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Doctrine for Joint Interdiction Operations



10 April 1997



PREFACE

1. Scope

This publication provides the guidance necessary to conceptualize, plan, coordinate, and conduct successful joint interdiction operations throughout the range of military operations.

2. Purpose


This publication has been prepared under the direction of the Chairman of the Joint Chiefs of Staff. It sets forth doctrine to govern the joint activities and performance of the Armed Forces of the United States in joint operations and provides the doctrinal basis for US military involvement in multinational and interagency operations. It provides military guidance for the exercise of authority by combatant commanders and other joint force commanders and prescribes doctrine for joint operations and training. It provides military guidance for use by the Armed Forces in preparing their appropriate plans. It is not the intent of this publication to restrict the authority of the joint force commander (JFC) from organizing the force and executing the mission in a manner the JFC deems most appropriate to ensure unity of effort in the accomplishment of the overall mission.

3. Application

a. Doctrine and guidance established in this publication apply to the commanders of combatant commands, subunified commands, joint task forces, and subordinate components of these commands. These principles and guidance also may apply when significant forces of one Service are attached to forces of another Service or when significant forces of one Service support forces of another Service.

b. The guidance in this publication is authoritative; as such, this doctrine will be followed except when, in the judgment of the commander, exceptional circumstances dictate otherwise. If conflicts arise between the contents of this publication and the contents of Service publications, this publication will take precedence for the activities of joint forces unless the Chairman of the Joint Chiefs of Staff, normally in coordination with the other members of the Joint Chiefs of Staff, has provided more current and specific guidance. Commanders of forces operating as part of a multinational (alliance or coalition) military command should follow multinational doctrine and procedures ratified by the United States. For doctrine and procedures not ratified by the United States, commanders should evaluate and follow the multinational command's doctrine and procedures, where applicable.

For the Chairman of the Joint Chiefs of Staff:



DENNIS C. BLAIR
Vice Admiral, US Navy
Director, Joint Staff

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EXECUTIVE SUMMARY

COMMANDER'S OVERVIEW

- Discusses Background and Fundamentals of Interdiction Operations
- Provides General Supported and/or Supporting Relationships and Joint Interdiction Planning Considerations
- Discusses Targeting Considerations Applicable to Interdiction Operations
- Describes Conditions for Achieving Effective Joint Interdiction Operations
- Covers Joint Force Interdiction Assets and Capabilities

Overview of Interdiction Operations

Joint interdiction operations may be conducted across the range of military operations and from all environments — air, land, sea, and space.

Joint interdiction operations encompass that interdiction conducted in support of theater- and/or joint operations area (JOA)-wide priorities or when conducted between supported and supporting components. Joint interdiction operations can achieve **tactical, operational, or strategic level effects**, and can significantly affect the course of a campaign or major operation. However, to be most effective, they must be tailored to the situation. This requires the **close integration of interdiction operations** with the joint force commander's (JFC's) overall strategy.

Interdiction Definition

Interdiction is “an action to divert, disrupt, delay, or destroy the enemy's surface military potential before it can be used effectively against friendly forces.”

Interdiction Objectives

The purpose of interdiction is to divert;

Interdiction can **divert** enemy forces away from areas where the enemy has immediate or critical requirements for them, or it can divert enemy forces to a location more favorable to friendly forces.

disrupt;

Interdiction **can disrupt** enemy operations, including the movement and routing of the enemy's information, materiel, and forces, through such means as attacks on telecommunications; command, control, communications, computers, and intelligence (C4I) nodes; and other lines of communications (LOCs).

delay;

Interdiction can **delay** enemy forces on such occasions as when they are forced to halt their advance behind a damaged route segment or are forced to make lengthy detours. Delay can result in more concentrated forces and longer periods of exposure, making the enemy easier to destroy or render ineffective.

or destroy.

Interdiction can **destroy** enemy forces and materiel, tipping the correlation of forces in favor of the friendly force. **Destruction** is the most direct of the four interdiction actions. The enemy's perception of our ability to destroy them can be nearly as effective in achieving interdiction objectives as physically destroying target systems, if it causes the enemy to react in a way upon which friendly forces can capitalize.

Conducting Joint Interdiction

Unity of effort, centralized planning, and decentralized execution directly affect the responsiveness and versatility of joint interdiction operations.

The **planning, coordination, and integration** of joint interdiction with other operations (such as maneuver) can yield unique advantages. This **synchronization of effort** begins with the JFC's theater- and/or JOA-wide perspectives and objectives. Subsequently, the JFC's theater and/or JOA campaign or operation plan facilitates such synchronization and helps ensure that interdiction operations are part of a larger design aimed at achieving the JFC's objectives.

Joint interdiction operations with **strategic and operational level objectives** generally occur deeper in enemy territory and produce more delayed effects, while **tactical level objectives** concentrate on targets which are generally closer to friendly forces and usually produce more immediate effects. However, geographic distance (that is, "close" versus "deep") should not constitute the primary distinction between different forms of interdiction; the most important aspect in planning interdiction operations is the effect desired.

Joint Force Interdiction Assets

Forces that can conduct, or be employed in, interdiction operations include land- and sea-based air forces;

Land- and sea-based air forces employ such weapons as missiles, bombs, precision-guided munitions, cluster munitions, land and/or sea mines, electronic warfare systems, and sensors from airborne platforms. Their flexibility, range, speed, lethality, precision, and ability to mass at a desired time and place contributes significantly to the overall joint interdiction effort.

ships and submarines;

Naval forces can employ missiles, munitions, torpedoes, and mines in the conduct of interdiction operations. Maritime interdiction can isolate an enemy from outside support, enhance free use of the sea LOCs for friendly operations, and provide security for other naval operations.

land forces;

Land forces employ such assets as fixed- and rotary-wing aircraft, missiles, artillery, and those forces capable of conducting conventional airborne, air assault, and amphibious operations. Commanders isolate the battlefield by interdicting enemy military potential before it can be used effectively against friendly forces.

and special operations forces.

Special operations forces (SOF) may support conventional interdiction operations by providing terminal guidance for precision-guided munitions, for example, or can be used independently in a direct action role when the use of conventional forces is inappropriate or infeasible. There may be circumstances where SOF are employed in an independent unconventional role.

Joint Interdiction Operations

Numerous subordinate commanders possess resources that can contribute to interdiction.

Interdiction can be performed with joint force component's organic forces. These forces may also support the JFC's operation or campaign objectives, or support other components of the joint force, to benefit the joint force as a whole. Since there will rarely be enough joint interdiction assets to meet all demands, the JFC should arrange for the centralized direction of these assets to ensure the unity of effort required for their optimum use. **The JFC structures the joint force** to ensure that diverse component capabilities, operations, and forces complement each other to achieve the desired results effectively and efficiently.

The joint force commander (JFC) normally designates a joint force air component commander.

The commander with the **preponderance of air assets** and the **ability to task and control those assets** will normally be designated the joint force air component commander (JFACC).

The JFACC is the supported commander for the JFC's overall air interdiction effort. For situations in which designation of a JFACC is not required, the JFC may plan, direct, and control joint air interdiction operations. If this option is exercised by the JFC, the JFC's staff will assist in planning and coordinating joint interdiction operations for JFC approval.

Synchronizing Interdiction and Maneuver

Synchronizing interdiction and maneuver (land, air, and sea) provides one of the most dynamic concepts available to the joint force.

Interdiction and maneuver operations are potent entities in their own right. Both maneuver and interdiction operations include: movement of forces and weapon systems; delivery of fires (lethal and nonlethal weapons effects); and attaining objectives at all levels through the range of military operations. Maneuver and interdiction could be conducted relatively independent of each other in certain circumstances. However, synchronizing interdiction and maneuver and their joint fires enhances the ability for each to more fully contribute to a successful outcome of a campaign or major operation.

Space assets are used to support interdiction and maneuver operations with timely surveillance, reconnaissance, and intelligence as well as reliable communications, navigation, and weapons guidance. This support significantly contributes to effective synchronization of operations.

Directing the Theater- and/or JOA-wide Interdiction Effort

Theater- and/or joint operations area (JOA)-wide interdiction operations may be planned and executed by the JFC staff or the appropriate commander as directed by the JFC.

To ensure unity of command and effort throughout the theater and/or JOA, **the JFC may delegate the planning and execution of theater- and/or JOA-wide interdiction operations** (that is, interdiction effort conducted relatively independent of surface maneuver operations) to the component commander best able to perform these functions, or the JFC may use the staff to accomplish these tasks. The JFC will normally designate a JFACC. **The JFACC recommends theater- and/or JOA-wide targeting priorities and, in coordination with other component commanders, forwards the air apportionment recommendation to the JFC. The JFACC, using the priorities or percentages established by the JFC's air apportionment decision, then plans and executes the theater- and/or JOA-wide interdiction effort.**

Interdiction may be conducted within surface boundaries by the land and naval force commanders' organic assets, by a supporting component, or as part of the theater- and/or JOA-wide interdiction effort.

As supported commanders within their area of operations (AO), the land and naval force commanders are responsible for synchronizing maneuver, fires, and interdiction. To facilitate this synchronization, such commanders designate the target priority, effects, and timing of interdiction operations within their AO. They may designate the priority of attacks to focus allocated interdiction assets on the targets or target systems essential to achieving their maneuver objectives. The supported commander **specifies target effects** to defeat threats to the maneuver force, to position the enemy for defeat by maneuver forces, and to avoid fratricide or hindrance to friendly maneuver.

Within their AO, **supported commanders usually attempt to strike interdiction targets with organic assets first.** Interdiction operations within AOs occur simultaneously with joint interdiction operations ranging theater- and/or JOA-wide. Joint interdiction assets are limited resources. **Nominated targets will usually outnumber assets capable of attacking them.** Coordination, communication, and feedback between and among components regarding targeting decisions are essential and enhance trust between supported, supporting, and subordinate commanders and forces. Interdiction targets that the land or naval force commander is unable to strike due to lack of organic assets, or for which joint force interdiction assets are best suited, are passed to the JFACC and staff via liaison elements. These targets may be either individual targets, categories of targets, or requests to achieve certain effects on the battle area.

Commanders establish fire support coordination measures which may impact interdiction operations.

Within their AOs, **land and naval force commanders employ permissive and restrictive fire support coordinating measures** to enhance the expeditious attack of targets; protect forces, populations, critical infrastructure, and sites of religious or cultural significance; and set the stage for future operations. When appropriate, **a fire support coordination line (FSCL) will be established** and adjusted by appropriate land or amphibious force commanders within their AOs in consultation with superior, subordinate, supporting, and affected commanders. Interdiction can occur both short of and beyond the FSCL. During the conduct of joint interdiction operations, attacks on surface targets short of the FSCL must be controlled by the appropriate land or amphibious force commander. Forces attacking targets beyond an FSCL must inform all affected commanders in sufficient time to allow necessary reaction to avoid fratricide, both in the air and on the ground. In exceptional circumstances, the inability to conduct coordination will not preclude the attack

The decision on where to place (or even to use) a fire support coordination line requires careful consideration.

of targets beyond the FSCL. However, failure to do so may increase the risk of fratricide and could waste limited resources.

The land or amphibious force commander adjusts the location of the FSCL as required to keep pace with operations. For high-tempo maneuver operations, the FSCL should strike a balance so as to not unduly inhibit operational tempo while maximizing the effectiveness of organic and joint force assets. Control of air-to-surface operations short of the FSCL requires detailed synchronization, increased communications assets, more restrictive rules of engagement, positive identification procedures, and more people in the decision cycle in real time than that required for missions conducted beyond the FSCL.

Intelligence Support to Interdiction

Effective intelligence support greatly enhances successful joint interdiction operations.

Intelligence can provide interdiction operations with crucial input on target development by assessing enemy capabilities, centers of gravity, force dispositions, relationships, intentions, operations, vulnerabilities, defenses, enemy warfighting sustainability, passive defense measures, and possible enemy courses of action. Intelligence also supports interdiction planners by providing environmental assessments (such as effects of terrain, adverse weather, darkness, and seasonal and temperature effects) and by **identifying enemy target systems** such as C4I systems, LOCs, and military geography.

Interdiction Targeting Considerations

Interdiction targeting translates desired effects into specific missions and attacks.

Appropriate interdiction resources are matched to target systems based on operational requirements and capabilities. The goal for joint interdiction targeting is to **execute a connected series of missions and attacks to achieve the JFC's interdiction objectives**. This requires a concerted application of lethal and nonlethal weapons designed to affect as many elements as necessary of selected target systems. It is critical to understand the enemy as a system and how various components of that system interrelate. Interdiction can cause cascading effects which lead to achieving operational and strategic objectives.

Commanders identify **desired mission effects** and the **enemy systems** for joint interdiction. Analysis should focus on such variables as the determination of critical vulnerabilities, time

windows in which vulnerabilities are likely to occur, threats to friendly forces, and the relative value of potential mission objectives or enemy systems. The **JFACC** conducts execution planning, coordination, allocation, tasking, and deconfliction associated with joint air interdiction in accordance with JFC guidance and ensures that the process is a joint effort.

A target analysis should be conducted to ensure a thorough understanding of the mission requirements in relation to the target.

Individual targets and target systems must be identified and prioritized in relation to their importance in achieving the JFC campaign objectives. These campaign objectives are the basis for developing and prioritizing component interdiction objectives. Targeting analysis should focus on analyzing target systems and/or targets to achieve the desired objectives. The net effect is a coordinated targeting process that links component interdiction operations to JFC campaign objectives.

Combat Assessment and Feedback

Information gained from combat assessment provides inputs for follow-on targeting efforts.

The **purpose of combat assessment** is to determine if the desired results were achieved and to identify areas that require additional effort, de-emphasis, or other adjustment. Analysis of interdiction missions should address, in near real time, **the effectiveness of the operation** in achieving the interdiction objectives and **actions undertaken by the enemy** to counter the interdiction effort. Appropriate feedback on interdiction results (or changes) permits **timely retargeting efforts** and **tasking for subsequent interdiction operations**. Such feedback ensures the effective employment of interdiction assets and enhances the mutual trust of supported, supporting, and subordinate commanders and forces.

Elements of Effective Interdiction

Effective interdiction operations are characterized by a combination of elements.

Successful and effective interdiction operations share a number of common elements. These elements lead to the attainment of interdiction objectives, such as destruction of enemy forces. To what degree each element will contribute to the operation depends on such variables as the nature of the conflict, geographic location, weather, and characteristics of the enemy. Operations notable for their specialized roles which can complement joint interdiction operations include: counterair operations, strategic attack operations, close air support, space operations, information operations, and special operations.

REQUIREMENTS TO SUCCESSFULLY PROSECUTE INTERDICTION OPERATIONS

Dimensional Superiority

Sustained, Concentrated Pressure

Accurate, Timely Intelligence

Appropriate Munitions/Assets

Synchronized Maneuver and Interdiction

CONCLUSION

Joint interdiction can play a key role in the successful outcome of a campaign or major operation. Joint interdiction operations require close integration with the JFC's overall strategy to be effective and must be tailored to the situation. They may achieve tactical, operational, or strategic level effects. Interdiction can complement, support, or be supported by other joint force operations. Because interdiction assets are a limited resource, joint interdiction requires unity of effort to achieve the desired synergy to achieve campaign or major operation objectives.

