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PREFACE

1. Scope

This publication provides doctrinal guidance for joint targeting across the range of military operations. Additionally, it provides time-sensitive target considerations.

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 (JFCs) 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 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 and consistent with US law, regulations, and doctrine.

For the Chairman of the Joint Chiefs of Staff:

JOHN P. ABIZAID
Lieutenant General, USA
Director, Joint Staff

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Fundamentals of Targeting

The purpose of targeting is to provide a logical progression in the development of warfighting solutions to meet the joint force commander's (JFC's) objectives.

Within military operations, targeting must be focused on creating specific effects to achieve the joint force commander's (JFC's) objectives or the subordinate component commander's supporting objectives. Targeting proceeds from the definition of the problem to an assessment of the results achieved by the executed courses of action. The process allows for the testing of multiple solution paths, a thorough understanding of the problem, and the refinement of proposed solutions. **The joint targeting process is flexible and adaptable to a wide range of circumstances.**

Targeting matches the JFC's objectives, guidance, and intent with inputs from each component and staff element to identify the forces and effects necessary to achieve the objectives.

Targets fall into two general categories: **planned and immediate.** Planned targets are those known to exist in an operational area with actions scheduled against them to generate the effects desired to achieve JFC objectives. Immediate targets are those that have been identified too late to be included in the normal targeting process, and therefore have not been scheduled. Immediate targets have two subcategories: **unplanned and unanticipated.**

A joint force component's assigned targets and desired effects are directly related to the JFC's objectives.

Effective targeting is distinguished by the ability to generate the type and extent of effects necessary to facilitate the realization of the commander's objectives. Identification of centers of gravity and decisive points is essential to achieving the JFC's objectives, guidance, and intent through joint force effects. Joint forces typically require the ability to attack centers of gravity throughout the area of responsibility and/or joint operations area. Joint forces detect and attack targets or target

sets to achieve specific desired effects. However, unintended collateral damage from target attacks must be taken into consideration throughout the targeting process.

The Joint Targeting Cycle

There are six phases in the joint targeting cycle.

The six phases of the joint targeting cycle are built upon the principles of effective joint targeting. The cycle focuses targeting options on the JFC objectives for combat operations, while diminishing the likelihood of undesirable consequences.

- **Phase 1 — Commander's Objectives, Guidance, and Intent.**
- **Phase 2 — Target Development, Validation, Nomination, and Prioritization.**
- **Phase 3 — Capabilities Analysis.**
- **Phase 4 — Commander's Decision and Force Assignment.**
- **Phase 5 — Mission Planning and Force Execution.**
- **Phase 6 — Combat Assessment.**

Joint Force Targeting Duties and Responsibilities

JFCs establish broad targeting guidance during theater campaigns and major operations.

With the advice of subordinate component commanders, JFCs set priorities, provide clear targeting guidance, and determine the weight of effort to be provided to various operations. Subordinate component commanders identify high-value and high-payoff targets for acquisition and attack, employing their forces in accordance with the JFC's guidance to achieve missions and objectives assigned by the JFC. The JFC establishes the joint targeting process within an organizational framework optimized for targeting operations. **A primary consideration in organizing this framework is the joint force's ability to coordinate, deconflict, prioritize, synchronize, integrate, and assess joint targeting operations.**

Targeting occurs at all levels of command within a joint force and is applied by component-level forces capable of attacking targets with both lethal and nonlethal means to achieve the desired effect.

The JFC is responsible for all aspects of the targeting process, from establishing objectives, coordination and deconfliction between component commanders, through to combat assessment. Component commanders conduct execution planning and achieve JFC objectives through the application of land, sea, air, space, and special operations forces capabilities. **All components are normally involved in targeting and should establish procedures and mechanisms to manage the joint targeting functions**. The JFC may prohibit or restrict joint force attacks on specific targets or objects without specific approval based on political considerations, military risk, collateral damage risk, the law of armed conflict, and rules of engagement. **The JFC normally appoints the deputy JFC or a component commander to chair the joint targeting coordination board (JTCB).** When a JTCB is not established and the JFC decides not to delegate targeting oversight authority to a deputy or subordinate commander, the JFC may perform this function at the joint force headquarters, with the assistance of the operations directorate. The JFC ensures that this process is also a joint effort involving applicable subordinate commands. The joint targeting process is a highly iterative process that needs close coordination during combat operations. To ensure the widest flexibility and greatest reaction to the adversary, the joint targeting process should be closely linked to the component commander with the preponderance of assets to strike joint targets and the staff to adequately plan, control, and coordinate these missions. Normally the majority of joint targets are attacked with joint air assets.

Time-Sensitive Targets

Time-sensitive targets require detailed planning and coordination.

A time-sensitive target (TST) is described as a target of such high priority to friendly forces that the JFC designates it as requiring immediate response because it poses (or will soon pose) a danger to friendly forces, or it is a highly lucrative, fleeting target of opportunity. TSTs may be planned or immediate. TSTs such as airborne aircraft and missiles and submarines may be handled by separate components, but others may require detailed inter-Service and/or functional component planning and coordination. The JFC provides specific guidance and prioritization for TSTs within the operational area.

Integrating Component Targeting

Integrating the component targeting processes supports joint operation planning and execution.

Planners perform a targeting capability assessment using currently available weapons and weapon systems during both deliberate and crisis action planning. Space-based and in-theater reconnaissance, surveillance, and target acquisition capabilities can provide the JFC and component commanders targeting information on adversary locations, dispositions, and intentions. Surface force commanders normally use a four-phase process (decide, detect, deliver, and assess) to enhance joint fire support planning and interface with the joint targeting process. The joint air tasking cycle applies targeting to air-specific operations via a six-phase air targeting process: objectives and guidance, target development, weaponeering, force application, execution planning and/or force execution, and combat assessment. Special operations forces normally use a similar deliberate six-phase targeting and mission planning process for specific targets or mission assignments. Information operations capabilities can be used to attack adversarial human decision processes, information and information systems, and nodes used to process information and implement decisions.

Joint awareness of target planning and target status is vital to all JFCs.

Component coordination and communication are especially critical for TSTs. A JFC or component commander normally considers weight of effort when an emerging target is of sufficient priority to direct diversion of committed assets. Operations center directors should normally have access to a common operational picture to support targeting in a dynamic environment. Common reference systems can provide a universal, joint perspective to define specific areas of the battlespace, enabling the JFC and component commanders to efficiently coordinate, deconflict, integrate, and synchronize TST attacks. **The JFC must integrate targeting efforts throughout the joint force to ensure the effective accomplishment of theater campaign or major operation objectives.**

CONCLUSION

This publication provides doctrinal guidance for joint targeting across the range of military operations. Additionally, it provides TST considerations.

CHAPTER I
FUNDAMENTALS OF TARGETING

"It is not the object of war to annihilate those who have given provocation for it, but to cause them to mend their ways."

