance of brigade operations.

A divisional OPSEC team normally operates with the brigade. *An OPSEC team is also found in a separate brigade.* Its purpose is to assist the S3 in developing a good OPSEC program.

STAFF OPERATIONS

The job of the staff is to assist the brigade commander by absorbing the burden of routine matters as much as possible. When preparing for operations, the staff gathers information to help the commander in his estimate. In conducting the operation, the staff sees to it that the commander's decisions are carried out and that necessary support is provided to units of the brigade. Staffs have some limitations. An efficient, well-organized, and highly motivated staff can do routine things very well. However, as a general rule, initiatives, long-term goals for the organization, and good decisionmaking do not "bubble up" out of staffs as a matter of course. *The commander must decide where his outfit is going, announce goals, and make decisions.*

The brigade has a small staff. It consists of the S1, personnel; S2, intelligence; S3, operations; and S4, logistics; a communications-electronics staff officer; chemical officer; surgeon; and chaplain. Some officers serve as special staff officers when attached to the brigade or when their units are supporting the brigade. Such officers are the *fire support officer* provided by the direct-support field artillery battalion and the *engineer officer* who is the direct support engineer company commander.

Since no two commanders operate alike, the brigade commander uses his staff according to his needs and based on the capabilities of each staff officer. *It is important, therefore, that the commander describe the staff's relationships with him and with subordinate*

units. Staff officers must remember that their job is not only to assist the brigade commander, but to assist battalion task force commanders and their staffs as well.

The *executive officer* is the deputy brigade commander. He directs the staff and acts as the coordinator of operations in the brigade main command post and brigade support area. He normally posts himself in the brigade MAIN and is responsible for its overall operation, movement, security, and efficiency.

The command sergeant major's primary role is to advise the brigade commander on matters concerning the soldiers of the brigade. *He is not an administrator and must not be used as such.* He is the MOST EXPERIENCED SOLDIER in the brigade with his finger on the pulse of the command. A good command sergeant major is often the one who first discovers that the commander's decisions and policies are not being carried out in the intended manner. It may also be the command sergeant major who first discovers which of the commander's policies are successful and should be continued. The brigade commander must establish a close relationship with his command sergeant major and should consciously define for himself and his command sergeant major what each of them will do.

REPORTS

Critical information of immediate importance to the commander is reported as described earlier in this chapter. Less critical information is provided to the staff through periodic, spot, or summary report. The commander must specify what information is to be included in these reports.

The brigade commander and his staff use reports to obtain and distribute information about the command to subordinate, higher, and adjacent headquarters. Only those reports *necessary to meet essential* needs for information should be required of subordinate commands. Both the SOP reporting system and the commander's battle information reports system must be reviewed continually to insure that the right amount of the right kind of information at the right time, and no more, is required in the report.

DISPLAYS

Staff sections should maintain informational displays required to keep members of their sections and the commander informed of frequently needed, essential information. The brigade main command post maintains a situation map that graphically portrays information passed on from the tactical command post and information received directly from other sources. Situational displays must be integrated. *It is not possible to operate if intelligence, operations, logistics, and other staff elements do not contribute to an integrated posting of clearly identified information elements on a central situational display.* A battle information report is an ideal vehicle to focus staff attention on what must be posted on this central display. Staff elements may maintain separate, more detailed displays for the conduct of staff operations, but their primary responsibility is to the commander's need for information and the displays that provide it to him. Journals should be maintained by each staff section. The brigade TOC operations staff maintains the unit journal.

FM 101-5, *Staff Officers' Field Manual—Staff Organization and Procedure*, describes staff operations and reporting in detail.

APPENDIX

REFERENCES

FM	TITLE
3-87	<i>Nuclear, Biological, and Chemical (NBC) Reconnaissance and Decontamination Operations (How To Fight)</i>
5-100	<i>Engineer Combat Operations (How To Fight)</i>
6-20	<i>Fire Support in Combined Arms Operations (How To Fight)</i>
7-30	<i>The Infantry Brigades</i>
10-63	<i>Handling of Deceased Personnel in Theaters of Operations</i>
11-50	<i>Combat Communications Within the Division (How To Fight)</i>
17-50	<i>Attack Helicopter Operations (How To Fight)</i>
54-2	<i>The Division Support Command and Separate Brigade Support Battalion</i>
71-2	<i>The Tank and Mechanized Infantry Battalion Task Force (How To Fight)</i>
71-100	<i>Armored and Mechanized Division Operations (How To Fight)</i>
90-2	<i>Tactical Deception (How To Fight)</i>
90-7	<i>Obstacles (How To Fight)**</i>
90-13	<i>River-Crossing Operations (How To Fight)</i>
*101-5	<i>Staff Officers' Field Manual—Staff Organization and Procedure</i>
101-10-1	<i>Staff Officers' Field Manual—Organizational, Technical and Logistical Data (Unclassified Data)</i>

*NOTE: Being revised as a How To Fight (Staff Organization and Operation)

**To be published.



Users of this manual are encouraged to submit comments and recommended changes on DA Form 2028 to: Commander, US Army Combined Arms Center, ATTN: ATZLCA-DL, Fort Leavenworth, Kansas 66027.

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25 JULY 1980

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