CHAPTER I

FUNDAMENTALS OF INTERDICTION

“The line that connects an army with its base of supplies is the heel of Achilles — its most vital and vulnerable point.”

John S. Mosby, War Reminiscences, 1887

1. Introduction

This publication provides a basis for the preparation and employment of joint forces for interdiction operations. **Interdiction is an action to divert, disrupt, delay, or destroy the enemy’s surface military potential before it can be used effectively against friendly forces. Joint interdiction operations are those interdiction operations conducted in support of theater-and/or joint operations area (JOA)-wide priorities or interdiction operations conducted between supported and supporting components.** Doctrine for joint interdiction operations can be applied across the range of military operations (war and military operations other than war [MOOTW]) and from all environments — air, land, sea, and space. These operations may complement, support, or be supported by surface maneuver operations. Joint interdiction operations can achieve tactical, operational, or strategic level effects. Interdiction operations apply to combatant commands, subordinate unified commands, joint task forces, and subordinate components of the joint force. **Interdiction-capable forces include land- and sea-based air forces; maritime forces; land forces, including those capable of conducting conventional airborne, air assault, and amphibious operations; and special operations forces (SOF).** Interdiction-capable forces are discussed in Chapter V, “Joint Force Interdiction Assets.” Joint force commanders (JFCs) may employ interdiction operations as a principal means to achieve intended objectives.

2. Interdiction Background

To appreciate fully the dynamics of interdiction and the role it fulfills in joint campaigns and operations, one needs first to place it in the context of operational art. **When required to employ force, JFCs seek combinations of forces and actions to achieve concentration in various dimensions.** This interaction can be best described with respect to friendly forces and enemy forces. **Friendly arrangements are characterized as either supported or supporting. With regard to enemy forces, though, JFCs arrange symmetrical (land versus land forces, for example) and asymmetrical (air versus land or sea forces, for example) actions to take advantage of friendly strengths and enemy vulnerabilities, and to preserve freedom of action for future operations.**

a. **Symmetric engagements** between similar forces **often require a superior correlation of forces and/or technological advantage to ensure success** and minimize friendly casualties. **Asymmetric engagements** between dissimilar forces **can be extremely lethal**, especially if the force being attacked is not ready to defend itself against the threat. The massive Allied air bombardment conducted in France from April to June 1944 to interdict enemy railroads and troop movements attempting to move into the Normandy lodgment areas is a classic example of these asymmetries.

b. **Asymmetric engagements** offer tremendous potential efficiencies. The properly functioning joint force is powerful in asymmetric attack, posing threats from a variety of directions with a broad range of weapon systems to stress the enemy's defenses. **Interdiction operations are one of the primary means for a joint force to seize opportunities and exploit the tremendous leverage afforded by asymmetric engagements.**

c. **Interdiction can significantly affect the course of a campaign or major operation.** It can create opportunities for commanders to exploit and should be planned in conjunction with other operations of the joint force. However, the use of interdiction must be tailored to the situation. Conducting interdiction against an enemy with a simple force structure, minimal logistic requirements, and primitive logistic systems differs from interdiction conducted against a highly mechanized, modern force with extensive and sophisticated logistic requirements. Interdiction can be particularly effective when the enemy must rapidly move major forces and their sustaining supplies. However, interdiction conducted without regard to the operational situation may be largely ineffective. Thus, **planning for interdiction should be closely integrated in the JFC's overall strategy.** It is important to bear in mind that the **objective determines whether an operation or mission is interdiction, not the target type or weapon system used.** For example, close air support (CAS) and air interdiction can both be performed by the same weapon systems, but CAS and air interdiction are differentiated by the relative proximity of friendly forces to the enemy being attacked, the requirement for detailed integration with the supported force, and the desired effects of the operation.

3. Interdiction Objectives

The purpose of interdiction is to attack the enemy's ability to fight primarily by targeting their tactical and operational infrastructure. Appropriate interdiction targets may include but are not limited to surface forces; command, control, communications, computers, and intelligence (C4I) systems; installations and facilities; transportation and supply systems; lines of communications (LOCs); and other vital resources and infrastructure (see Figure I-1). The desired objectives of interdiction are the diversion, disruption, delay, and destruction of enemy surface military potential by either lethal or nonlethal means.

a. **Diversion. Interdiction can divert enemy forces from areas where the enemy has critical operational requirements for them.** It may divert enemy ground forces to a location more favorable to the JFC and can also divert enemy naval, engineering, and personnel resources to the tasks of repairing and recovering damaged equipment and facilities as well as keeping LOCs open. These diversions prevent enemy ground forces and their backup support resources from being employed for their intended purpose. Diversions can also cause more circuitous routing along LOCs, resulting in additional delays for the enemy.

b. **Disruption. Interdiction can disrupt the enemy's C4I systems, intelligence collection capability, transportation systems, supply lines, and industrial base.** Interdiction thus disrupts the movement and routing of the enemy's information, materiel, and forces.

- The enemy's combat operations may be disrupted with **attacks on their**

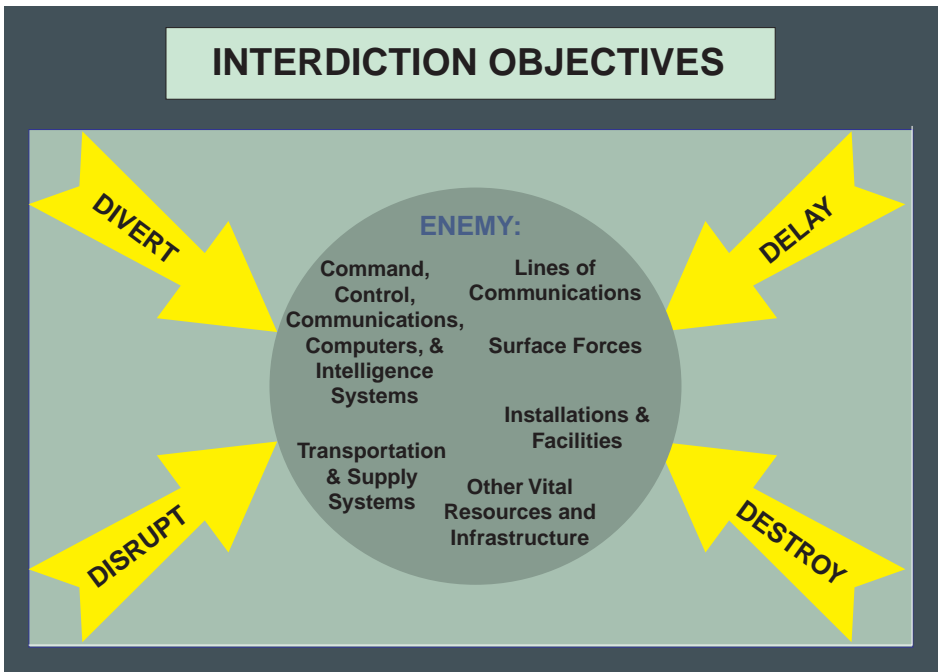


Figure I-1. Interdiction Objectives

telecommunications C4I nodes or key commercial infrastructure components (such as electrical power and transportation) which support and sustain military operations. Such attacks may force the enemy to use less capable, less secure backup communication systems that can be more easily exploited by friendly forces. Regimes which possess a rigid, top-down command and control (C2) structure can be particularly vulnerable to the disruptive effects of interdiction on C4I systems.

- Interdiction can disrupt by **attacking enemy LOCs**, forcing the enemy to use less capable transportation modes. These disruptive effects can severely affect the tempo of enemy operations. This degradation may enhance the effects of attacks on enemy C4I facilities. Enemy forces, which must disperse to avoid damage or destruction, have a reduced ability to mass to initiate or sustain effective offensive operations.

- Interdiction attacks can also produce a **psychological impact** which could significantly reduce enemy capabilities and morale. Uncertainty as to whether or not forces, materiel, or supplies will arrive can directly affect enemy commanders, their staffs, and forces.

"The greatest secret of war and the masterpiece of a skillful general is to starve his enemy."

Frederick the Great

- c. **Delay. Interdiction can delay enemy forces and supplies.**

- When interdiction delays the enemy, **friendly forces gain time**. What JFCs do to improve their situation in the time gained is critical to any assessment of interdiction's contribution. However, an interdiction plan that focuses on delay and is effectively executed does not guarantee a major impact on combat

operations. In order for delay to have a major impact, either the enemy must face urgent movement requirements in support of its own operations or to counter friendly maneuver, or the delay must enhance the effect of planned friendly maneuver.

- It is advantageous for friendly forces to **pressure their opponent to attempt time-urgent movement**. Ideally, if the joint force maintains the initiative in air, ground, sea, and space, the opponent is forced to make unplanned time-urgent movements, at times and places that maximize their exposure to interdiction.
- Delay is critical in achieving **additional interdiction payoffs**. For example, it can lengthen the time during which enemy land or naval forces are at risk of attack. When vehicles amass behind a damaged route segment, or ships are trapped in a harbor because of mines, a more concentrated set of targets and a longer period of exposure results. This makes the enemy easier to destroy or renders them ineffective.

d. **Destruction. The destruction of enemy forces, support elements, and supplies** is the most direct of the four interdiction actions in achieving the goals of the interdiction operation and objectives of the campaign or major operation. Destroying transportation systems is usually not an end in itself, but contributes to the delay, diversion, and disruption of enemy forces and materiel. **The demonstrated or perceived ability to destroy may, by itself, achieve substantial delay and diversion of enemy resources.** It may cause the enemy to move only at night, or to mass air defense assets (which may be useful elsewhere) around critical transportation nodes. The enemy may have to divert engineering resources from other tasks to prepare alternate routes in anticipation of possible attacks. This may be true even

when transportation systems remain largely undamaged. However, destruction may also inhibit friendly freedom of action. For example, destruction of key enemy transportation infrastructure in and around land and naval areas of operations (AOs) could hinder subsequent friendly surface operations. Appropriate coordination of interdiction helps to preserve friendly freedom of action.

e. **Effective interdiction can typically achieve the following desired effects:** it may channel the enemy's movements, constrict the enemy's logistic system, and force time-urgent movement upon the enemy.

- **Channeling Enemy Movements.** Interdiction channels the enemy's movements when conditions force the enemy to maneuver through or along predictable avenues. This generally results from the lack of transportation routes, manmade and natural obstacles, and other geographic constraints. **The fewer the routes to handle enemy supplies and reinforcements, the greater the loss or delay caused by severing those routes.** **Attacks on enemy lateral LOCs** can channel movement, impair reinforcement, reduce operational cohesion, and create conditions for defeating the enemy in detail. **Minfields** may be employed to channel enemy maritime and ground movements. Geography may also restrict or channel surface movement, creating chokepoints and concentrated targets. **Geography** influences the rate of enemy movement, the size of the force to be moved, where it can move, and the means required to move the force. In cases where geography favors rapid movement of enemy forces, artificial and/or temporary chokepoints can be created by such means as delivery of large numbers of scatterable mines.

- **Constriction of the Enemy's Logistic System.** The less surplus capacity the enemy's logistic system has, the less it can compensate for damage. **Degrading the mobility of the enemy's distribution system hinders its ability to redistribute assets to effectively counter friendly operations.** When attacking the enemy's logistic systems, it is normally prudent to concentrate efforts on a small number of limiting factors such as concentrations of supplies; petroleum, oils, and lubricants; storage and resupply systems; or soft vehicles. There may not be enough interdiction assets to attack all of an enemy's logistic systems, even sequentially over time.
- **Forcing Time-Urgent Movement Upon the Enemy.** Time-urgent movement may occur for several reasons: an enemy attempt to achieve surprise, the need to attack before reinforcements or supplies arrive, the requirement for rapid reinforcement of threatened defensive positions, the attempt to exploit offensive operations, or when driven to

urgent movement by interdiction effects. Under these conditions, **the enemy has a strong incentive to attain specific objectives within time constraints. Rapid movement of enemy forces and supplies may make them more vulnerable to interdiction.** They generally become more concentrated while traversing more exposed and predictable avenues, foregoing time-consuming camouflage and concealment efforts. However, time-urgent movements are temporary due to a desire to limit exposure. For friendly forces to capitalize on such opportunities, we must deny the enemy mobility when they need it most. Close coordination is required among all forces to take full advantage of the situation. Additionally, commanders require access to C4I systems able to process real-time and near-real-time intelligence in order to fully exploit the capabilities of interdiction and opportunities which interdiction operations create; otherwise the enemy can negate their effects.

CUTTING OFF THE IRAQI ARMY

Air interdiction attacks were planned to reduce and slow resupply for the [Iraqi] forces in the Kuwait Theater of Operations (KTO) which were almost totally dependent on outside sources for supplies, including food and water. The Iraqis had extensive stockpiles in rear areas which were only moderately degraded by air attacks — but air attacks dramatically slowed resupply. The key interdiction targets were identified as about 40 of the 54 bridges across the Tigris and Euphrates rivers, along with railroad marshaling yards, fuel depots, and supply concentration areas. Truck convoys also were hit.

Cutting the one rail line running south from Al-Basrah through Az-Zubayr to the KTO and the bridges over the Tigris and Euphrates rivers reduced the ability of the Iraqi army to resupply the theater. Once stockpiled supplies had been destroyed from the air or consumed, the Iraqi army would be unable to sustain itself.

Interdiction attacks reduced the flow of supplies from Baghdad to the KTO and made supply movements within the KTO extremely difficult and slow. By 4 February (D+18), intelligence estimated the amount of supplies reaching Iraqi forces in the KTO was below the level needed to sustain combat operations. One captured senior Iraqi infantry officer said that one week after the bombing began, there was no more resupply. Food shortages apparently caused desertion rates to escalate. Air interdiction attacks left most of the Iraqi army in the KTO weak and demoralized, although front-line forces in Kuwait bore the brunt of these privations. These and other air attacks, according to military intelligence reports, psychologically disarmed some Iraqi soldiers.

**SOURCE: DOD Final Report to Congress:
Conduct of the Persian Gulf War, April 1992**

CHAPTER II

CONDUCTING JOINT INTERDICTION OPERATIONS

"Whereas in previous times we could chop up the battlespace and delegate the various 'pieces' to the components, as battlespace becomes more nonlinear and combat power is applied more asymmetrically, this is a luxury we can no longer afford."

GEN George Joulwan, USCINCEUR

1. Overview

The JFC synchronizes the actions of air, land, sea, and special operations forces to achieve objectives through an integrated joint campaign and major operations. The manner

in which JFCs organize their forces directly affects the responsiveness and versatility of joint interdiction operations. Unity of effort, centralized planning, and decentralized execution are key considerations (see Figure II-1).