Polybius, *History* (2nd century B.C.)

1. Introduction

Warfare will continue to be an act of force to compel an adversary to comply with specific requirements. Targeting, within military operations, must be focused on creating specific effects to achieve the joint force commander's (JFC's) campaign objectives or the subordinate component commander's supporting objectives. Tactics, techniques, and procedures (TTP) for targeting span the full range of lethal and nonlethal application of force, including information, space, and special operations capabilities. Additionally, principles of targeting can be applied to multinational operations and throughout the range of military operations, from major theater wars to complex contingency operations.

2. The Purpose of the Joint Targeting Process

a. The purpose of the joint targeting process is to provide the commander with a methodology linking objectives with effects throughout the battlespace. The targeting process provides a logical progression as an aid to decisionmaking and ensures consistency with the commander's objectives.

b. The joint targeting process is flexible enough to affect situations ranging from quick reaction tactical operations to broad campaigns. However, its primary focus is to assist the commander to most effectively employ military resources to achieve the JFC's objectives.

Principles of targeting can apply to both joint and multinational operations.

c. Joint forces require a common joint targeting process in order to minimize the likelihood of conflicting or duplicative actions during military operations, as well as to mitigate potentially undesirable consequences resulting from the outcome of those operations. Consequently, components must understand the joint targeting process if they are to achieve the effects necessary to accomplish the commander's objectives. A common understanding of the joint targeting process and adherence to its principles among joint force components will ensure the following.

- Compliance with JFC objectives, guidance, and intent.
- Focus on adversary's centers of gravity (COGs) and decisive points (DPs).
- Coordination, synchronization, and deconfliction of attacks.
- Rapid response to time-sensitive targets (TSTs) that present limited opportunities for action.
- Minimal duplication of effort.
- Expeditious assessment of executed operations.
- A common perspective on all targeting efforts performed in support of the commander.
- Full integration of all capabilities, including lethal and nonlethal means.

3. Targeting Defined

Targeting is **"the process of selecting and prioritizing targets and matching the appropriate response to them, taking account of operational requirements and capabilities."** Targeting is both a joint- and component-level command function that determines **desired effects** necessary to accomplish JFC objectives; selects targets that achieve those effects; and selects or tasks the **means to best engage those targets**.

4. Target Defined

a. A **target** is an area, complex, installation, force, equipment, capability, function, or behavior identified for possible action to support the commander's objectives, guidance, and intent. Targets fall into two general categories: planned and immediate. One important aspect to remember is that a target is not critical in and of itself. Rather, its importance is derived from its potential contribution to achieving the commander's military objective(s). The JFC establishes these objectives, consistent with National Command Authorities (NCA) direction, to compel an adversary to comply with specific requirements.

b. **Joint forces attack targets for the purposes of capture, destruction, disruption, delay, degradation, neutralization, deception, or exploitation, commensurate with the commander's objective.** The desired effect of an action against a target should contribute to the attainment of a commander's specific objective.

c. Targets include the wide array of mobile and stationary forces, equipment, and other military resources that an adversary commander can use to conduct operations at any level — strategic, operational, or tactical. From a commander's planning and execution perspective, targets fall into two general categories: **planned** and **immediate** (see Figure I-1).

- **Planned targets** are those known to exist in an operational area with actions scheduled against them to generate the effects desired to achieve JFC objectives. Examples range from targets on joint target lists in the applicable campaign

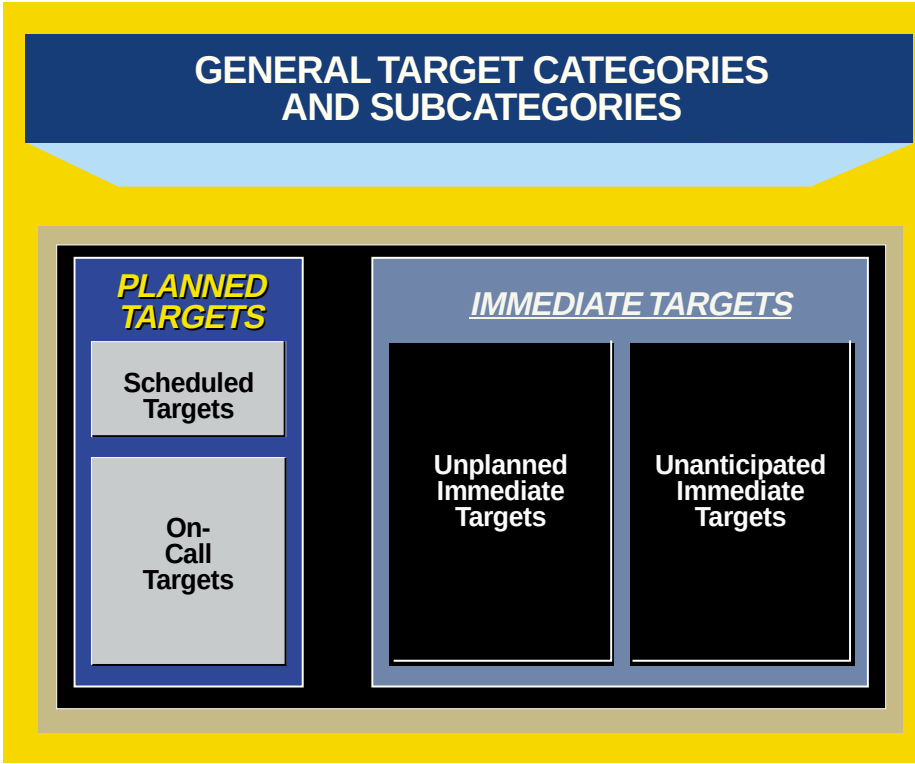


Figure I-1. General Target Categories and Subcategories

plan, to targets detected in sufficient time to list in the air tasking order (ATO), mission-type orders, or fire support plans. Planned targets have two subcategories: **scheduled** or **on-call**.

•• **Scheduled targets** are planned targets upon which fires are to be delivered at a specific time.

•• **On-call targets** are those that do not have fires scheduled to be delivered at a specific time, are known to exist in an operational area, and are located in sufficient time for **deliberate** planning to meet **emerging situations specific to campaign objectives**.

- **Immediate targets** are those that have been identified too late, or not selected for action in time to be included in the normal targeting process, and therefore have not been scheduled. Immediate targets have two subcategories: **unplanned** and **unanticipated**.

•• **Unplanned immediate** targets are those that are known to exist in an operational area but are not detected, located, or selected for action in sufficient time to be included in the normal targeting process.

•• **Unanticipated immediate** targets are those that are unknown or unexpected to exist in an operational area but, when detected or located, meet criteria specific to campaign objectives.

d. **TSTs** are those targets requiring immediate response because they pose (or will soon pose) a danger to friendly forces or are highly lucrative, fleeting targets of opportunity. TSTs may be planned or

The JFC prioritizes specific TSTs for immediate response.

immediate (see Figure I-2). They may also be fixed or mobile. The JFC provides specific guidance and prioritization for TSTs within the operational area. TSTs such as airborne aircraft and missiles and submarines may be handled by separate components, but others may require detailed inter-Service and/or functional component planning and coordination. Fleeting TSTs may be difficult to detect or identify with current intelligence, surveillance, and reconnaissance (ISR) sensors because of the adversary's use of mobility and/or camouflage, concealment, and deception (CC&D) techniques. Hence the target must be rapidly engaged before the adversary can employ mobility and/or CC&D, and disrupt effective targeting efforts.

See Appendix B, "Time-Sensitive Target Considerations," for details on TTP for TSTs.

5. Principles of Targeting

The joint targeting process is designed to provide a means to achieve the JFC's operational objectives. Adherence to these principles throughout the targeting cycle should ensure that desired effects are achieved while diminishing undesired or collateral consequences.

a. **Focused.** The targeting process is **focused on achieving the JFC's objective.** It is the function of targeting to efficiently achieve those objectives within the parameters set by the operation plan (OPLAN), the rules of engagement (ROE), and the law of armed conflict (LOAC). Every target nominated should in some way contribute to attaining the JFC's objectives.

b. **Effects-based.** In achieving the JFC's objectives, targeting is concerned with **producing specific effects.** Targeting analysis considers all possible means to achieve desired effects, drawing from any available forces, weapons, and platforms. The art of targeting seeks to achieve desired effects with the least risk, time, and expenditure of resources.

c. **Interdisciplinary.** Joint targeting requires the efforts of **many functional disciplines.** The targeting process relies upon contributions from a wide range of personnel from many disciplines. For example, operators bring experience gained from the execution of combat operations, while intelligence personnel provide analysis of adversary strengths and vulnerabilities. Legal personnel provide expertise in the application of LOAC and interpretation of ROE, while geospatial

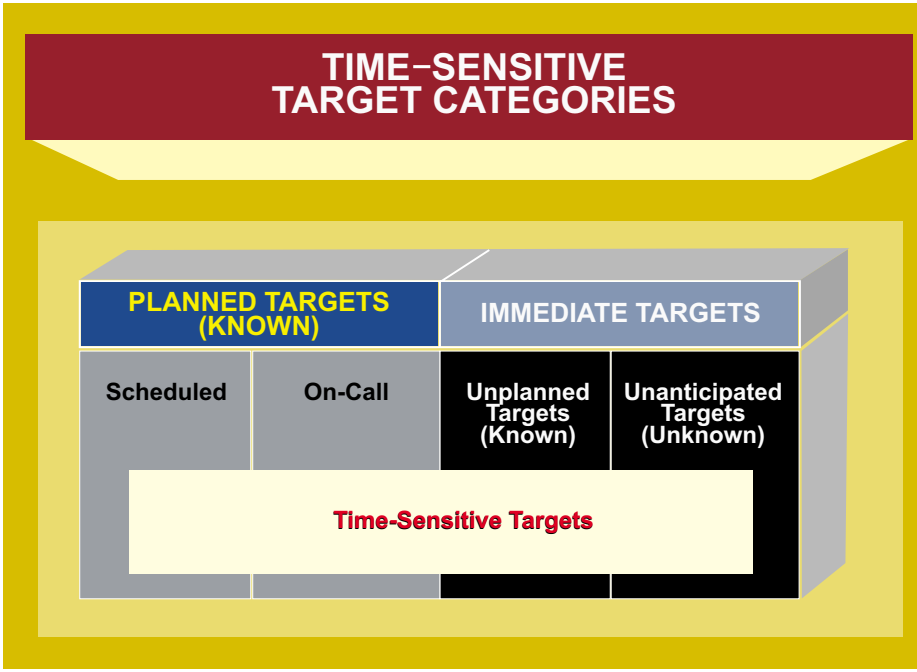


Figure I-2. Time-Sensitive Target Categories

experts provide data vital for mission planning and weapons delivery.

d. **Systematic.** In supporting the JFC's campaign objectives, the targeting process seeks to **achieve effects in a systematic manner.** The targeting cycle is a rational and iterative process that methodically analyzes, prioritizes, and assigns forces against adversary targets systematically to achieve the appropriate effects needed to meet the JFC's objectives. If the desired effects are not achieved, targets are recycled through the process.

6. Effects-Based Targeting

a. The four principles of effective joint targeting (paragraph 5) emphasize that the focus of the targeting process is on achieving the JFC's objectives. **Thus, effective targeting is distinguished by the ability to identify the targeting options, both lethal and nonlethal, to achieve the desired effects that will support the commander's objectives.**

b. It is pivotal to the success of effects-based targeting to link sensors, delivery systems, and desired outcomes. The ability to rapidly collect, share, access, and manipulate information is an enabler in achieving information superiority over US adversaries. Achieving this information superiority is important for conducting effects-based targeting. Understanding the adversary's operational objectives, intentions and decision cycle, expectations, and needs through observations and analysis enable the use of varied joint and multinational means to produce effects against the enemy's critical vulnerabilities. When choosing targets, the commander must be focused on the purpose of the fires striking chosen targets. Targeting effects are more than the results of the fires. Targeting effects are the cumulative results of actions taken to engage geographical areas, complexes, installations, forces, equipment,

TSTs can be either mobile or fixed air-, land-, or sea-based targets.

functions, perception, or information by lethal and nonlethal means. Targeting effects are designed to influence the outcomes of individual battles or engagements, operations, or campaigns. Once the action is taken, the commander must evaluate the effectiveness of the operation. If the desired effect was not achieved, the target may need to be re-engaged or another method selected to achieve the effect.

c. Targeting effects can be categorized in two forms: direct or indirect.

- **Direct effects** are the immediate, first-order consequence of a military action (weapons employment results, etc.), unaltered by intervening events or mechanisms. They are usually immediate and easily recognizable. (For example, a parked aircraft is destroyed either by a direct hit from a bomb, or it is sufficiently close to the point of detonation that it receives the brunt of the weapon's blast and fragments.)

- **Indirect effects** are the delayed and/or displaced second- and third-order consequences of military action. They are often accentuated by intermediate events or mechanisms to produce desired outcomes that may be physical or psychological in nature. Indirect effects are often difficult to recognize, due to subtle changes in adversary behavior that may hide their extent. (For example, the plane destroyed as a direct effect of an attack on an airfield, combined with similar attacks on all the assets of an adversary's air defense system, over time may ultimately degrade the legitimacy of the regime by portraying them as incapable of protecting the populace.)

- Direct and indirect effects possess three fundamental characteristics that qualitatively impact the influence they exert on adversary capabilities.