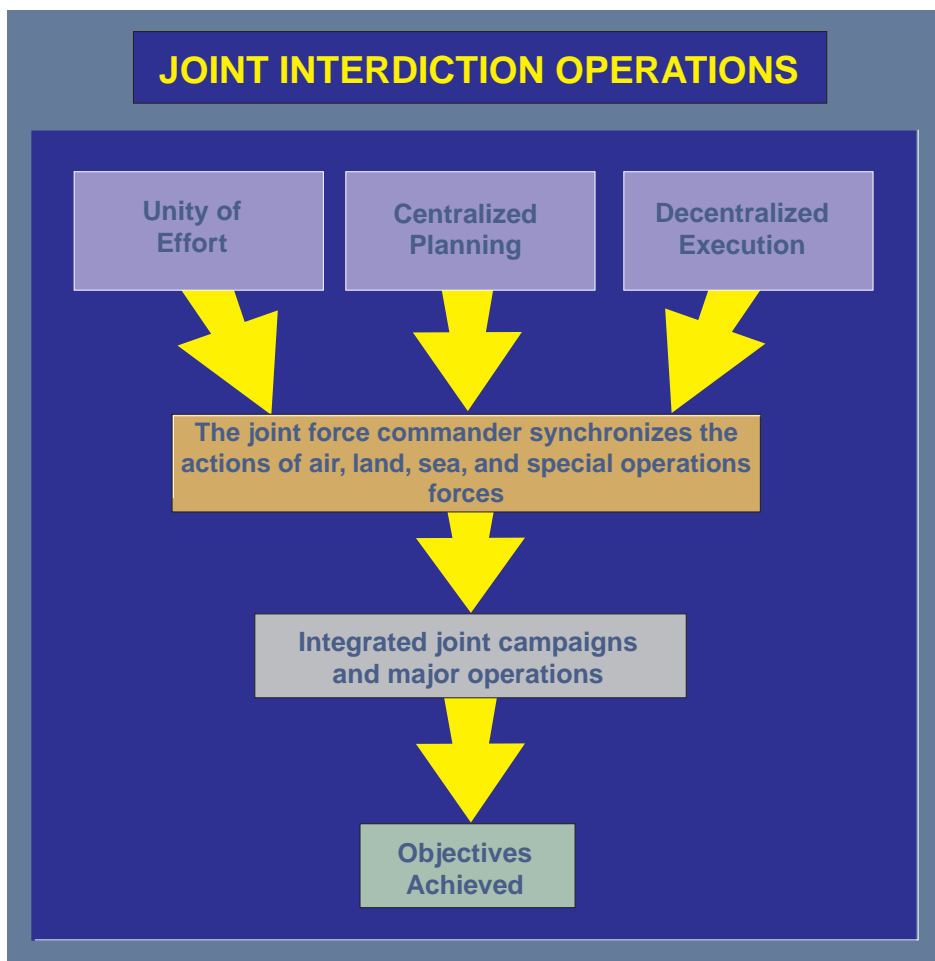


Figure II-1. Joint Interdiction Operations

a. **Joint Force Objectives.** JFCs can employ their forces for a variety of purposes; the principal challenge is to combine force capabilities and operations into a concentrated effort. The planning, coordination, and integration of joint interdiction with other operations (such as maneuver) can yield unique advantages. This synchronization of effort begins with the JFC's theater- and/or JOA-level perspectives and objectives. Likewise, the JFC's theater and/or JOA campaign or operation plan facilitates such synchronization and helps to ensure that interdiction operations are part of a larger design aimed at achieving the JFC's objectives. **Centralized planning and decentralized execution of joint interdiction operations ensure coherence and aid in the effective use of force; enhance the exploitation of tactical events; avoid fragmented, duplicated, and conflicting efforts; and accommodate the Service and functional components' different employment concepts and procedures.**

b. **Operational Art.** Joint force planning for campaigns and operations is based on operational art. One of the fundamental elements of operational art as it applies to interdiction is the concept of **simultaneity and depth**. This concept also forms the foundation of **deep operations theory**. **The intent of deep operations is to bring force to bear on the opponent's entire structure, at the tactical, operational, and strategic depths, in a near simultaneous manner.** The objective is to overwhelm and cripple enemy capabilities and their will to resist.

- Simultaneity refers to the simultaneous application of friendly capabilities against the full array of enemy capabilities and sources of strength. Likewise, **joint force operations should be conducted across the full breadth and depth of the operational**

area, creating competing and simultaneous demands on enemy commanders and resources. Just as with simultaneity, the concept of depth seeks to overwhelm the enemy throughout the operational area from multiple dimensions, contributing to their rapid defeat or capitulation. **Interdiction is one manner in which JFCs add depth to operations at the operational level.**

•• **Geographic distance (that is, "close" versus "deep") should not constitute the primary distinction between different forms of interdiction.** First, in joint operations, depth is a relative term. As Joint Pub 1, "Joint Warfare of the Armed Forces of the United States," points out, **"The full dimensional joint campaign is in major respects 'non-linear.' That is, the dominant effects of air, sea, space, and special operations may be felt more or less independently of the front line of troops."** Second, the concept of depth applies to time as well as space. **Operations extended in depth, in time as well as space, shape future conditions and can disrupt an opponent's decision cycle.** Although it has usually been the case that interdiction closer to surface forces was designed to affect the battle over a shorter term than actions deeper in the enemy's territory, the most important aspect in planning interdiction operations is the effect desired, which may be measured in time. Once objectives and desired outcomes are known, commanders can make appropriate targeting decisions.

- **Joint interdiction typically focuses on operational level objectives**, as delineated in the JFC's campaign plan. It can enhance strategic level objectives by working in concert with other efforts to neutralize or destroy the enemy's center(s) of gravity or other key target

systems that may affect the entire theater. **Joint interdiction can also enhance tactical level objectives** which more directly complement maneuver forces. Successful joint interdiction requires close integration with other operations, available resources, and expected results. **Strategic and operational level objectives are best described in terms of desired outcomes rather than specific targets.** Those interdiction operations with strategic and operational level objectives generally occur deeper in enemy territory and produce more delayed effects. Tactical level objectives concentrate on targets which are generally closer to friendly forces and usually produce more immediate effects.

operation or campaign objectives, or to support other components of the joint force, which benefits the joint force as a whole. Normally, joint interdiction assets tasked in support of the **theater- and/or JOA-wide interdiction effort** (interdiction operations conducted relatively independent of surface maneuver operations) are also heavily tasked for other joint operations in addition to joint interdiction, such as counterair, strategic attack, information operations (IO), and maritime support. Since there will rarely be enough of these assets to meet all demands, the JFC arranges for the centralized direction of joint interdiction assets to ensure the unity of effort required for their optimum use.



The precision and flexibility of interdiction assets provide the joint force a capability to apply responsive combat power to attain joint force objectives.

2. Joint Interdiction Operations

Planning and coordinating interdiction operations occurs at many levels of command within a joint force. The flexibility and capability of interdiction assets allow them to be employed in a multitude of situations. **Subordinate commanders** possess organic assets which can contribute to interdiction operations. These assets may also be employed in support of the JFC's

a. **Unity of Effort in Joint Interdiction Operations.** The capabilities of forces used for joint interdiction, as well as the magnitude of their potential contribution, must be considered while planning and conducting the joint interdiction effort. **The JFC structures the joint force to ensure that diverse component capabilities, operations, and forces complement each other to achieve the desired results effectively and efficiently.**

b. **Air Interdiction Operations** are defined as **air operations conducted to destroy, neutralize, or delay the enemy's military potential before it can be brought to bear effectively against friendly forces at such distance from friendly forces that detailed integration of each air mission with the fire and movement of friendly forces is not required.** Air interdiction is differentiated from other air operations by the objective. For instance, a strike with Tomahawk land-attack missiles (TLAMs) on a land-based airfield in order to deny the enemy a staging area for supplies would be

Within an assigned AO, a surface commander can interdict enemy forces to enhance the effects of the friendly scheme of maneuver with the use of such organic assets as Army Tactical Missile System (ATACMS), organic fixed- and rotary-wing aircraft, and artillery. In such situations as these, C2 for the operation is normally conducted according to the component's procedures.

d. **The JFC ultimately approves the integration of joint interdiction operations with execution of other joint force operations.** Air interdiction operations



A long history of inter-Service teamwork is exemplified in this World War II skip-bombing interdiction operation of enemy sea LOCs.

an air interdiction operation, while a strike against the same airfield with F-16s, targeted on recently deployed forward based fighters, would be classified as an offensive counterair operation.

c. **Component Organic Interdiction Operations. Components may conduct interdiction operations as part of their specific mission in addition to, or in lieu of, supporting the theater- and/or JOA-wide interdiction effort.** For example, naval forces charged with seizing and securing a lodgment along a coast may include the interdiction of opposing land and naval forces as part of the overall amphibious operation.

conducted over maritime and littoral areas may require close coordination between the joint force air component commander (JFACC) and the naval force commander. Such coordination is necessary because many missions involving sea control may include joint air interdiction efforts. In an unpredictable maritime environment, often only the at-sea naval task force commander knows the location and detailed intentions of friendly at-sea forces. Additionally, in the case of air interdiction operations short of the fire support coordination line (FSCL), all air-to-ground and surface-to-surface attack operations are controlled by the appropriate land or

amphibious force commander. Coordination between the JFACC and the land force commander, as well as coordination between aircrews and friendly forces on the ground, is required through the appropriate air C2 agencies.

3. Synchronizing Interdiction and Maneuver

a. **General.** Interdiction and maneuver operations are potent entities in their own right. Both maneuver and interdiction

and maneuver (land, air, and sea) provides one of the most dynamic concepts available to the joint force. Interdiction and maneuver should not be considered as separate operations against a common enemy, but rather as complementary operations designed to achieve the JFC's campaign objectives. **Moreover, maneuver by land or naval forces can be conducted to interdict enemy surface potential.** Potential responses to synchronized maneuver and interdiction can create a dilemma for the



Interdiction and maneuver are complementary actions.

operations include: movement of forces and weapon systems; delivery of fires (lethal and nonlethal weapons effects); and attaining objectives at all levels through the range of military operations. Maneuver and interdiction could be conducted relatively independent of each other in certain circumstances. However, synchronizing interdiction and maneuver as well as their joint fires enhances the ability for each to more fully contribute to a successful outcome of a campaign or major operation.

- Interdiction and maneuver are complementary operations that should normally be synchronized to create dilemmas for the enemy. Accordingly, **synchronizing interdiction**

enemy. If the enemy attempts to counter the maneuver, enemy forces can be exposed to unacceptable losses from interdiction. If the enemy employs measures to reduce such interdiction losses, enemy forces may not be able to counter the maneuver.

- When properly synchronized, these operations place the enemy in the operational dilemma of either defending from disadvantageous circumstances or exposing forces to interdiction strikes during attempted repositioning. This was frequently the case in Operation DESERT STORM. As recorded in the DOD Final Report to Congress on the Conduct of the Persian

Gulf War, Coalition air interdiction operations “... placed Iraqi forces on the horns of a dilemma: if they remained in position, they would be struck either from the air or by the advancing Coalition ground forces; if they tried to move, they made themselves extremely vulnerable to patrolling Coalition aircraft, including attack helicopters.”

- Successful interdiction operations have several characteristics in common, as discussed in this publication. **Maneuver can play a major role** in enabling these conditions for effective employment of interdiction. Maneuver can place sustained pressure on the enemy, enabling interdiction to destroy enemy forces and assets at a faster rate than they can be repaired or replaced. Maneuver can also affect target systems to facilitate their acquisition and attack by interdiction-capable forces. **Actual or threatened maneuver can force an enemy to respond by attempting rapid maneuver or resupply.** This can force the enemy into the open, concentrating them along channeled routes. This makes the enemy a more identifiable, lucrative, and vulnerable target. Close coordination among the components supporting the component leading the joint interdiction effort will help ensure that conditions occur in which the enemy force is made most vulnerable to interdiction.

- **Joint interdiction can also facilitate maneuver operations.** It may, but does not have to, occur at the same place and time as the maneuver to be effective. **Joint interdiction can control the time of engagement to that point most advantageous to friendly forces.** Joint interdiction can be a major contributor and enabler for land and naval force operations. Interdiction can give surface forces the time and protection they need

to maneuver. **The psychological effects of interdiction efforts can greatly reduce the will of enemy forces to continue,** especially when faced with the prospects of having to also defend against subsequent maneuver operations. In a forced entry scenario, joint interdiction may support land and amphibious maneuver operations by denying the enemy supply or resupply of equipment and forces to the objective area. It may also interfere with their means of C2 or provide a diversionary screen. Joint interdiction can isolate enemy forces, control the movement of enemy forces into or out of a land or naval AO, and set conditions for maneuver forces. The joint interdiction effort conducted in support of land or naval forces should be properly integrated with the scheme of maneuver of the supported force. The supported land or naval commander within the AO is responsible for the synchronization of maneuver, fires, and interdiction. To facilitate this synchronization, such commanders designate the target priority, effects, and timing of interdiction operations within their AOs.

- The land or naval force commander can determine specific targets for joint interdiction or, most preferably, give the supporting commanders mission-type instructions in order to provide the other components as much leeway as possible. For example, a naval commander could indicate to the JFACC that a particular group of enemy naval units are automatically the highest priority. The JFACC can then determine how best to support the naval commander — without knowing in advance the exact location or timing of the priority target. By judiciously employing fire support coordination measures, surface commanders can facilitate the joint interdiction effort within their AOs.

•• It is important to note that **not all joint interdiction conducted inside a land or naval AO is responding to the needs of the commander.** The JFC may, for example, have designated certain high priority targets that are located inside a surface force AO that are not of immediate interest to the land or naval commander. In such a case, the component commander tasked by the JFC to conduct the joint interdiction mission inside the particular surface force AO will inform and/or coordinate with the affected commander inside whose boundaries they will be conducting interdiction operations to ensure that there are no adverse effects on surface operations. Joint interdiction can even be conducted in support of a surface force prior to the introduction of land or naval forces. For example, in interdiction operations conducted to set the conditions for a forcible entry operation, the supported commander introducing forces into the AO will designate the timing, priority, and effects of joint interdiction so that it best supports the intended scheme of maneuver. This is but one example of synchronizing interdiction and maneuver to achieve a synergy that is greater than the sum of its parts.

b. **Conducting Joint Interdiction.** At the highest level, **the JFC establishes broad planning objectives and guidance for interdiction of enemy forces** as an integral part of a joint campaign or major operation. Supported and supporting commanders recommend to the JFC how to use their combat power more effectively to this end. With the advice of subordinate commanders, **the JFC sets interdiction priorities, provides targeting guidance, and makes apportionment decisions. The JFC should clearly designate where the weight of the joint interdiction should be applied. Weight of effort may be expressed in terms**

of percentage of total available resources; by assigning priorities for resources used with respect to other aspects of the theater and/or JOA campaign or operation; or as otherwise determined by the JFC. This is a particularly important consideration for commanders who must determine a correlation of forces within their AO, including the effects of joint interdiction. Likewise, effective interdiction planners must have a thorough understanding of the JFC's campaign or major operation plan. Once the JFC establishes campaign or major operation objectives, **component commanders** develop operation plans that accomplish (or contribute to the accomplishment of) the theater- and/or JOA-wide strategic and operational objectives. **All commanders should consider how their capabilities and operations can complement joint interdiction in achieving campaign objectives and vice versa.** These operations may include such actions as deception operations, withdrawals, lateral repositioning, and flanking movements that are likely to cause the enemy to maneuver large surface forces which may make them more vulnerable to interdiction.