  •• **Cumulative Nature of Effects.** Effects tend to compound, such that the ultimate result of a finite number of direct effects is greater than the sum of their immediate consequences. Likewise, indirect effects often synergistically combine to produce greater changes than the sum of their individual consequences. This may occur at the same or at different

Cumulative effects result from the aggregate of many direct or indirect effects.

levels of war as the contributing lower-order effects are achieved.

•• **Cascading Nature of Effects.** Indirect effects can ripple through an adversary target system, often influencing other target systems as well; most typically through nodes that are common and critical to related target systems. The cascading of indirect effects, as the name implies, usually flows from higher to lower levels of war. As an example, destruction of a headquarters element will result in the loss of command and control (C2) and synergy of subordinate units.

•• **Collateral and Additional Nature of Effects.** Effects often spill over to create unintended consequences, usually in the form of injury or damage to persons or objects unrelated to the objectives. Sound planning should allow for consideration of the risks of unintended second- and third-order consequences.

Target attacks can inflict unintended collateral or additional damage.

While estimating their outcomes can never be an exact process, it becomes increasingly difficult as effects continue to compound and cascade through targets and target systems. In addition, the impact of a single event can often be magnified over time and distance that greatly exceeds the span of the direct effect associated with that one event.

d. **Measures of Effectiveness (MOEs).** MOEs in military operations are defined as tools used to measure results achieved in the overall mission and execution of assigned tasks. MOEs are a prerequisite to the performance of combat assessment. Assessment of such indicators normally takes place at the tactical, operational, and even strategic levels of war, and goes beyond counting craters or vehicles destroyed. The key is to determine when the predetermined conditions have been met that affect adversary operational employment or overall strategy and whether or not the anticipated effects are occurring. The continuing intelligence analysis process helps to ensure that proper combat assessment measurements take place.

CHAPTER II
THE JOINT TARGETING PROCESS

"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 likely to win or lose."

Sun Tzu
***The Art of War* (c. 500 B.C.)**

1. The Joint Targeting Cycle

The six phases of the joint targeting cycle follow (see Figure II-1). The targeting cycle is not time-dependent, and steps may occur concurrently, but it provides a helpful metric to describe the steps that must be satisfied to successfully conduct targeting.

a. **Phase 1 — Commander's Objectives, Guidance, and Intent.**

- The commander's objectives support the NCA's desired end state for the conduct of military actions, while the guidance provided with the objectives stipulates particular conditions related to the execution of operations (e.g., limitations on collateral damage). Taken together, the objectives and guidance embody the commander's intent for military operations, and their scope can range from very near term tactical situations to far-reaching campaigns in the geopolitical arena. The focus of the commander's intent is always to create a change in the adversary's behavior that turns both the tactical situation and, ultimately, the strategic outcomes to a US advantage. The conditions that establish this strategic advantage are defined by national security strategy and policy, made relevant to the particular situation by amplifying direction from the NCA, and subsequently expressed in national military objectives.
- Commander's guidance drives the subsequent phases of the targeting cycle. Clear, quantifiable, and achievable objectives lead to the successful realization of national security goals through a targeting solution. Understanding the commander's objectives, guidance, and intent is the most important part of the joint targeting process, because they encapsulate all the national-level guidance in a set of outcomes relevant to the present warfighting situation and set the course for all that follows. However, national security strategy, national military objectives, NCA direction and, in most instances, even the JFC's objectives, guidance, and intent express desired end states for the conclusion of hostilities that are too vast and complex to be achieved by a single event or effort.
- **Centers of Gravity and Decisive Points.** Effective targeting is distinguished by the ability to generate the type and extent of effects necessary to achieve the commander's objectives. Identification of COGs and DPs is essential to achieving the commander's objectives in accordance with guidance and intent through joint force efforts. By correctly identifying and controlling DPs, a commander can gain a marked advantage over the adversary and greatly influence the outcome of an action. DPs are the keys to attacking protected COGs. There normally will be more DPs in an

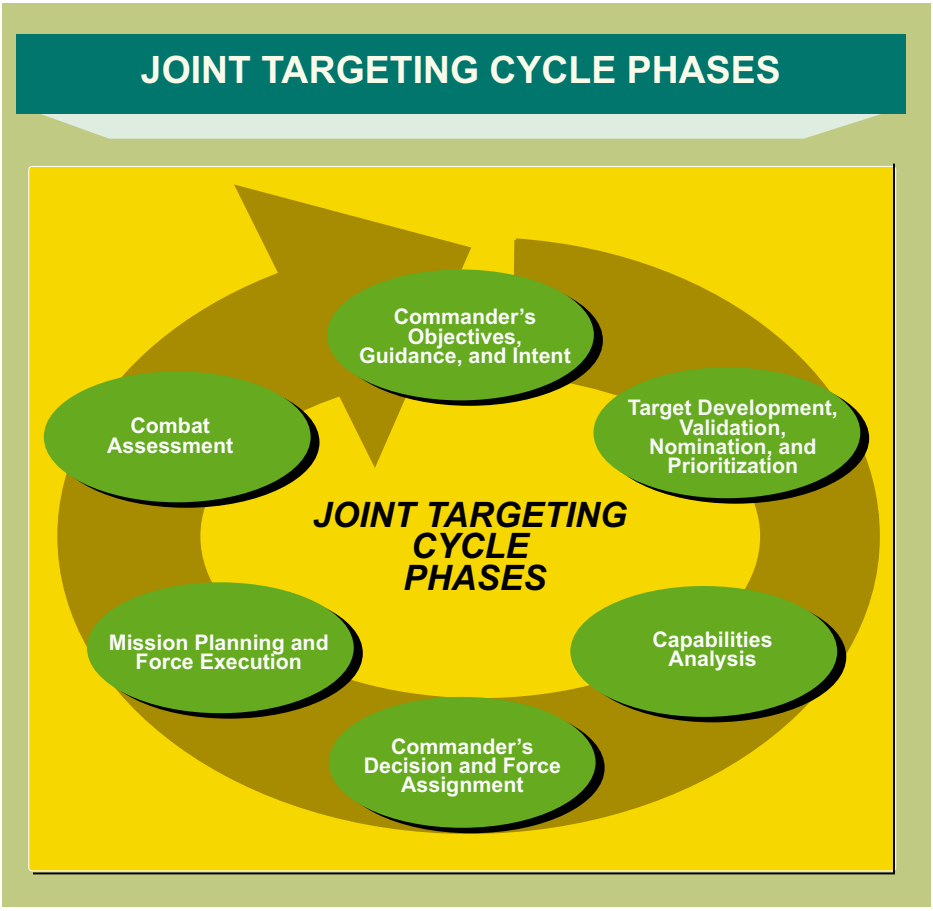


Figure II-1. Joint Targeting Cycle Phases

operational area than the commander can control, destroy, or neutralize with available resources. Accordingly, planners must analyze potential DPs and determine which points enable eventual attack of the adversary's COGs. The commander designates the most important DPs as objectives and allocates resources to control, destroy, or neutralize them.

For more information on COGs and DPs, see Joint Publication (JP) 3-0, Doctrine for Joint Operations.

- The first activity of the joint targeting process at this phase in the cycle is to translate strategy to discrete tasks, each logically and directly related to the overall desired outcome. Following this initial breakdown, it is then necessary to further break these supporting tasks into elements of manageable size, where each element is of sufficient clarity and requires a weight of effort that is within joint force capabilities to sustain during a protracted cycle of planning and execution. The net result of this successive devolution from over-arching strategy to highly discrete task elements is to construct a synergistic structure of interrelated actions that will progress the overall effort to the desired conclusion. Furthermore, it will maximize effective use of joint force capabilities while minimizing the likelihood of unintended,

Course of action development takes place at the tactical, operational, and even strategic levels of war.

and potentially undesired, consequences (e.g., unnecessary adversary noncombatant casualties and/or unwarranted risk to friendly forces).

- Since the underlying purpose of military operations is to create change in adversary behavior, the other critical activity of this phase in the joint targeting process is the development of MOEs (as discussed in Chapter I, "Fundamentals of Targeting") to assess whether objectives have been attained. These MOEs will be the critical ingredient when the joint targeting process turns to the task of identifying specific targets and means for attacking them, and assessing the degree of success achieved in executed operations and attempts to assist the JFC with recommendations for follow-on military actions.

b. **Phase 2 — Target Development, Validation, Nomination, and Prioritization.**

- The JFC's objectives are normally directed against adversary capabilities. These capabilities are themselves enabled by physical and virtual infrastructures. For example, an electric power system provides energy through the physical generation and distribution processes, under the virtual energy system management process.

- Critical to the success of the entire targeting process is the establishment of intelligence requirements. Targeteers must work closely with collection managers to ensure that target development, pre-strike and post-strike requirements, and any changes that occur throughout the targeting cycle are integrated into the collection plan. This intelligence support is vital for the analysis performed in target development, as well as to prepare for future targeting during the execution of operations (e.g., to pretask real-time ISR assets) and to support post-attack assessment of success.

- It is vitally important to understand target development always approaches adversary capabilities from the perspective of their support from target systems. A target system is most often considered as a collection of assets directed to performing a specific function (e.g., production of electric power) and

Detailed target development, validation, and mission planning are critical to special operations forces success.

being broadly geographically bounded. While target systems are intradependent to perform a specific function, they are also interdependent in support of adversary capabilities (e.g., the electric power system may provide energy to run the adversary's railroads that are a key component of their military logistic system). Target development links these multiple target systems and their components (targets) in matrices that reflect both their intra- and inter-dependency with elements of tasks that, in the aggregate, contribute to the accomplishment of objectives.

- The analysis performed in target development must be conceived of as proceeding through successively greater levels of detail, flowing from the macro (broad scope) level to the micro (narrowly focused) level. This winnowing approach to the selection of candidate targets is essential to preserve the linkage between the JFC's objectives (in terms of the desired effects) and the specific action that is taken against a particular target. Furthermore, it determines the necessary type and duration of the action that must be exerted on each target to generate an effect that is consistent with the commander's objective.

- Target development is made most effective by accessing the greatest possible breadth of subject matter expertise and information regarding the functioning of the systems that support adversary behaviors. This research is improved by expanded contact beyond that normally available within a JFC's planning staff, to include national interagency groups. The ultimate goal of this expansive research is to locate exploitable vulnerabilities in the adversary's warfighting and/or war-sustaining resources and to prepare for the process of matching joint force capabilities against those critical vulnerabilities.

- Integral to target development is target validation. Target validation determines whether a target remains a viable element of the target system. Equally important in the validation of the target is determining whether it is a lawful target

Joint forces normally examine the systemic and physical vulnerability of a target or target system to the effects of lethal and nonlethal capabilities available.

under the LOAC, as well as any promulgated ROE. For example, attacking a national religious shrine in an attempt to demoralize an adversary's populace and diminish their will to support continued hostilities is considered an illegal act under the provisions of the LOAC.

- Once potential targets are identified and validated, they are nominated through the proper channels for approval, generally involving their deliberation in a coordinating body such as the joint targeting coordination board (JTCB), that represents the interests of all major joint force components. In some cases target approval may be required from the NCA or geographic combatant commander or deputy commander levels, depending on political considerations. Targets are prioritized based on the JFC's objectives and guidance and the mutual support required between joint force components as they strive to achieve the JFC's objectives.

- The net result of target development is to produce from the approved targets a target nomination list (TNL) that identifies those elements within an adversary's power base (e.g., forces, infrastructure, and political support) that most closely support the JFC's objectives, and that has been vetted through all joint force component and interagency concerns. In addition to enumerating these candidate targets, the nomination list also includes specific functional outcomes that must be created at each target to achieve the JFC's objectives as well as any stipulations that may affect how those functional outcomes may be created (e.g., nearby collateral damage risks). This supporting documentation is critical in order to frame the force estimation performed in the next phase and to facilitate the assessment of success achieved at the conclusion of operations.

c. **Phase 3 — Capabilities Analysis.**

- Coincident with the determination of targets and desired outcomes for those targets, it is necessary to select the most promising forces for application against those targets.

- This phase of the joint targeting cycle involves estimating the effects of lethal or nonlethal attacks against specific targets. Its purpose is to weigh the relative efficacy of the available forces as an aid to achieving the objectives set forth by the JFC and subordinate commanders. These estimates build upon the analysis performed in target development, both for information that characterizes the physical, functional, and psychological vulnerability of the target and for a connecting thread of logic to the JFC's objectives and guidance. Consequently, the modeled results of forces resulting from this phase must be congruous with the JFC's intent for the prosecution of combat operations.

- Estimates may be generated using mathematical models that take into account the target's critical vulnerabilities, performance data on the weapons contemplated for application against the target, and delivery parameters associated with the delivery of those weapons.

- It is critically important to stress that all estimates generated during this phase are situation-specific, reflecting the pairing of particular forces against particular targets, under particular conditions of employment. As such, users of this information are cautioned against assuming that the estimated effectiveness of a force capability under one set of circumstances is broadly applicable to other circumstances. Relatively minor targeting variations may have an exaggerated effect impact on effects estimates. It is equally important to stress that these estimates of performance are not designed to take into account considerations outside of the realm of weapon-target interaction (e.g., they do not address whether or not the delivery system will survive to reach the target). Estimates of consequences beyond the weapon-target interaction are deemed far too speculative and are subject to extreme bounds of uncertainty to prove of any value in quantitative analyses of capability performance.