• **Directing the Theater- and/or JOA-wide Interdiction Effort.** JFCs typically conduct joint interdiction operations through component commanders. Many elements of the joint force may perform interdiction operations. For example, SOF may conduct limited interdiction operations deep in enemy territory, and land and naval force commanders may employ interdiction assets within their AOs. To ensure unity of command and effort throughout a theater and/or JOA, **the JFC normally delegates the planning and execution of theater- and/or JOA-wide interdiction operations to the component commander, with the preponderance of interdiction assets with theater- and/or JOA-wide range and the ability to**

KOREAN WAR — INTERDICTION DURING RETREAT FROM THE YALU

Highly successful United Nations amphibious operations at Inchon in Sep 1950 and Wonsan in Oct 1950 culminated in a sustained drive northward, reaching North Korea's northernmost border, the Yalu River, in late Nov 1950. These actions spurred a massive Chinese Communist counteroffensive against UN forces from Manchuria China. As General MacArthur saw it, the United Nations Command was "facing the entire Chinese nation in an undeclared war." According to prisoner-of-war reports during this period, Red Chinese troops in Korea numbered between 400,000 and 500,000 men, nearly a 10-to-1 enemy advantage. There was no way to verify these estimates, and friendly forces had no choice but to fall back as fast as possible to escape annihilation. General Lin Piao, the Chinese commander, intended to defeat the US Eighth Army as far north as possible, ideally north of the Chongchon River. Failing this, the Chinese threw their usual caution to the wind and, abandoning their previous practice of traveling only at night, quickly marched southward in pursuit of the Eighth Army and US X Corps over main and secondary roads in bold daylight movements. American interdiction forces, taking advantage of this exposure, inflicted massive casualties upon the Chinese. Even under attack, Chinese columns continued to march forward, apparently ignoring the casualties inflicted upon them by attacking planes of the Fifth Air Force. At night vehicle columns often refused to extinguish their lights, even when they were being strafed and bombed. On the basis of accumulative combat claims, it was estimated that in the first half of Dec 1950, interdiction operations accounted for 33,000 killed or wounded enemy troops — the equivalent of four full-strength divisions. After sustaining 2 weeks of punishment from air interdiction forces, the Chinese Communists began to realize that they could not sustain such high casualty rates, and were forced to return to their rigid discipline of concealment and camouflage. Interdiction operations afforded MacArthur's armies the time to regroup and eventually repel the Chinese Communist onslaught, while maintaining a United Nations presence in Korea.

SOURCE: Robert F. Futrell, The United States Air Force in Korea 1950-1953, Office of Air Force History, 1983

control them. In most cases, this is the JFACC.

c. Designation of a Joint Force Air Component Commander. The JFC will normally designate the commander with the preponderance of air assets and the ability to plan, task, and control joint air operations as the JFACC. The JFACC is the supported commander for the JFC's overall air interdiction effort.

- The authority and command relationships of the JFACC are established by the JFC. These typically

include exercising operational control over assigned and attached forces and tactical control (TACON) over other military capabilities and/or forces made available for tasking. However, the JFC may decide that direct support (DS) is a more appropriate command authority for certain capabilities and/or forces.

- TACON is the command authority over assigned or attached forces or commands, or military capabilities or forces made available for tasking, that is limited to the detailed and usually local

direction and control of movements or maneuvers necessary to accomplish assigned missions or tasks.

- Support is a command authority. DS is a mission requiring a force to support another specific force and authorizing it to answer directly to the supported force's request.
- Unless limited by the establishing directive, the supported commander will have the authority to exercise general direction of the supporting effort. General direction includes the designation and prioritization of targets or objectives, timing and duration of the supporting action, and

operations center which is normally designated a joint air operations center (JAOC). The JAOC is structured to operate as a fully integrated facility. JAOC operations rely on expertise from other component liaisons to coordinate requests or requirements and maintain an up-to-date status of the other component operations. The structure of a JAOC is discussed in Joint Pub 3-56.1, "Command and Control for Joint Air Operations."

- The JFACC recommends theater- and/or JOA-wide targeting priorities and, in coordination with other component commanders' interdiction priorities, forwards the air apportionment



SOF operations add another dimension to a joint force's interdiction capabilities.

other instructions necessary for coordination and efficiency. The supporting commander determines the forces, tactics, methods, procedures, and communications to be employed in providing this support. Joint Pub 0-2, "Unified Action Armed Forces (UNAAF)," provides additional information on command relationships.

- **The JFACC directs, coordinates, and deconflicts operations from an**

recommendation to the JFC. The JFC provides target priorities and air apportionment guidance to the JFACC and other component commanders. The JFACC, using priorities established in the JFC's air apportionment decision, then plans and executes the theater- and/or JOA-wide interdiction effort. Other components may simultaneously conduct interdiction efforts with other organic or assigned capabilities.

- **JFC Staff Option.** There may be situations in which designation of a JFACC is not required. This could occur if a conflict or situation is of limited duration, scope, or complexity. **If this option is exercised by the JFC, the JFC's staff will assist in planning and coordinating interdiction operations for JFC approval.** Refer to Joint Pub 3-56.1, "Command and Control for Joint Air Operations," for a detailed discussion on the "JFC Staff Option" involving joint air operations.

- **Capabilities and forces made available for planning and tasking are determined by the JFC,** in consultation with component commanders. They are based on JFC-assigned objectives and the concept of operations. These capabilities and forces are tasked directly by the JFC or by the JFACC based on the JFC's air apportionment decision. **The JFACC's air interdiction employment guidance,** based on the air apportionment decision, **is used by the JAOC to develop the air tasking order (ATO).** Aircraft or other capabilities and forces not allocated for tasking should be included in the ATO for coordination purposes. These may be redirected only with the approval of the JFC or affected component commander. The ATO process assists the JFACC in synchronizing, planning, and executing the overall theater- and/or JOA-wide interdiction effort. The air apportionment process and the air tasking cycle are discussed further in Joint Pub 3-56.1, "Command and Control for Joint Air Operations."

•• **The JFC is the only individual who has the authority to change the air apportionment decision.** However, the JFACC may divert, cancel, or change apportioned interdiction target assignments to adapt to a changing

situation, consistent with the JFC's intent. Such changes are not considered "changing the air apportionment"; however, the JFACC coordinates changes with affected commanders whenever possible to minimize impact on other joint force operations. The JFC may give the JFACC the authority to redirect joint air operations. The JFC or affected component commander must approve all requests for redirection of direct support air assets. Affected component commanders will be notified by the JFACC upon redirection of joint sorties previously allocated in the joint ATO for support of component operations. Aircraft or other capabilities and/or forces not apportioned for tasking, but included in the ATO for coordination purposes, will be redirected only with the approval of the respective component commander or designated senior JAOC liaison officer.

•• **Proper coordination facilitates a coherent interdiction effort** involving diverse forces using different employment procedures and reduces the potential for fratricide. **Interdiction coordination procedures must not inhibit timely application of firepower in the conduct of other operations.** Commanders should consider component capabilities for speed, range, maneuver, weapon system characteristics, IO, intelligence gathering, and the ability to receive and distribute information available from space-based assets. **Commanders at all levels must ensure interdiction operations are synchronized with other ongoing operations in support of campaign or major operation objectives.** At the joint force level, the joint operations center is the focal point for integrating joint operations at the macro level to include interdiction. (1)

Normally, **subordinate commanders establish planning cycles** for operations based on JFC guidance. This practice permits the coordination of applicable operations between component commanders early enough and in sufficient detail to allow integration of those operations with the plan for the joint interdiction effort. (2) **Certain time-sensitive targets** (highly lucrative, fleeting targets designated by the JFC as high priority) **and other targets of opportunity may preclude the use of normal coordination procedures.** In such cases, appropriate coordination measures, prior coordination, on-scene command, and rules of engagement should allow rapid attack of these targets. Time-sensitive targets and other targets of opportunity should be coordinated between affected component commanders prior to attack. (3) When mission objectives, desired effects, and general deconfliction and time sequencing have been jointly planned and integrated at the JAOC for air interdiction operations, details such as attack tactics and individual mission deconfliction can be worked out by those responsible for execution. **To ensure a coherent and coordinated effort, a plan for conducting joint interdiction should address two principal areas:** a general **concept of operations** and a description of the **planning and coordination cycle** required for the phasing of joint interdiction (see Figure II-2).

- **Joint interdiction operations outside surface AOs** and conducted against closing enemy forces, LOCs, C2 elements, C4I systems, and other types of enemy forces **can provide direct and indirect benefits for subsequent or ongoing maneuver operations.**

- **JFCs may employ various control and coordinating measures to**

facilitate effective joint operations. These measures may include establishing boundaries, objectives, coordinating altitudes to deconflict air operations, air defense areas, amphibious objective areas, and submarine operating areas. Boundaries require special emphasis because of their implications on the synchronization of interdiction and maneuver.

- **Boundaries define surface areas in order to facilitate coordination and deconfliction of operations.** In land and sea warfare, a boundary is a line that defines areas between adjacent units or formations. A naval boundary may be designated for seas adjacent to the area of land conflict to enhance coordination and execution of naval operations. Synchronization of efforts within the land or naval operational boundaries is particularly important. (1) **The JFC may use lateral, rear, and forward boundaries to define AOs for land and naval forces.** These are sized, shaped, and positioned to enable land or naval forces to accomplish their mission while protecting deployed forces. Theater air sorties are not constrained by land boundaries, per se. However, since the airspace above surface areas is used by all components of the joint force, JFCs promulgate airspace control measures to deconflict the necessary multiple uses required (see Joint Pub 3-52, "Doctrine for Joint Airspace Control in the Combat Zone"). (2) **Boundaries are based on the JFC's concept of operations** and the land or naval force commander's requirement for depth to maneuver rapidly and to fight at extended ranges. Within the AOs contained by these boundaries, the land or naval force commander is designated the supported commander.

- As supported commanders within their AOs, **the land and naval force**

JOINT INTERDICTION PLAN

The concept of operations should include:

- Identification of objectives and resource requirements necessary to sustain activities
- An orderly schedule of anticipated decisions needed to shape and direct the conduct of joint interdiction
- Phases for related joint interdiction operations
- Arrangements for orchestrating the operations of air, land, maritime, and special operations forces to ensure an integrated effort
- Scheme of support operations needed to assist and protect forces engaged in joint interdiction operations
- Provisions for feedback or analysis concerning the effectiveness of joint interdiction operations

The planning & coordination cycle should:

- Emphasize simplicity
- Emphasize mission-type orders when appropriate
- Ensure availability of appropriate forces and capabilities for employment
- Ensure that component efforts support and reinforce each other to minimize duplication and conflicting actions
- Arrange tasking and coordination of support operations to assist and protect forces engaged in joint interdiction
- Preclude adverse effects on other friendly forces and operations
- Ensure the continuance of effective operations during periods of degraded communications
- Provide flexibility to adapt to changing conditions and priorities

Figure II-2. Joint Interdiction Plan

commanders are responsible for synchronizing maneuver, fires, and interdiction. They may designate priority of attacks to focus allocated

interdiction assets on the targets or target systems essential to achieving the land or naval force commander's maneuver objectives. The supported commander



Attack helicopters provide a lethal and responsive organic and joint interdiction capability.

specifies target effects to defeat threats to the maneuver force, to position the enemy for defeat by maneuver forces, and to avoid fratricide or hindrance to friendly maneuver. **Timing** of operations is synchronized to mass effects at the desired instance to achieve the objective. **Synchronization** requires explicit coordination and unity of purpose among the units and components in any operation. Maneuver force commanders are assisted in this synchronization by such elements as the battlefield coordination detachment (BCD), tactical air control party, and air liaison officers who provide advice to the maneuver force commander and staff on the capabilities, limitations, and employment of air assets, to include interdiction.

•• **Component commanders develop interdiction priorities to enhance mission accomplishment.** Within their AOs, supported commanders attempt to strike interdiction targets with organic assets first when practical and feasible.

Preplanned targets scheduled for attack by land or naval forces' direct support air capabilities and forces should be included in the joint ATO, when appropriate, for deconfliction and coordination. Interdiction targets which the land or naval force commander is unable to strike, due to lack of organic assets or for which joint force interdiction assets are best suited, are passed to the JFACC via liaison elements. These targets are passed as individual targets, categories of targets, or in terms of desired effects. **However, forwarding desired effects rather than strict target nominations gives those responsible for conducting joint interdiction maximum flexibility to exploit their capabilities.** These joint interdiction target recommendations are prioritized in accordance with JFC directives. (1) The joint team in the JAOC's Combat Plans Division integrates target nominations into a joint integrated prioritized target list (JIPTL) based on prioritized tasks. The JFACC's objectives, tasks, air apportionment recommendation, and JIPTL are reviewed by the JFACC and senior component liaison officers. Typically, it is at this level (or lower) where issues concerning specific targets are resolved. The JFACC air apportionment recommendation is developed from these activities; the JFC then approves the recommendation. The Joint Targeting Coordination Board (JTCB), if formed by the JFC, maintains a macro-level view of the theater and/or JOA and ensures that targeting nominations are consistent with JFC guidance. The JTCB provides a forum in which all components can articulate strategies and priorities for future operations to ensure that they are synchronized. Typically, the JTCB reviews targeting information, develops targeting guidance and priorities, and

may prepare and refine joint target lists. Specific target issues are not typically addressed by the JTCB and/or JFC unless they cannot be resolved at a lower level. The JFACC has the capability in the JAOC to address component target requests throughout the planning and execution of the ATO and can retask assets based on JFC guidance. (2) **Joint interdiction assets are limited resources. Nominated targets will usually outnumber assets capable of attacking them.** A component commander's number one priority may be the JFC's tenth priority (based on the JFC's scheme of maneuver, objectives, or concept of operations for a given period or phase of the campaign). Interdiction operations within AOs occur simultaneously with joint interdiction operations ranging theater- and/or JOA-wide. Coordination, communication, and feedback between and among components regarding targeting decisions are essential and enhance trust between supported, supporting, and subordinate commanders and forces. (3) **Time-sensitive targets acquired within land or naval force AOs may be attacked by interdiction-capable forces,** in accordance with established directives and permissive and restrictive fire support coordination measures. **Attacks should be coordinated with the affected commanders** unless exceptional circumstances dictate otherwise. Under most circumstances, the ATO achieves the desired coordination for preplanned air interdiction missions. Failure to properly coordinate attack of targets within the boundary may result in a duplication of effort or increase the risk of fratricide.

•• **The supported commander should clearly articulate the concept of maneuver operations to commanders**

who apply joint interdiction forces within the supported commander's AO. In particular, supported commanders should provide supporting commanders as much latitude as possible in planning and executing their operations. When coordinating maneuver operations, **supported commanders should clearly state how they envision interdiction enabling or enhancing their maneuver operations** and what they want to accomplish with interdiction (as well as those actions they want to avoid, such as the destruction of key transportation nodes or the use of certain munitions in a specific area). Once they understand what the supported commanders want to accomplish and what they want to avoid, supporting commanders can normally plan and execute their operations with only that coordination required with supported commanders.

"For our air offensive to attain its full effect, it is necessary that our ground offensive should be of a character to throw the greatest possible strain upon the enemy's communications."

Winston Churchill

- **Fire Support Coordination Line.** Within their AOs, land and naval force commanders employ permissive and restrictive fire support coordinating measures to enhance the expeditious attack of targets; to protect forces, populations, critical infrastructure, and sites of religious or cultural significance; and to set the stage for future operations. **The most recognizable fire support coordination measure,** and the one with the potential to impact joint interdiction operations most, **is the FSCL.**
- **When appropriate, an FSCL will be established and adjusted by appropriate land or amphibious force commanders within their AOs in**

consultation with superior, subordinate, supporting, and affected commanders. (The FSCL is a term oriented to land operations; there is no similar term used at sea.)

•• **The decision on where to place (or even to use) an FSCL requires careful consideration.** Placement of the FSCL should strike a balance so as not to inhibit unduly operational tempo while maximizing the effectiveness of organic and joint force interdiction assets. **Establishment of the FSCL too far forward of friendly forces can limit the responsiveness of air interdiction sorties.** Control of air-to-surface operations short of the FSCL requires detailed synchronization, increased communications assets, more restrictive rules of engagement, positive identification procedures, and more key personnel involved in the decision cycle than for those missions conducted beyond the FSCL. **Once established, the land or amphibious force commander, after coordination with superior, subordinate, supporting, and affected commanders, adjusts the location of the FSCL as required to keep pace with current operations.** In high tempo maneuver operations, the FSCL location may change frequently. Accordingly, affected commanders must be notified in time to adjust their respective operations when the FSCL location changes.

•• **Interdiction can occur both short of and beyond the FSCL.** Attacks on surface targets short of the FSCL during the conduct of joint interdiction operations must be controlled and/or coordinated with the appropriate land or amphibious force commander. While conducting air interdiction short of the

FSCL, **mission updates through a theater air control system or amphibious tactical air control system agency can help ensure that those targets are still valid, eliminate redundant targeting, and reduce the potential for fratricide.**

An example of this type of coordinating agency is an air support operations center (ASOC), airborne battlefield command and control center (ABCCC), or Navy tactical air control center.

•• **Attack of time-sensitive targets short of the FSCL is controlled by the appropriate land or amphibious force commander.** Coordination is normally conducted through such agencies as the fire support element and fire support coordination center. This coordination is facilitated by such C2 platforms or centers as: ABCCC; Airborne Warning and Control System; joint surveillance, target attack radar system (JSTARS); BCD; ASOC; Direct Air Support Center; Naval Amphibious Liaison Element; or special operations liaison element (SOLE).

•• **Supporting forces attacking targets beyond the FSCL must inform all affected commanders** in sufficient time to allow necessary reaction to avoid friendly casualties. SOF operations beyond the FSCL and outside the land force AO are particularly at risk and require detailed coordination through the SOLE. **The inability to inform affected commanders will not preclude the attack of targets beyond the FSCL,** providing the attack will not produce adverse effects. However, failure to coordinate this type of attack increases the risk of friendly casualties and could waste limited resources through duplicative attack.

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CHAPTER III TARGETING

"The general who wins a battle makes many calculations in his temple before the battle is fought. The general who loses a battle makes but few calculations beforehand. Thus, many calculations lead to victory, and few calculations to defeat. It is by attention to this point that I can foresee who is to win or lose."

Sun Tzu

1. Interdiction Targeting Considerations

a. **General. Targeting is the process of selecting targets and matching the appropriate response to them**, taking account of operational requirements and capabilities. Interdiction targeting translates desired effects into specific missions and attacks. Appropriate interdiction resources are matched to target systems based on operational requirements and capabilities. **The goal for joint interdiction targeting is to execute a connected series of missions and attacks to achieve the JFC's interdiction objectives.** This requires a concerted application of lethal and nonlethal weapons designed to affect as many elements of selected target systems as possible. Interdiction attacks on widely dispersed target systems (such as a railway system) should be concentrated in purpose, which is not necessarily the same as massing physical assets in one location at one time. **Coherent operations of this type depend on centralized planning.** Differing conditions and considerations determine what operations are required. Interdiction should disrupt those systems which will result in the greatest payoff and achieve the desired objectives. However, commanders must balance the potential advantage of attacking enemy facilities, capabilities, and threats with the potential loss of intelligence that might result from the destruction of specific targets. **Commanders identify desired mission effects and the enemy systems for joint interdiction.** Analysis should focus on such variables as

the determination of critical vulnerabilities, time windows in which vulnerabilities are likely to occur, threats to friendly forces, and the relative value of potential mission objectives or enemy systems.

b. Targeting Responsibilities

- **Since interdiction operations can be conducted by different elements of a joint force, the JFC may either delegate the authority or use the staff to conduct execution planning, coordination, allocation, tasking, and deconfliction** associated with the theater- and/or JOA-wide interdiction effort. **When designated, the JFACC is responsible for ensuring unity of effort for execution of theater- and/or JOA-wide interdiction.** This responsibility includes deconfliction, coordination, control measures, and adjustments to the theater- and/or JOA-wide air interdiction effort. Joint interdiction execution planning considers the elements shown in Figure III-1.
- **JFCs may establish and task an organization within their staffs** to accomplish broad targeting oversight functions or may delegate the responsibility to a subordinate commander. Typically, JFCs organize JTCBs. If the JFC so designates, the JTCB may be an integrating center for the targeting oversight effort or a JFC-level review mechanism. In either case,

EXECUTION PLANNING CONSIDERATIONS

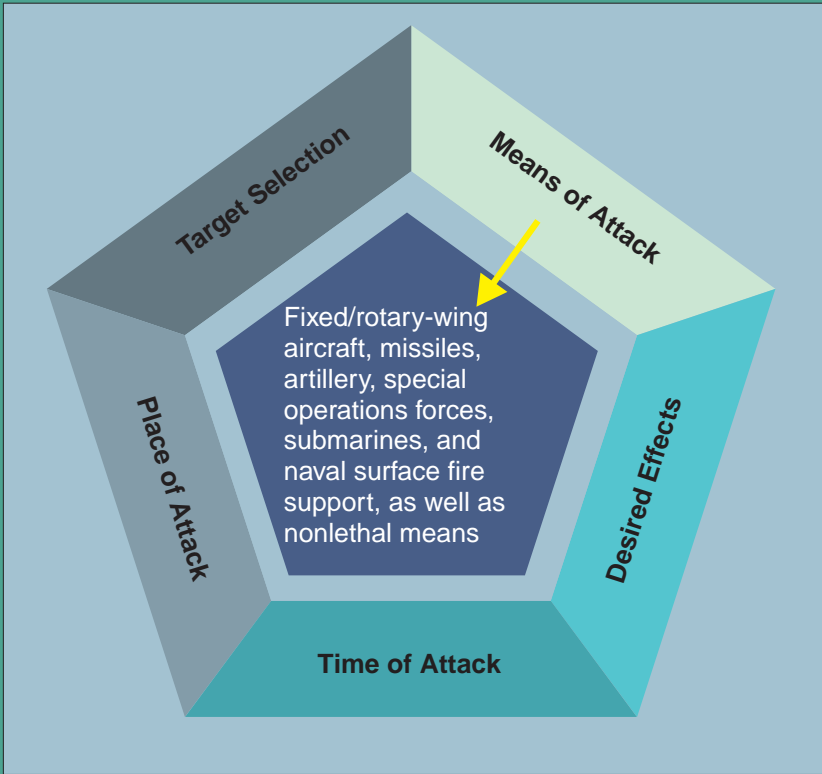


Figure III-1. Execution Planning Considerations

it must be a joint activity comprised of representatives from the joint force staff, all components and, if deemed necessary, their subordinate units. The JFC defines the role of the JTCCB. Typically, the JTCCB reviews target information and develops targeting guidance and priority recommendations for the JFC's approval.

- If targeting oversight functions are delegated to a component commander, the JFC ensures that the targeting process is a joint effort, and the designated component staff should include appropriate component representation at all levels. Execution planning requires a

sufficient C2 infrastructure, adequate facilities, and joint planning expertise. **Detailed joint interdiction execution planning is based on the JFC's joint campaign planning objectives;** it is done in close cooperation with elements of the appropriate components.

- In addition to normal target nomination procedures, **JFCs establish procedures through which land or naval force commanders can specifically identify those interdiction targets which could affect planned or ongoing maneuver within their boundaries and which they are unable to attack with organic**

assets. This also includes key areas that they do not want targeted, such as enemy transportation nodes to be preserved for future friendly use. These targets may be identified individually or by category, specified geographically, and/or tied to desired effects and time periods. The purpose of these procedures is to add visibility to, and allow the JFC to give priority to, targets directly affecting planned maneuver by land or naval forces. Component commanders assist each others' target validation efforts by establishing a timely target feedback process. Component liaison elements such as the BCD (collocated with the JAOC) are ideally situated to relay information and concerns involving the targeting process. Targeting relationships are discussed further in Joint Pub 3-56, "Command and Control Doctrine for Joint Operations" (in development), Joint Pub 3-56.1, "Command and Control for Joint Air Operations," Joint Pub 3-60, "Joint Doctrine for Targeting," (in development), and Joint Pub 2-01.1, "JTTP for Intelligence Support to Targeting."

"All the numerous applications of physics, chemistry, engineering, etc., which make up the modern arsenal are in fact at the mercy of humans, the soldiers who use or direct them."

S.T. Das

c. Target Detection

- **The ability to detect and identify targets is a function of the following attributes:**

- The **nature of a target set** may determine its suitability for interdiction and what forces and weapon systems should be employed. For example, a pipeline in the jungle might best be

attacked by SOF ground elements. The fewer the routes and depots in an enemy transportation system, and the more the enemy depends on that system, the more that system may be vulnerable to interdiction. Conversely, an enemy who possesses a varied, dispersed transportation system is usually much less affected by interdiction. Mobile or easily concealed targets may require an approach different from that employed in attacking fixed emplacements.

- **Target area environmental conditions** include terrain restrictions, adverse weather, darkness, and seasonal and temperature effects. These conditions may camouflage or conceal targets, reduce visibility, and degrade weapon systems and force capabilities.

- (1) **Terrain features** may affect acquisition of the target, requiring specialized weapons and attack tactics. For example, heavily forested emplacements or staging areas may be more suited to SOF direct action missions or air-released cluster munitions than laser-guided or general purpose weapons or surface-to-surface firepower.
- (2) **Adverse weather conditions** can affect movement as well as capability to interdict the enemy. The rate and extent of surface maneuver may also be influenced by weather conditions. These, in turn, can provide greater interdiction opportunities (for example, when enemy maneuver is restricted to a few major routes or by seasonal conditions, it results in the concentration of forces). Adverse weather may also hinder interdiction by making acquisition of the enemy more difficult. Additionally, darkness and other conditions that degrade visibility may limit surveillance and reconnaissance efforts, as well as degrade weapon systems and forces. Effective weather support is essential to the potency of



JSTARS not only enhances situational awareness, but C4 capabilities as well.

interdiction operations. Accurate weather information allows the joint force to maximize the performance of its personnel and systems, such as forecasting the electro-optical environment (thermal crossover periods and other target acquisition data) for employing advanced weapon systems. Accurate weather information can increase the probability of undiverted successful attacks and enable friendly forces to exploit weather-induced limitations of enemy forces and systems. (3) **Technology** can enhance detection and identification of obscured targets. For example, night vision devices and electronic sensors can greatly reduce the concealment previously provided by limited visibility. More importantly, aviation assets equipped with technology sensors such as JSTARS can direct interdiction assets onto immediate, high-value, time-sensitive targets which might otherwise be undetectable. (4) **Target defenses** may distract or target aircrews, reducing the effectiveness of air attacks. Detection assets, such as JSTARS or the use of all-source intelligence, may enhance target acquisition. However, enemy air defenses may not allow aircrews adequate time or avenues to acquire their target visually due to high speeds, low or medium altitudes, or restricted ingress routing necessary to minimize the risk of engagement. Effective force packaging can

reduce the impact of enemy air defenses and achieve local air superiority.

2. Combat Assessment and Feedback

a. Joint interdiction operations should include both pre- and post-interdiction target reconnaissance efforts in order to facilitate combat assessment. **The purpose of combat assessment is to determine if the desired results were achieved** and to identify areas that require additional effort, de-emphasis, or other adjustment. Analysis of interdiction missions should address, in near real time, the effectiveness of the operation in achieving the interdiction objectives and actions undertaken by the enemy to counter the interdiction effort. **The combat assessment function consists of three components:** battle damage assessment, munitions effects assessments, and reattack recommendation (a combined intelligence and operations function). Information gained from combat assessment provides input for follow-on targeting efforts.

b. **The JFC and component commanders communicate about revisions to anticipated targeting for joint interdiction operations through component liaison elements.** These revisions may result from unforeseen joint force needs, unavailability of assets, or as otherwise directed by the JFC. If joint interdiction missions tasked to support maneuver operations are delayed, canceled,

or diverted to higher priority targets, the affected commander should be informed in sufficient time to allow adjustments to the scheme of maneuver. **Appropriate feedback on the results of interdiction missions permits timely retargeting**

efforts and tasking of subsequent interdiction operations. Thus, such feedback ensures the effective employment of interdiction assets and enhances the mutual trust of supported, supporting, and subordinate commanders and forces.

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CHAPTER IV

ACHIEVING EFFECTIVE JOINT INTERDICTION

“They forget that the whole art of war is to gain your objective with as little loss as possible.”