- The joint targeting process allows all components access to information and methodologies used in determining which type and level of force has a greater likelihood of generating the desired effect. The methodologies and data used for capability analyses are also capable of producing estimations of collateral

Vulnerability is not only an assessment of susceptibility to weapons effects, but also a measure of the ability to detect or locate the target.

damage risk to noncombatants and nontargeted facilities.

- Once the capabilities analysis phase is completed, the results can be merged with the individual component target nominations to create the target recommendations for the JFC. The critical element of the joint targeting cycle is to link anticipated effects to the JFC's objectives.

d. **Phase 4 — Commander's Decision and Force Assignment.**

- TNLs and associated forces are vetted, through the appropriate coordinating bodies representing the joint force components, to ensure compliance with commander's objectives, guidance, and intent and the synergistic application of effort with minimal operational conflict. This list comprises targeting recommendations compiled by the JFC's designated targeting representative.

- Once the JFC has approved the joint integrated prioritized target list (JIPTL), or elements thereof, tasking orders are prepared and released to the executing components and forces. The joint targeting process facilitates the publication of tasking orders by providing amplifying information necessary for detailed force-level planning of operations.

- The joint targeting process is also responsible for providing the documentation that maintains the logical linkage between objectives and guidance and the operations being undertaken. This documentation traces the analytical reasoning that supported the nominated targets and the details of the capability effectiveness estimates. The work of operations planners is significantly enhanced when they are furnished with detailed insights into the reasoning that resulted in their tasking. Furthermore, because the pairings of capabilities against targets are made using nominal weapon and weapon system performance data, there may be divergences with more current and/or specific data used by force-level planners. Making the factors used in joint force planning available to the operations planners, and providing them real-time collaboration capability with other component and joint force-level targeting specialists, enables adjustment and fine-tuning of operational planning. It also provides a channel to discuss mitigation of risk for the attacking force, since variations in tactics may be required that could affect the results achieved at the target; the joint targeting process must be aware of these variations and adjust expectations accordingly. This is a critical path of information flow that reduces the likelihood of confusion between what was expected at the joint force level and what was actually achieved during execution. Ultimately, the exchange of information at this phase and the reconciliation of a common operating picture are critical elements in the last phase of the joint targeting process where outcomes are analyzed and future actions are determined.

- Thus, at the conclusion of this phase, the stage is set for the planning and execution of operations that perform discrete tasks in synergistic support of over-arching objectives.

e. **Phase 5 — Mission Planning and Force Execution.**

- Upon receipt of tasking orders, detailed planning must be performed for the execution of operations. The joint targeting process supports this planning by providing tactical-level planners with direct access to detailed information on

the targets, supported by the nominating component's analytical reasoning that linked the target with the desired effect (Phase 2). This will provide the background information necessary for the warfighter to focus on the JFC's objectives as the battle unfolds.

- Combat operations are dynamic. During execution, the battlespace changes as the adversary responds and deviates from friendly force assumptions. The joint targeting process monitors these changes in order to allow commanders to maintain the initiative through flexibility.

f. **Phase 6 — Combat Assessment** (see Figure II-2).

- Combat assessment (CA) is a crucial part of operations. The joint targeting process provides short-term assistance for immediate decisions. This is essential in order to provide to the JFC a fully developed picture of the battlefield. A critical ingredient for effective CA is an understanding of all aspects of target development and its link to the JFC's objectives and guidance.

- CA is performed at all levels. At the JFC level, the CA process should normally be an all source joint program supported by all components and designed to determine if the required effects on the adversary envisioned in the campaign plan are being achieved. CA addresses

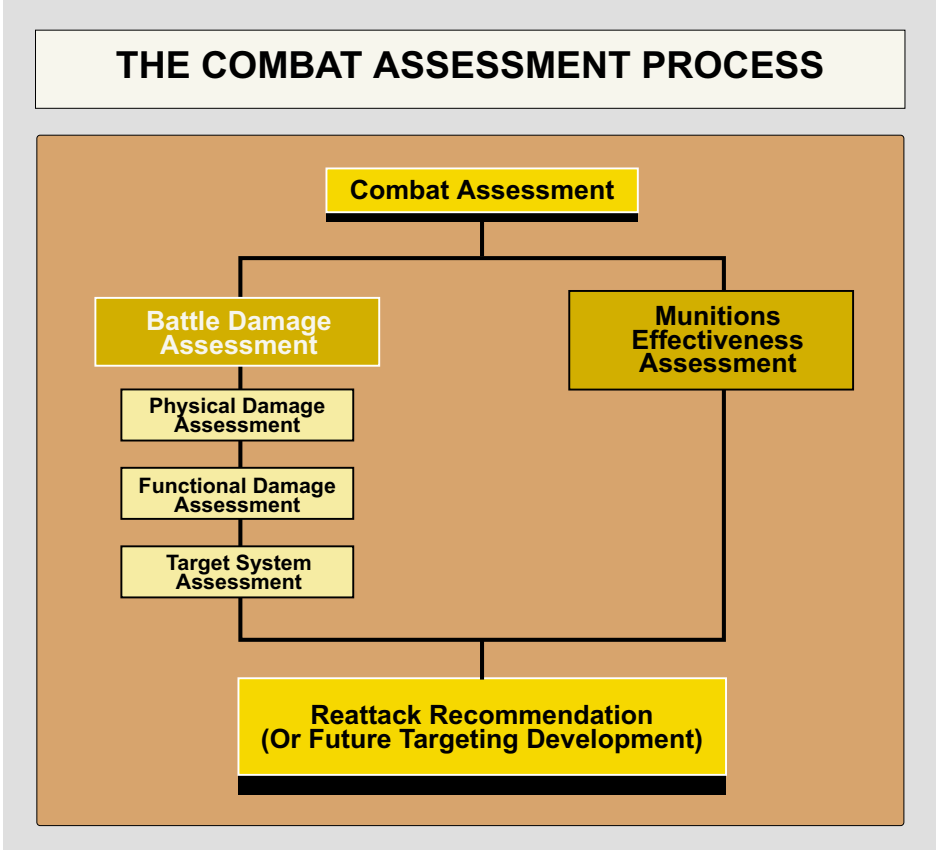


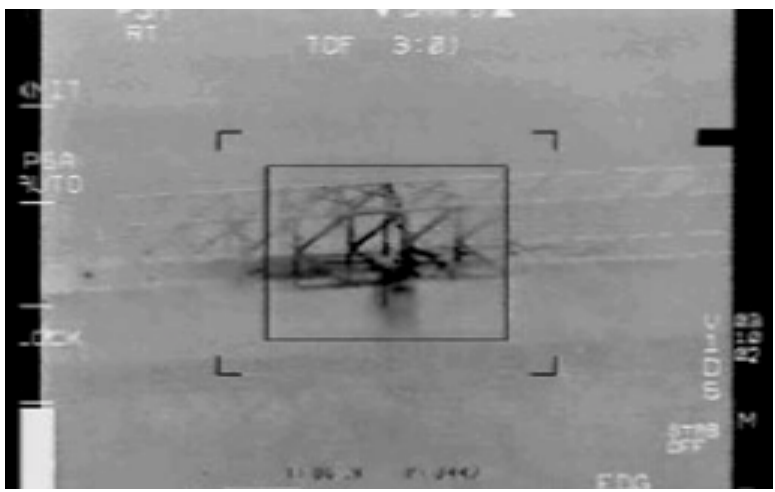
Figure II-2. The Combat Assessment Process

the effectiveness of operations. This directly impacts the JFC's air apportionment decision. The end product of CA at the operational and/or strategic level is a campaign assessment that is incorporated into strategy and guidance development. (Note: Simply attacking targets on the JIPTL does not represent the total effectiveness of the operations.)