Field Marshal Bernard L. Montgomery

1. Immediacy of Interdiction Operations

The relative immediacy of the impact of interdiction may depend on several factors: the distance between interdiction operations and the location of intended effect, the means and rate of enemy movement (ships, trains, aircraft, trucks, tanks, or foot), the type of interdiction targets (forces, supplies, fuel, munitions, or infrastructure), the level of enemy activity, and the strength and resilience of the attacked force or system. The JFC should not apply strict geographic boundaries to interdiction, but should plan for its theater- and/or JOA-wide application. **By directing interdiction operations with this broad perspective, the JFC can take full advantage of the effects of interdiction at the operational level.**

2. Elements of Effective Interdiction

Effective interdiction operations share a number of common elements which lead to the attainment of interdiction objectives, such as destruction of enemy forces or infrastructure. To what degree each will contribute to the operation depends on such variables as the nature of the conflict, geographic location, weather, and characteristics of the enemy. Elements which are normally required to successfully prosecute interdiction operations are shown in Figure IV-1 and are discussed below.

a. **Dimensional Superiority.** Although air and maritime superiority are not ends in



Figure IV-1. Interdiction Operations Elements

themselves, history shows that control of the sea and/or airspace has been a pivotal wartime factor. In particular, **successful joint air interdiction operations have resulted from a largely unimpeded access to the enemy’s airspace.** To ensure interdiction success, **the JFC must establish conditions conducive to effective operations in enemy areas.** Counterair operations, which can achieve theater- and/or JOA-wide or localized air superiority, allows interdiction forces to conduct operations in the enemy’s AO without undue interference and enhances the

acquisition of targets to facilitate their attack. Without such freedom, sustained interdiction operations may cause friendly forces to suffer much higher levels of attrition. Effective interdiction, in turn, may allow freedom of action for other friendly operations. For example, an enemy's counter to interdiction may leave the enemy more susceptible to friendly surface maneuver.

b. Sustained and Concentrated Pressure. Successful interdiction operations have highlighted the importance of sustained, concentrated efforts. Since interdiction is often directed against replaceable systems (vehicles, weapons, aircraft, ships, communications equipment) and repairable systems (engineering features, such as bridges and rail lines), **sustained, persistent pressure, sufficient to impede efforts to replace or repair affected assets, is required.** This applies particularly to operations of long duration, because time allows the enemy to restore losses. Attacks on key enemy repair and replacement assets may be advisable in many circumstances. Concentrating the effects of interdiction is essential due to generally limited numbers of interdiction-capable assets. **The JFC prioritizes and aggressively attacks high payoff, high value interdiction target sets over lower priority interdiction opportunities.** This **economizes forces** in one area so that other more critical target sets may be attacked with a mass of forces and weapons effects sufficient to enhance friendly combat operations. Conversely, when the enemy consumes large quantities of supplies because of heavy combat or extensive movement to counter friendly maneuver, interdiction operations can also have an accelerated impact. This is true for two reasons. First, when opponents are under heavy pressure, they may be forced to deplete stockpiles reserved for ongoing or future operations. Inability to stockpile supplies makes it more difficult for the enemy to initiate large-scale offensive operations. Second, high

consumption rates normally drive an enemy to use direct resupply routes, making the enemy more vulnerable to interdiction attacks.

c. Accurate and Timely Intelligence. Information about the enemy's LOCs, tactical dispositions, and capabilities is imperative. **Accurate and timely intelligence provides information** about the enemy's probable course(s) of action, identifies interrelated target systems to include their components and elements as well as critical nodes, and allows the commander to anticipate enemy's actions or counteractions and respond accordingly. A prerequisite for planning joint interdiction operations is an understanding of the capabilities and limitations of the enemy and how the enemy is most likely to fight. Accurate intelligence allows commanders to develop achievable objectives, select appropriate targets, apply the appropriate weapon and delivery systems, and keep abreast of the enemy's response. In order to accomplish this, **interdiction-capable commanders require C4I systems which facilitate exploitation and dissemination of real-time and near-real-time intelligence.** Such intelligence is particularly useful in dealing with targets which may have near or immediate effect on surface forces or whose location was not accurately known. Intelligence operations must support the joint interdiction effort to enhance unity of effort. To that end, **interdiction targets must be identified and then prioritized in relation to their importance in achieving campaign objectives.**

- **Intelligence can provide interdiction operations with crucial input on target development** by assessing enemy characteristics described in Figure IV-2. Intelligence also supports interdiction planners with **environmental assessments** and by **identifying enemy target systems** such as C4I systems, LOCs, and military geography.

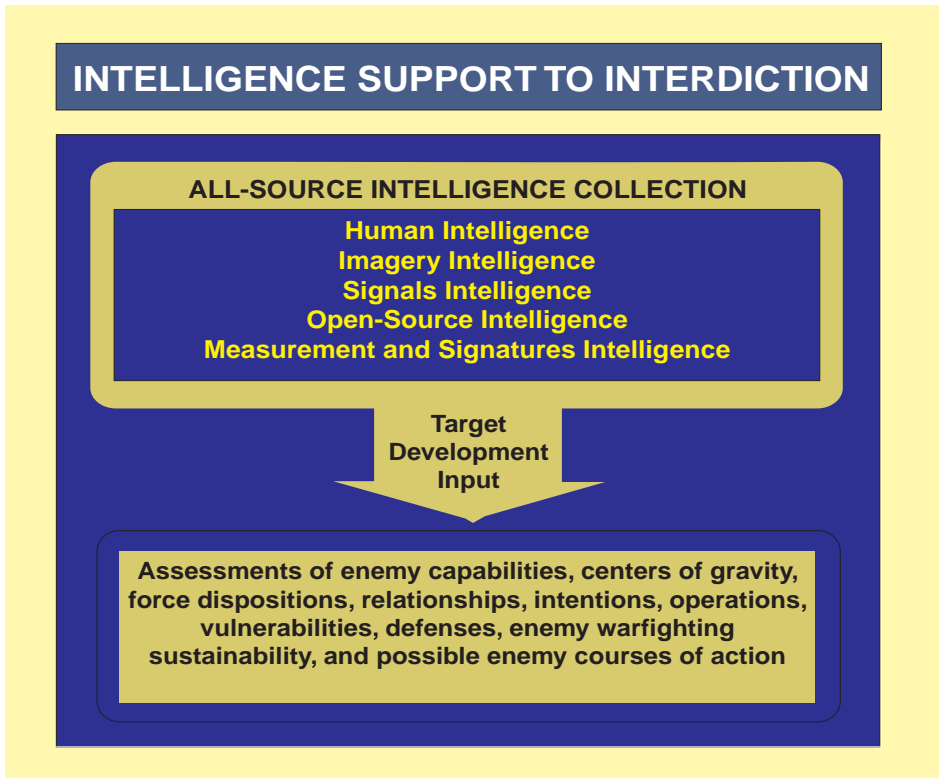


Figure IV-2. Intelligence Support to Interdiction

Reconnaissance, surveillance, and target acquisition forces support these intelligence efforts through the collection of a broad range of information.

- As all-source intelligence such as human intelligence, imagery intelligence, signals intelligence, open-source intelligence, and measurement and signatures intelligence is collected, **analysts must systematically evaluate potential targets** to identify critical nodes and determine the most effective means to disrupt them. Analysts should consider the value of leaving a critical node intact so it can be exploited for intelligence purposes. The complete analysis of all intelligence derived from technical and non-technical means may reveal vulnerabilities in the enemy's operations which friendly interdiction can exploit. Conversely, **interdiction may enhance**

intelligence collection if, for example, the destruction of primary communications nets causes the enemy to use systems which are more vulnerable to exploitation. Additional information on intelligence doctrine and tactics, techniques, and procedures is provided in the Joint Pub 2-0 series and specifically in Joint Pub 2-01.1, "JTTP for Intelligence Support to Targeting."

d. **Appropriate Munitions and/or Assets.** Mismatching available munitions or assets with targets and/or target systems can greatly increase the time and resources required to achieve the objectives of the interdiction operation. **Matching the correct weapon (system) to the target enhances the joint force's ability to realize the intended effect on the target and frees excess assets for use elsewhere.** For example, from 1965 to 1972 during the Vietnam War, hundreds



Destroyed Paul Doumer Bridge, North Vietnam — A testimony to proper interdiction weaponeering.

of sorties dropping thousands of tons of unguided ordnance failed to close the heavily defended Thanh Hoa and Paul Doumer bridges permanently. All supplies coming into Hanoi or moving southward by rail passed over these two key bridges. When precision-guided munitions became available, the first strike on each target with laser guided bombs resulted in two dropped bridges with no friendly losses.

e. Synchronization With Surface Maneuver. An important factor in successful interdiction operations is synchronizing interdiction and maneuver. **Planning and conducting interdiction and surface operations within a coherent framework provides a synergistic effect.** The benefits of integrating these operations are discussed in more detail in Chapter II of this publication, “Conducting Joint Interdiction Operations.”

3. Complementary Operations

Joint interdiction operations are most effective when planned and executed in a synergistic manner with other planned and ongoing air, land, sea, space, information, and special operations of the joint force.

In addition to counterair and maneuver, which were discussed earlier, other operations notable for their specialized roles which can complement joint interdiction operations include the following:

a. Strategic Attack Operations. Strategic attack operations **target enemy centers of gravity and such other vital target systems** as government and military leadership C2, C4I networks, weapons of mass destruction and the means to deliver them, critical materiel stockpiles, and other war-sustaining capabilities. **Strategic attack and interdiction operations complement one another** through their effects. As an example, strategic attack may focus on production and storage of critical war materiel, while interdiction concentrates on cutting off the flow of this materiel. Strategic attack and interdiction operations also create a synergistic effect with simultaneous attacks against the enemy in depth, which places maximum stress on the enemy, allowing them no respite.

b. Space Operations. Space operations **enhance interdiction’s freedom of action throughout the theater and/or JOA** and include protection of friendly forces from

space threats as well as the ability to deny an adversary support from space. Denying the enemy support from space increases the advantages friendly forces have in a conflict. **Space systems support joint interdiction target analysts, planners, and combat forces** by providing capabilities for C4I; sea, land, and space surveillance; intelligence collection; tactical warning and combat assessment; navigation; geospatial information and services; and environmental monitoring. Denying the adversary access to their space capabilities, and attacking the adversary's capabilities to deny US and allied space capabilities, must be integrated into joint interdiction plans and operations. Joint Pub 3-14, "Joint Doctrine; Tactics, Techniques, and Procedures for Space Operations," provides further amplification on the role of space forces in joint operations.

c. **Information Operations.** Information operations encompass actions taken to affect adversary information and information systems while defending one's own information and information systems. IO complement interdiction through a variety of means and can be used to accomplish interdiction objectives, ideally achieving the

goals before friendly forces engage in battle (but also during and after combat operations). IO targeted against adversary information systems for the purposes of disrupting C2 can have collateral effects on the entire information system. IO actions can divert enemy forces through insertion of false commands and deception, disrupt enemy C4I systems (including C2, supply, and transportation) through technical and physical means, delay enemy forces and supplies by impairing enemy C2 capabilities, and contribute to the destruction of enemy forces through insertion of false commands and by impairing enemy C2. Effective IO contribute to the security of friendly forces, bring the adversary to battle (if appropriate) on terms favorable to friendly forces, help seize and maintain the initiative, enhance agility, contribute to surprise, isolate enemy forces from their leadership, and create opportunities for a systematic exploitation of adversary vulnerabilities. They provide the commander with nonlethal means of conducting interdiction operations. CJCSI 3210.01, "Joint Information Warfare Policy," CJCSI 6510.01A, "Defensive Information Warfare Implementation," and Joint Pub 3-13, "Joint Doctrine for Information Operations," discuss the role of IO in joint warfare.

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CHAPTER V

JOINT FORCE INTERDICTION ASSETS

“One can never have too many guns; one never has enough.”

Napoleon

1. General

Interdiction operations can be conducted by all components of the joint force, during war and MOOTW, by both lethal and nonlethal means. In congruence with the JFC’s concept of operations, components may support, or be supported by, another component commander to achieve theater- and/or JOA-wide interdiction objectives; they may also conduct interdiction operations as part of their mission.

2. Interdiction-Capable Forces

Forces that can conduct, or be employed in, interdiction operations include those listed in Figure V-1 and described below.

a. **Land- and sea-based air forces employ such weapons as missiles, bombs, precision-guided munitions, cluster munitions, land and/or sea mines, electronic warfare (EW) systems, and sensors from airborne platforms.** Aircraft have attributes which allow them to be

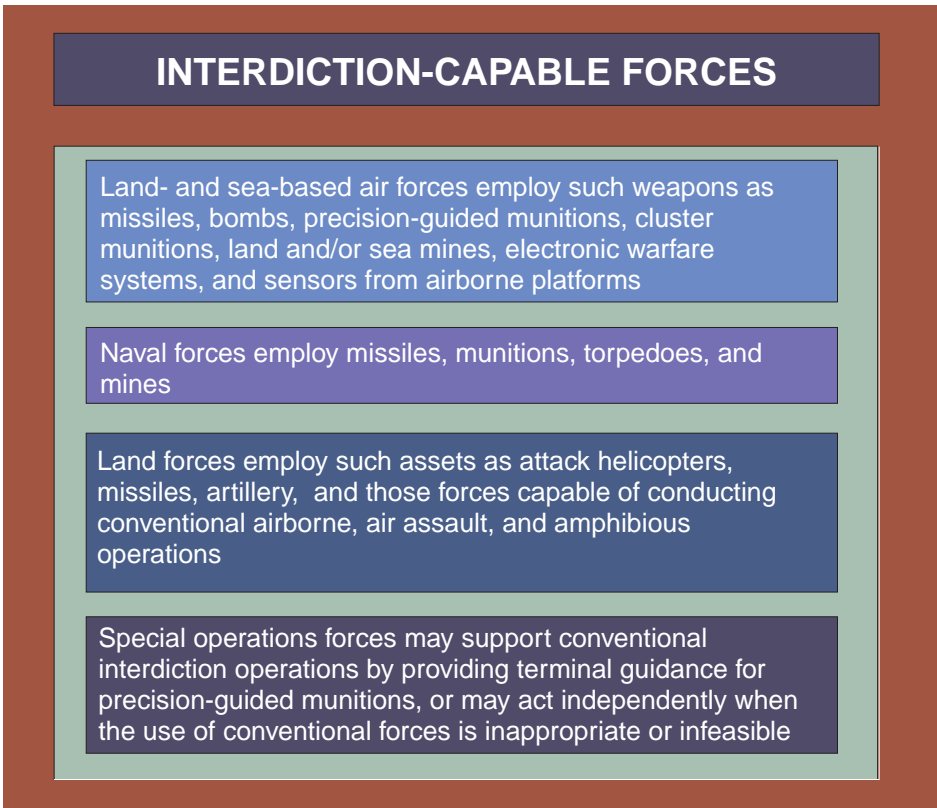


Figure V-1. Interdiction-Capable Forces

employed in diverse and multiple combat air tasks throughout a theater of operations.