- CA is composed of three interrelated components: battle damage assessment (BDA); munitions effectiveness assessment (MEA); and future targeting or reattack recommendations.

- BDA is the complementary activity to the selection of targets performed in target development. It takes a three-phased approach to proceed from a micro-level examination of the damage or effect inflicted on a specific target, to ultimately arriving at macro-level conclusions regarding the functional outcomes created in the target system, retracing the macro-to-micro path of analysis in target development. In addition, to conduct BDA in the three-phased approach, a baseline set of target system damage criteria and MOEs must be established. These criteria and measures are invaluable to maintaining a standard measure of targeting effectiveness. They help drive the conduct of military operations against target systems in a more effective systematic fashion — achieving results at a greatly reduced effort, risk, and cost. The first phase examines the outcomes at the specific targeted elements; the second phase estimates the functional consequences for the target system components; and the third phase projects results on the overall functioning of the target system and the consequent changes in the adversary's behavior. The purpose of BDA is to compare what was actually accomplished to what target development determined should be accomplished when the targeting options were being formulated. Consequently, a critical ingredient for effective BDA is detailed familiarity with all aspects of the analysis performed in the target development that justified the chosen targets and their linkage to the JFC's objectives and guidance.

- MEA is the corresponding activity to BDA, and directs its assessments to after-



Aircraft cockpit video or weapon system video recorded media can serve as sources of BDA and MEA.

the-fact studies of how capabilities were performed and the method in which they were applied. It complements the estimative analyses of capability assessment by examining the forensic evidence after attacks to determine whether weapons and weapon systems performed as expected. The purpose of MEA is to compare the actual effectiveness of the means employed to their anticipated effectiveness calculated during the capability assessment phase of the joint targeting process. The results of MEA support both near-term improvement in force employment tactics and techniques and long-term improvements in lethal and nonlethal capabilities. Consequently, a critical ingredient for effective MEA is detailed familiarity with all inputs to the calculations performed in capability assessment that resulted in weapon system selection.

- Future target nominations and reattack recommendations merge the picture of what was done (BDA) with how it was done (MEA) and compares the result with predetermined MOEs that were developed at the start of the joint targeting process. The purposes of this phase in the process are to determine degree of success in achieving objectives and to formulate any required follow-up actions, or to indicate readiness to move on to new tasks in the path to achieving the overall JFC objectives. This last activity in the final phase both completes and begins the joint targeting process anew by linking the achieved outcomes with stated objectives that began the cycle.

For information on combat assessment, refer to JP 2-01.1, Intelligence Support to Targeting.

2. Post-Campaign and Operation Activities

a. The joint targeting process does not end when hostilities cease. During the transition phase of postconflict operations there is normally a critical need to collect all available information that feeds both BDA and MEA analysis. This data collection effort is essential to:

- Evaluate the full extent of target physical and functional damage;

The joint targeting process does not end when hostilities cease.

- Determine the true effectiveness of employed delivery systems and munitions; and

- Critique and improve the BDA analysis and reporting process.

b. Although there are many different types of data to collect for follow-on analyses, generally they can be grouped into the areas of operational data, intelligence information, and MEA exploitation. Collection of operational or mission-specific data includes all executed mission type orders (to include all executed ATOs), all mission reports, and copies of aircraft cockpit video or weapon system video at a minimum. Information to collect includes both national and tactical intelligence gathered during the operations, as well as continued postconflict damage assessment and analysis of reconstruction activities. Finally, the optimal method to analyze munitions effects is to deploy MEA exploitation teams (engineers, tacticians, and intelligence analysts) to conduct on-site analyses of the damage from the ground-level perspective. The goal of these "ground truth" operations is to bridge the gap of knowledge that exists between the level of damage the BDA collection assets have shown during hostilities and what actual physical and functional damage was done to the adversary targets and systems.

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CHAPTER III
JOINT FORCE TARGETING DUTIES AND RESPONSIBILITIES

"Four brave men who do not know each other will not dare to attack a lion. Four less brave, but knowing each other well, sure of their reliability and consequently of their mutual aid, will attack resolutely."

Colonel Charles Ardnant du Picq, 1880

1. Joint Targeting Integration

a. The joint targeting process integrates military force to achieve the JFC's objectives, guidance, and intent. **With the advice of subordinate component commanders, JFCs set priorities, provide clear targeting guidance, and determine the weight of effort to be provided to various operations. Subordinate component commanders identify high-value targets (HVTs) and high-payoff targets (HPTs) for acquisition and attack, employing their forces in accordance with the JFC's guidance to achieve missions and objectives assigned by the JFC.**

b. **The JFC establishes the joint targeting process within an organizational framework optimized for targeting operations. A primary consideration in organizing this framework is the joint force's ability to coordinate, deconflict, prioritize, integrate, synchronize, and assess joint targeting operations.** The structure established by the JFC must be able to facilitate the joint targeting process throughout the entire spectrum of anticipated targeting timelines from long-term to rapidly changing time-sensitive situations. The JFC defines this structure based upon assigned, attached, and supporting forces, as well as the threat, mission, and operational area. This targeting structure is established to either directly or indirectly achieve JFC-established objectives in order to expedite campaign success. It must also be able to identify those critical vulnerabilities that directly or indirectly lead to the desired effect on the adversary COGs. In addition, it must be responsive enough to react to rapidly changing events. Likewise, it should be able to execute all phases of the joint targeting process efficiently and continuously.

c. **The joint targeting process cuts across traditional functional and organizational boundaries.** Operations, plans, and intelligence are the **primary** participants, but other functional areas such as logistics, weather, legal, and communications also support the joint targeting process. Close coordination, cooperation, and communication among the participants are essential for the best use of JFC and component resources.