- The flexibility, range, speed, lethality, precision, and ability to mass at a desired time and place contributes significantly to the overall joint interdiction effort. Air forces offer the versatility and capability to deliver combat power against the enemy when and where needed to attain objectives across the range of military operations. The ability of aircraft to employ precision-guided munitions offers a distinct advantage over other weapon systems in many cases. Guided weapons can correct for ballistic, release, and targeting errors in flight. Explosive loads can also be more accurately tailored for the target, since planners can assume most bombs will strike in the manner and place expected. Unless using time-delayed munitions, manned aircraft can offer the advantage of providing immediate attack assessment. Also, stealth technology and the ability to employ air-launched conventional standoff weaponry offer unique advantages and, in effect, may achieve their own local air superiority due to their reduced detectability.
- Employment of **air-deliverable, scatterable mines and munitions** can increase the overall effectiveness of attacks. Scatterable mines can temporarily channel enemy movement into killing zones or create temporary chokepoints that enhance the effectiveness of follow-up destructive attacks. Mixing even a few land and/or sea mines or time-delayed cluster munitions with other weapons will create uncertainty and fear among the repair crews or personnel in the target areas. Often, air-deliverable mines and time-delayed munitions are more effective for interdiction than such directly delivered munitions as bombs, because delayed effects munitions continue to be effective after the delivery aircraft have left the area. Enemy uncertainty regarding the presence of these munitions can result in excessive delays, diversion of resources into time-consuming countermeasures, and reduced enemy morale. Consideration should be given to the possible effects these weapons may have on follow-on friendly operations in or moving through the targeted area.

AIR INTERDICTION IN THE GULF WAR

On 30 January, two Iraqi divisions were detected marshalling for a follow-on attack into Al-Khafji. This offered Coalition air power a lucrative target and, shortly after nightfall, Coalition aircraft took full advantage of their night combat capabilities. Heavy Coalition air attacks were directed onto the two Iraq divisions. B-52s dropped armor-sensing mines, AV-8Bs, A-6s, and F/A-18s delivered cluster and precision munitions, A-10s and F-16s fired Maverick missiles, and F-15Es and F-16s dropped combined effects munitions. In some cases, when Iraqi vehicles were found in columns, the first aircraft took out the lead and trail vehicles, trapping the rest of the vehicles for follow-on attacks. In another case, the Tactical Air Control Center used Airborne Warning and Control System aircraft to redirect a three-ship B-52 formation to strike Iraqi armor north of Al-Khafji. The strike caught more than 80 Iraqi vehicles in column and broke it apart, making it easier for other aircraft to destroy the rest of the column.

SOURCE: "CENTCOM Messages and Unit Reports" DOD Final Report to Congress: Conduct of the Persian Gulf War, April 1992

- Joint forces utilize **EW systems** to provide direct and indirect support to interdiction operations as well as to conduct lethal and nonlethal interdiction as part of electronic attack or EW support operations. Examples of interdiction by EW systems include degrading, denying, and exploiting enemy C4I links with electromagnetic jammers, antiradiation missiles, and use of specialized sensors. EW systems may also intercept, maintain, and update enemy electronic order of battle data for use in subsequent operations. Joint Pub 3-51, “Electronic Warfare in Joint Military Operations,” provides indepth guidance for EW operations.

b. Naval forces employ missiles, torpedoes, mines, and other munitions (such as naval gunfire) to support naval, air, and ground forces.

- **Ships and submarines** can conduct interdiction operations to establish and maintain sea control. Maritime interception operations can isolate an enemy from outside support. It can also enhance free use of the sea LOCs for such friendly operations as deployment of forces and can provide security for other naval operations. Because of the highly specialized nature of some naval operations, such as submarine and mine warfare, joint interdiction operations in maritime areas often require a higher degree of coordination among commanders.
- **Missiles such as the TLAM** can be effective interdiction assets and provide a potent employment option to the joint force. Several variants provide single warhead unitary blasts or multi-effect submunition capabilities. Low risk, accuracy, and range make missiles most viable in the planning of interdiction contingency

operations against stationary, non-hardened targets. The TLAM weapon system may require coordination between strike planners in-theater and supporting mission planners out of theater (Cruise Missile Support Activities). This is an ongoing process independent of the decision to use the weapon. With proper preplanning, TLAMs are capable of conducting short-notice strikes, without aircraft support, against targets in heavily defended areas where the probability of the loss of manned aircraft is too high. TLAMs are also capable of neutralizing enemy air defenses to facilitate a much larger attack by land- and sea-based airpower. In theater, the associated afloat planning systems suites provide the Navy component commander with the capability to plan new missions or modify selected missions in the AO.



The Tomahawk land-attack missile gives the joint force increased options for attacking heavily defended targets.

- **Interdiction firepower** can deny the enemy free movement into or within an objective area prior to an amphibious assault by landing force elements. During offensive operations, **naval surface fire support and other munitions** can be directed on the axis of advance, objective, enemy positions which slow down or disrupt the advance, and other targets of opportunity. They may be used to provide covering firepower during such operations as minefield and obstacle breaching, and are capable of being massed on enemy forces threatening or conducting counterattacks. **Naval bombardment** may also be used to destroy or damage transportation infrastructure and assets along LOCs on or near enemy coasts.

“One cannot think about this activity without mentioning the Navy — the very quiet, very professional way they put the [Maritime Interception Operations] on . . . very, very effective — maybe one of the most effective things we did.”

**General Merrill McPeak,
Chief of Staff, USAF**

- **Interdiction of waterways** can disrupt enemy infiltration, movement, and resupply along and across major waterways in an AO. **Mines have a wide application to interdiction operations** in both the littoral regions and the open ocean. They are effective in harbors, coastal regions, and strategic chokepoints of the ocean. Harbors can be key to maintaining both a viable economy and an effective maritime force. A lack of adequate ports to resupply naval vessels may reduce the effectiveness of enemy forces. Ports may also be essential in sustaining a military campaign. Disrupting the flow of ships in and out of a port — or shutting it off altogether — can be an effective way to
- cripple an enemy. **Maritime intercept operations** complement waterway interdiction through surveillance, interception, and boarding operations in both war and MOOTW. Commanders may employ aircraft and ships in coordinated operations designed to stop, board, search, and divert vessel traffic to disrupt or deny the use of supply lines or embargoed materiel and the movement of maritime traffic or forces.
- c. **Land forces employ such assets as attack helicopters, missiles, artillery, and those forces capable of conducting conventional airborne, air assault, and amphibious operations.** Operational-level commanders isolate the battlefield by interdicting enemy military potential before its effective use against friendly forces. Firepower employed by land forces may be either direct or indirect. It is usually combined with maneuver (for greatest effect) and can be integrated with EW systems (as discussed above) and other assets to disrupt, disorganize, or destroy the enemy, producing specific physical and psychological effects.
- **Attack helicopters** provide a commander with an effective and versatile means of interdicting enemy forces. They may use them for rapid reaction operations and where terrain restricts or prohibits ground force occupation or engagement of the enemy’s forces. Attack helicopters are capable of employing precision-guided weapons and providing terminal guidance for other interdiction forces. They are capable of operating during the day or night and in adverse weather conditions.
 - **Missile systems such as ATACMS** are very effective assets for interdicting high value, well-defended targets, day or night, in all weather conditions. ATACMS provides the joint force with a flexible employment option which can

MARITIME INTERCEPT OPERATIONS (MIO) IN THE GULF WAR

MIO appears to have been very effective. As a result of Coalition efforts during the seven months of the Persian Gulf crisis, more than 165 ships from 19 Coalition navies challenged more than 7,500 merchant vessels, boarded 964 ships to inspect manifests and cargo holds, and diverted 51 ships carrying more than one million tons of cargo in violation of UN Security Council sanctions. Commerce through Iraqi and Kuwaiti ports was essentially eliminated; ships were deterred from loading Iraqi oil while Turkey and Saudi Arabia prohibited use of Iraqi oil pipelines that crossed their territory. Virtually all Iraqi oil revenues were cut off; thus the source of much of Iraq's international credit was severed, along with 95 percent of the country's pre-invasion revenues.

By severely restricting Iraqi seaborne trade, MIO played a major role in intercepting the import of materials required to sustain military operations and operate such equipment as surface-to-surface missile systems, command and control equipment, and early warning radar systems. Importantly, access to outside sources of tanks, aircraft, munitions, and other war materiel to replenish combat losses effectively was precluded. Iraq did obtain some imports by smuggling along its borders and by air, but most high-volume bulk imports were completely cut off.

**SOURCE: "Maritime Intercept Operations,"
Final Report to Congress, Conduct of the Persian Gulf War, April 1992**

complement and enhance the theater-and/or JOA-wide interdiction effort. They can conduct short-notice strikes without airborne aircraft support against targets in heavily defended areas where the probability of the loss of manned aircraft is too high. Missile systems are usually employed against soft, stationary, semi-fixed targets. These targets include unhardened surface-to-surface missile sites, emplaced artillery batteries, air defense sites, logistic sites, and C4I facilities.

- Although **artillery** primarily provides close supporting fires to the maneuver force, it can also provide a significant contribution to interdiction operations. Artillery can create obstacles to enemy maneuver and cover the friendly force's advance with smoke and fire. Artillery can suppress enemy defensive systems to facilitate ground and air operations, and can be used to promote deception,
- **Airborne and air assault forces** provide the joint force with a unique interdiction capability, using forcible entry operations in the form of raids to seize key terrain or chokepoints to achieve interdiction objectives. During Operation DESERT STORM, elements of the XVIIIth Airborne Corps, in **the largest air assault in military history**, penetrated 260 kilometers into Iraqi



All components can conduct joint interdiction through lethal and nonlethal means.

territory to the Euphrates River. The purpose of this operation was to cut the Iraqi LOCs along Highway 8 to Baghdad, effectively isolating Iraqi forces in the Kuwait Theater of Operations.

d. Special Operations Forces. SOF may support conventional interdiction operations by providing terminal guidance for precision-guided munitions, for

example, or may act independently when the use of conventional forces is inappropriate or infeasible. Special operations are generally unconventional in nature and often clandestine in character. SOF may conduct **coastal or riverine interdiction operations**, using a variety of special operations ships and craft. In a linear battlespace, **ground forces** may be inserted in the enemy's rear operations area for their disruptive effect or to take out key transitory targets. Such **direct action**



Interdiction operations can be conducted throughout the JOA by any component. Proper coordination enhances effectiveness and reduces potential for fratricide.

operations typically involve an attack on such critical targets as the interdiction of LOCs or other target systems. A very successful example of this type of mission was the interdiction of the Pacora River Bridge by SOF during Operation JUST CAUSE. After air assaulting into a blocking position, a small SOF team engaged a battalion-sized Panamanian Defense Force reaction force with organic weapons and CAS from an AC-130 gunship, destroying six vehicles. The surviving Panamanian Defense Forces returned to their base at Fort Cimmaron. This mission effectively denied a major avenue of approach into the friendly lodgment area at the Tocumen-Torrijos Airport complex. SOF may also **provide intelligence**; ground designation of vital camouflaged, well-hidden targets for air-employed, precision-guided munitions; and post attack assessment. SOF can also **employ** such **weapon systems** as fixed- or rotary-wing gunships for their specialized sensors and weapons effects. Additionally, SOF may enlist the **support of local insurgents** who may interdict from

within the enemy's infrastructure in areas presumed to be safe from attack. SOF may also **degrade or obstruct the warmaking capability of a country** by damaging, destroying, or diverting war materiel, facilities, utilities, and resources. This sabotage may be the most effective or the only means of attacking specific targets that lie beyond the capabilities of conventional weapon systems.

"The Americans, with minimum losses, attacked and seized a relatively weak area, constructed airfields, and then proceeded to cut the supply lines to troops in that area. The Japanese army preferred direct assault, after German fashion, but the Americans flowed into our weaker points and submerged us, just as water seeks the weakest entry to sink a ship. We respected this type of strategy for its brilliance because it gained the most while losing the least."

**Lt Col Matsuichi Iino,
Japanese Eighth Area Army**



SOF provide a wide array of specialized capabilities.

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APPENDIX A

REFERENCES

The development of Joint Pub 3-03 is based upon the following primary references.

1. DOD Directive 5100.1, "Functions of the Department of Defense and Its Major Components."
2. CJCSI 3210.01, "Joint Information Warfare Policy."
3. CJCSI 6510.10A, "Defense Information Warfare Implementation."
4. Joint Pub 1, "Joint Warfare of the Armed Forces of the United States."
5. Joint Pub 0-2, "Unified Action Armed Forces (UNAAF)."
6. Joint Pub 1-01, "Joint Publication System, Joint Doctrine and JTTP Development Program."
7. Joint Pub 1-02, "DOD Dictionary of Military and Associated Terms."
8. Joint Pub 2-0, "Joint Doctrine for Intelligence Support to Operations."
9. Joint Pub 2-01, "Joint Intelligence Support to Military Operations."
10. Joint Pub 2-01.1, "Joint Tactics, Techniques, and Procedures for Intelligence Support to Targeting," (In Development).
11. Joint Pub 3-0, "Doctrine for Joint Operations."
12. Joint Pub 3-01, "Joint Doctrine for Countering Air and Missile Threats," (In Development).
13. Joint Pub 3-01.4, "Joint Tactics, Techniques, and Procedures for Joint Suppression of Enemy Air Defenses (J-SEAD)."
14. Joint Pub 3-02, "Joint Doctrine for Amphibious Operations."
15. Joint Pub 3-04, "Doctrine for Joint Maritime Operations (Air)."
16. Joint Pub 3-05, "Doctrine for Joint Special Operations."
17. Joint Pub 3-05.5, "Joint Special Operations Targeting and Mission Planning Procedures."
18. Joint Pub 3-07, "Joint Doctrine for Military Operations Other Than War."
19. Joint Pub 3-09, "Doctrine for Joint Fire Support," (In Development).

20. Joint Pub 3-13, “Joint Doctrine for Information Operations,” (In Development).
21. Joint Pub 3-13.1, “Joint Doctrine for Command and Control Warfare (C2W).”
22. Joint Pub 3-14, “Joint Doctrine; Tactics, Techniques, and Procedures for Space Operations,” (In Development).
23. Joint Pub 3-18, “Joint Doctrine for Forcible Entry Operations,” (In Development).
24. Joint Pub 3-18.1, “Joint Doctrine for Airborne and Air Assault Operations,” (In Development).
25. Joint Pub 3-51, “Electronic Warfare in Joint Military Operations,” (In Revision).
26. Joint Pub 3-52, “Doctrine for Joint Airspace Control in the Combat Zone.”
27. Joint Pub 3-56, “Command and Control Doctrine for Joint Operations,” (In Development).
28. Joint Pub 3-56.1, “Command and Control for Joint Air Operations.”
29. Joint Pub 3-60, “Joint Doctrine for Targeting,” (In Development).
30. Joint Pub 4-0, “Doctrine for Logistic Support of Joint Operations.”
31. Joint Pub 5-0, “Doctrine for Planning Joint Operations.”
32. Joint Pub 6-0, “Doctrine for Command, Control, Communications, and Computer (C4) Systems Support to Joint Operations.”

APPENDIX B

ADMINISTRATIVE INSTRUCTIONS

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Users in the field are highly encouraged to submit comments on this publication to the Joint Warfighting Center, Attn: Doctrine Division, Fenwick Road, Bldg 96, Fort Monroe, VA 23651-5000. These comments should address content (accuracy, usefulness, consistency, and organization), writing, and appearance.

2. Authorship

The lead agent for this publication is the US Air Force. The Joint Staff doctrine sponsor for this publication is the Director for Operational Plans and Interoperability (J-7).

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a. Recommendations for urgent changes to this publication should be submitted:

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Routine changes should be submitted to the Director for Operational Plans and Interoperability (J-7), JDD, 7000 Joint Staff Pentagon, Washington, D.C. 20318-7000.

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GLOSSARY

PART I—ABBREVIATIONS AND ACRONYMS

ABCCC	airborne battlefield command and control center
AO	area of operations
ASOC	air support operations center
ATACMS	Army Tactical Missile System
ATO	air tasking order
BCD	battlefield coordination detachment
C2	command and control
C4I	command, control, communications, computers, and intelligence
CAS	close air support
CJCSI	Chairman of the Joint Chiefs of Staff Instruction
DOD	Department of Defense
DS	direct support
EW	electronic warfare
FSCL	fire support coordination line
IO	information operations
JAOC	joint air operations center
JFACC	joint force air component commander
JFC	joint force commander
JIPTL	joint integrated prioritized target list
JOA	joint operations area
JSTARS	joint surveillance, target attack radar system
JTCB	Joint Targeting Coordination Board
LOC	line of communications
MOOTW	military operations other than war
SOF	special operations forces
SOLE	special operations liaison element
TACON	tactical control
TLAM	Tomahawk land-attack missile

PART II—TERMS AND DEFINITIONS

airborne battlefield command and control center. A United States Air Force aircraft equipped with communications, data link, and display equipment; it may be employed as an airborne command post or a communications and intelligence relay facility. Also called ABCCC. (Joint Pub 1-02)

air interdiction. Air operations conducted to destroy, neutralize, or delay the enemy's military potential before it can be brought to bear effectively against friendly forces at such distance from friendly forces that detailed integration of each air mission with the fire and movement of friendly forces is not required. (Joint Pub 1-02)

air support operations center. An agency of a tactical air control system collocated with a corps headquarters or an appropriate land force headquarters which coordinates and directs close air support and other tactical air support. (Joint Pub 1-02)

air tasking order. A method used to task and disseminate to components, subordinate units, and command and control agencies projected sorties/capabilities/forces to targets and specific missions. Normally provides specific instructions to include call signs, targets, controlling agencies, etc., as well as general instructions. Also called ATO. (Joint Pub 1-02)

allocation. In a general sense, distribution of limited resources among competing requirements for employment. Specific allocations (e.g., air sorties, nuclear weapons, forces, and transportation) are described as allocation of air sorties, nuclear weapons, etc. (Joint Pub 1-02)

allocation (air). The translation of the air apportionment decision into total numbers of sorties by aircraft type available for each operation or task. (Joint Pub 1-02)

apportionment (air). The determination and assignment of the total expected air effort by percentage and/or by priority that should be devoted to the various air operations and/or geographic areas for a given period of time. Also called air apportionment. (Joint Pub 1-02)

area of operations. An operational area defined by the joint force commander for land and naval forces. Areas of operation do not typically encompass the entire operational area of the joint force commander, but should be large enough for component commanders to accomplish their missions and protect their forces. (Joint Pub 1-02)

area of responsibility. 1. The geographical area associated with a combatant command within which a combatant commander has authority to plan and conduct operations. 2. In naval usage, a predefined area of enemy terrain for which supporting ships are responsible for covering by fire on known targets or targets of opportunity and by observation. Also called AOR. (Joint Pub 1-02)

battlefield coordination detachment. An Army liaison provided by the Army component commander to the Air Operations Center (AOC) and/or to the component designated by the joint force commander to plan, coordinate, and deconflict air operations. The battlefield coordination detachment processes Army requests for tactical air support, monitors and interprets the land battle situation for the AOC, and provides the necessary

interface for exchange of current intelligence and operational data. Also called BCD. (This term and its definition modifies the existing term and its definition and is approved for inclusion in the next edition of Joint Pub 1-02.)

campaign. A series of related military operations aimed at accomplishing a strategic or operational objective within a given time and space. (Joint Pub 1-02)

centers of gravity. Those characteristics, capabilities, or localities from which a military force derives its freedom of action, physical strength, or will to fight. (Joint Pub 1-02)

combat assessment. The determination of the overall effectiveness of force employment during military operations. Combat assessment is composed of three major components, (a) battle damage assessment, (b) munitions effects assessment, and (c) reattack recommendation. The objective of combat assessment is to identify recommendations for the course of military operations. The J-3 is normally the single point of contact for combat assessment at the joint force level, assisted by the joint force J-2. Also called CA. (Joint Pub 1-02)

command and control. The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission. Also called C2. (Joint Pub 1-02)

command and control warfare. The integrated use of operations security, military deception, psychological operations, electronic warfare, and physical destruction, mutually supported by intelligence, to deny information to, influence, degrade, or destroy adversary command and control capabilities, while protecting friendly command and control capabilities against such actions. Command and control warfare is an application of information warfare in military operations and is a subset of information warfare. Command and control warfare applies across the range of military operations and all levels of conflict. Also called C2W. C2W is both offensive and defensive: a. C2-attack. Prevent effective C2 of adversary forces by denying information to, influencing, degrading, or destroying the adversary C2 system. b. C2-protect. Maintain effective command and control of own forces by turning to friendly advantage or negating adversary efforts to deny information to, influence, degrade, or destroy the friendly C2 system. (Joint Pub 1-02)

counterspace operations. Offensive and defensive operations by friendly space and joint forces directed against an enemy's space forces to gain and maintain a desired degree of space superiority. (This term and its definition are provided for information and are proposed for inclusion in the next edition of Joint Pub 1-02 by Joint Pub 3-14.)

electronic warfare. Any military action involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to attack the enemy. Also called EW. The three major subdivisions within electronic warfare are: electronic attack, electronic protection, and electronic warfare

support. a. **electronic attack.** That division of electronic warfare involving the use of electromagnetic, directed energy, or antiradiation weapons to attack personnel, facilities, or equipment with the intent of degrading, neutralizing, or destroying enemy combat capability. Also called EA. EA includes: 1) actions taken to prevent or reduce an enemy's effective use of the electromagnetic spectrum, such as jamming and electromagnetic deception, and 2) employment of weapons that use either electromagnetic or directed energy as their primary destructive mechanism (lasers, radio frequency weapons, particle beams). b. **electronic protection.** That division of electronic warfare involving actions taken to protect personnel, facilities, and equipment from any effects of friendly or enemy employment of electronic warfare that degrade, neutralize, or destroy friendly combat capability. Also called EP. c. **electronic warfare support.** That division of electronic warfare involving actions tasked by, or under direct control of, an operational commander to search for, intercept, identify, and locate sources of intentional and unintentional radiated electromagnetic energy for the purpose of immediate threat recognition. Thus, electronic warfare support provides information required for immediate decisions involving electronic warfare operations and other tactical actions such as threat avoidance, targeting, and homing. Also called ES. Electronic warfare support data can be used to produce signals intelligence, both communications intelligence, and electronics intelligence. (Joint Pub 1-02)

fire support coordination line. A line established by the appropriate land or amphibious force commander to ensure coordination of fire not under the commander's control but which may

affect current tactical operations. The fire support coordination line is used to coordinate fires of air, ground, or sea weapons systems using any type of ammunition against surface targets. The fire support coordination line should follow well-defined terrain features. The establishment of the fire support coordination line must be coordinated with the appropriate tactical air commander and other supporting elements. Supporting elements may attack targets forward of the fire support coordination line without prior coordination with the land or amphibious force commander provided the attack will not produce adverse surface effects on or to the rear of the line. Attacks against surface targets behind this line must be coordinated with the appropriate land or amphibious force commander. Also called FSCL. (Joint Pub 1-02)

interdiction. An action to divert, disrupt, delay, or destroy the enemy's surface military potential before it can be used effectively against friendly forces. See also air interdiction. (Joint Pub 1-02)

joint air operations. Air operations performed with air capabilities/forces made available by components in support of the joint force commander's operation or campaign objectives, or in support of other components of the joint force. (Joint Pub 1-02)

joint air operations center. A jointly staffed facility established for planning, directing, and executing joint air operations in support of the joint force commander's operation or campaign objective. Also called JAOC. See also joint air operations. (Joint Pub 1-02)

joint force air component commander. The joint force air component commander derives authority from the joint force commander who has the authority to

exercise operational control, assign missions, direct coordination among subordinate commanders, redirect and organize forces to ensure unity of effort in the accomplishment of the overall mission. The joint force commander will normally designate a joint force air component commander. The joint force air component commander's responsibilities will be assigned by the joint force commander (normally these would include, but not be limited to, planning, coordination, allocation, and tasking based on the joint force commander's apportionment decision). Using the joint force commander's guidance and authority, and in coordination with other Service component commanders and other assigned or supporting commanders, the joint force air component commander will recommend to the joint force commander apportionment of air sorties to various missions or geographic areas. Also called JFACC. See also joint force commander. (Joint Pub 1-02)

joint force commander. A general term applied to a combatant commander, subunified commander, or joint task force commander authorized to exercise combatant command (command authority) or operational control over a joint force. Also called JFC. (Joint Pub 1-02)

joint operations center. A jointly manned facility of a joint force commander's headquarters established for planning, monitoring, and guiding the execution of the commander's decisions. Also called JOC. (Joint Pub 1-02)

joint targeting coordination board. A group formed by the joint force commander to accomplish broad targeting oversight functions that may include but are not limited to coordinating targeting information, providing

targeting guidance and priorities, and preparing and/or refining joint target lists. The board is normally comprised of representatives from the joint force staff, all components, and if required, component subordinate units. Also called JTCCB. See also joint target list. (Joint Pub 1-02)

joint target list. A consolidated list of selected targets considered to have military significance in the joint operations area. (Joint Pub 1-02)

line of communications. A route, either land, water, and/or air, which connects an operating military force with a base of operations and along which supplies and military forces move. Also called **LOC**. (This term and its definition modifies the existing term "lines of communications" and its definition and is approved for inclusion in the next edition of Joint Pub 1-02.)

maneuver. 1. A movement to place ships or aircraft in a position of advantage over the enemy. 2. A tactical exercise carried out at sea, in the air, on the ground, or on a map in imitation of war. 3. The operation of a ship, aircraft, or vehicle, to cause it to perform desired movements. 4. Employment of forces on the battlefield through movement in combination with fire, or fire potential, to achieve a position of advantage in respect to the enemy in order to accomplish the mission. (Joint Pub 1-02)

mission type order. 1. Order issued to a lower unit that includes the accomplishment of the total mission assigned to the higher headquarters. 2. Order to a unit to perform a mission without specifying how it is to be accomplished. (Joint Pub 1-02)

operational control. Transferable command authority that may be

exercised by commanders at any echelon at or below the level of combatant command. Operational control is inherent in combatant command (command authority). Operational control may be delegated and is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. Operational control includes authoritative direction over all aspects of military operations and joint training necessary to accomplish missions assigned to the command. Operational control should be exercised through the commanders of subordinate organizations. Normally this authority is exercised through subordinate joint force commanders and Service and/or functional component commanders. Operational control normally provides full authority to organize commands and forces and to employ those forces as the commander in operational control considers necessary to accomplish assigned missions. Operational control does not, in and of itself, include authoritative direction for logistics or matters of administration, discipline, internal organization, or unit training. Also called OPCON. See also tactical control. (Joint Pub 1-02)

operational level of war. The level of war at which campaigns and major operations are planned, conducted, and sustained to accomplish strategic objectives within theaters or areas of operations. Activities at this level link tactics and strategy by establishing operational objectives needed to accomplish the strategic objectives, sequencing events to achieve the operational objectives, initiating actions, and applying resources to bring

about and sustain these events. These activities imply a broader dimension of time or space than do tactics; they ensure the logistic and administrative support of tactical forces, and provide the means by which tactical successes are exploited to achieve strategic objectives. See also strategic level of war; tactical level of war. (Joint Pub 1-02)

special operations. Operations conducted by specially organized, trained, and equipped military and paramilitary forces to achieve military, political, economic, or psychological objectives by unconventional military means in hostile, denied, or politically sensitive areas. These operations are conducted during peacetime competition, conflict, and war, independently or in coordination with operations of conventional, nonspecial operations forces. Political-military considerations frequently shape special operations, requiring clandestine, covert, or low visibility techniques and oversight at the national level. Special operations differ from conventional operations in degree of physical and political risk, operational techniques, mode of employment, independence from friendly support, and dependence on detailed operational intelligence and indigenous assets. Also called SO. (Joint Pub 1-02)

strategic level of war. The level of war at which a nation, often as a member of a group of nations, determines national or multinational (alliance or coalition) security objectives and guidance, and develops and uses national resources to accomplish these objectives. Activities at this level establish national and multinational military objectives; sequence initiatives; define limits and assess risks for the use of military and other instruments of national power; develop global plans or theater war plans to achieve these objectives; and

provide military forces and other capabilities in accordance with strategic plans. See also operational level of war; tactical level of war. (Joint Pub 1-02)

synchronization. 1. The arrangement of military actions in time, space, and purpose to produce maximum relative combat power at a decisive place and time. 2. In the intelligence context, application of intelligence sources and methods in concert with the operational plan. (Joint Pub 1-02)

tactical air control center. The principal air operations installation (ship-based) from which all aircraft and air warning functions of tactical air operations are controlled. Also called Navy TACC. (Joint Pub 1-02)

tactical control. Command authority over assigned or attached forces or commands, or military capability or forces made available for tasking, that is limited to the detailed and, usually, local direction and control of movements or maneuvers necessary to accomplish missions or tasks assigned. Tactical control is inherent in operational control. Tactical control may be delegated to, and exercised at any level at or below the level of combatant command. Also called TACON. See also operational control. (Joint Pub 1-02)

tactical level of war. The level of war at which battles and engagements are planned and executed to accomplish military objectives assigned to tactical

units or task forces. Activities at this level focus on the ordered arrangement and maneuver of combat elements in relation to each other and to the enemy to achieve combat objectives. See also operational level of war; strategic level of war. (Joint Pub 1-02)

targeting. 1. The process of selecting targets and matching the appropriate response to them, taking account of operational requirements and capabilities. 2. The analysis of enemy situations relative to the commander's mission, objectives, and capabilities at the commander's disposal, to identify and nominate specific vulnerabilities that, if exploited, will accomplish the commander's purpose through delaying, disrupting, disabling, or destroying enemy forces or resources critical to the enemy. See also joint targeting coordination board. (Joint Pub 1-02)

target list. The listing of targets maintained and promulgated by the senior echelon of command; it contains those targets that are to be engaged by supporting arms, as distinguished from a "list of targets" that may be maintained by any echelon as confirmed, suspected, or possible targets for informational and planning purposes. See also joint target list. (Joint Pub 1-02)

target system. 1. All the targets situated in a particular geographic area and functionally related. 2. A group of targets which are so related that their destruction will produce some particular effect desired by the attacker. (Joint Pub 1-02)

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