2. Delegation of Joint Targeting Process Authority

a. The JFC is responsible for all aspects of the targeting process, from establishing objectives, coordination and deconfliction between component commanders, through to CA. The targeting process is complicated by the requirement to deconflict duplicative efforts, to prevent fratricide, and to synchronize and integrate the attack of those targets with other activities of the joint force. **The JFC's primary targeting responsibility lies in establishing the objectives that component commanders will achieve through application of air, land, sea, space, and special operations forces capabilities.**

b. **The JFC also has the responsibility to conduct planning, coordination, and deconfliction associated with joint**

targeting. The JFC normally appoints the deputy JFC or a component commander to chair the JTCB. When a JTCB is not established and the JFC decides not to delegate targeting oversight authority to a deputy or subordinate commander, the JFC may perform this task at the joint force headquarters, with the assistance of the joint staff Operations Directorate (J-3). The JFC ensures that this process is also a joint effort involving applicable subordinate commands. The joint targeting process is a highly iterative process that needs close coordination during combat operations. To ensure the widest flexibility and greatest reaction to the adversary, the joint targeting process should be closely linked to the component commander with the preponderance of assets to strike joint targets and the staff to adequately plan, control, and coordinate these missions. Normally the majority of joint targets are attacked with joint air assets. Whomever the JFC delegates joint targeting planning, coordination, and deconfliction authority to must possess or have access to a sufficient C2 infrastructure, adequate facilities, and ready availability of joint planning expertise. Should a specific agency be charged with joint functional command responsibilities, a joint targeting mechanism may also be needed to facilitate this task at the component level. All components are normally involved in targeting and should establish procedures and mechanisms to manage the joint targeting task.

c. The JFC may prohibit or restrict joint force attacks on specific targets or objects without specific approval based on political considerations, military risk, the LOAC, and ROE. Targeting limitations fall into two categories.

- Items on the **no-strike list** are those designated by the appropriate authority upon which attacks are prohibited to avoid violating international law, conventions, or agreements or damaging relations with the indigenous population.
- **Restricted targets** are legitimate targets that have specific restrictions imposed to avoid interfering with military operations, and any actions that exceed those restrictions are prohibited until coordinated with the establishing headquarters. Attacking restricted targets may interfere with or hamper projected friendly operations. Targets may have certain restriction caveats associated with them that should be clearly documented in the restricted target list (for example, do not strike during daytime; strike only a certain weapon, etc.). Some require special precautions (e.g., chemical, biological, or nuclear facilities, proximity to no-strike facilities).

For additional information see Appendix A, "International Law and Legal Considerations in Targeting."

3. Target List Development Responsibilities

Various target lists may be identified for use by the JFC. It is imperative that procedures be in place for additions or deletions to the lists and that those procedures are responsive and verifiable. Commanders should be aware of the larger impact when individual targets are removed from the target list. The removal of one seemingly isolated target may cause an entire target set to be invalid and require a different set of targets to create the same effect.

a. A **joint target list (JTL)** is a consolidated list of all targets considered to have military significance in a combatant commander's area of responsibility (AOR). National agencies, the combatant commander's staff, joint forces subordinate to the combatant commander, supporting unified commands, and components all nominate targets to the combatant commander for validation and inclusion.

b. A **target nomination list** is a list of targets nominated by component commanders, national agencies, supporting commands, or the JFC staff for inclusion on the JIPTL to support JFC objectives and priorities.

c. Derived from the integration of TNLs, the **JIPTL** is a list of targets prioritized based upon the effects their attacks will have upon achieving JFC objectives. This list usually contains more targets than there are resources available to attack them due to competing concerns. Exactly how many targets are to be attacked is determined once attack resources are matched to targets on the JIPTL. An estimate of how many targets may be attacked can be provided to components in the JIPTL process by estimating the total number of desired mean points of impact that can be attacked with projected resources available.

- Once projected strike assets are determined, this prioritized listing of targets often contains a "cut line" showing which targets may not be struck due to competing concerns, asset limitations, or a missing intelligence requirement.

- It must be clearly understood that this is just an estimate and does not insure that a target will be attacked. This estimate will not inhibit planners from using resources in the most efficient manner possible. This prioritized list of targets provides components as well as the JFC with the proper feedback on how their specific target nominations fit into achieving the effects desired.

d. A **no-strike list (NSL)** is a list of geographic areas, complexes, or installations not planned for capture or destruction. Attacking these may violate the LOAC (e.g., cultural and religious sites, embassies belonging to noncombatant countries, hospitals, schools) or interfere with friendly relations with indigenous personnel or governments.

e. A **restricted target list (RTL)** includes restricted targets nominated by elements of the joint force and approved by the JFC. This list also includes restricted targets directed by higher authorities. When targets are restricted from lethal attacks, commanders should consider nonlethal options as a means to achieve or support the commander's desired objectives.

f. Components, supporting commands, national intelligence agencies, and JFC staff select targets from the JTL to compile their respective TNLs. The TNLs are combined, validated, and prioritized to form the JIPTL. Targets are vetted against the NSL and the RTL at each successive level. Relief may be requested from the JFC for targets nominated to the JIPTL that are also on the RTL. These targets can only be attacked with JFC approval.

4. Joint Targeting Coordination Responsibilities

a. Joint targeting coordination responsibilities for the **JFC** are as follows.

- Establishes parameters for successful targeting operations within the JFC's AOR or joint operations area (JOA) by promulgating guidance and priorities.

- Retains authority and responsibility to direct target priorities, relative levels of effort, and the sequence of those efforts to components of the joint force.

- Provides guidance and objectives for operational planning and targeting.

- Influences targeting apportionment decisions.

- Conducts combat assessment.
- Updates mission planning guidance, intent, and priority intelligence requirements (PIR) throughout the joint targeting process.
- Directs the formation, composition, and specific responsibilities of a JTCB.
- Approves or delegates approval of the JIPTL developed from component and staff nominations.
- Provides broad targeting guidance to components based on the campaign planning guidance and priorities.
- Addresses functions and responsibilities for prosecuting TSTs in the operational area.

For more detailed information on TSTs, see Appendix B, "Time-Sensitive Target Considerations."

b. The targeting representative **delegated joint target planning, coordination, and deconfliction authority** is responsible as follows.

- Reviews with the components the JFC's joint targeting guidance and apportionment.
- Reviews the JFC's campaign plans in advance and acts in an advisory capacity to anticipate future joint targeting requirements.
- Compiles component targeting requirements and prioritizes targets based on JFC guidance. Develops the JIPTL.
- Provides JTCB results and approved JIPTL to each component and supporting forces.

5. Relative Division of Joint Targeting Process Responsibilities

a. A relevant aspect pertaining to the execution of the joint targeting process is the collaboration between joint force staff targeting specialists and component level operations and targeting planners. It should be obvious that collaboration is a critical element of the execution of the targeting process at all levels of joint forces. The fourth phase of the joint targeting process is where the interaction between the joint force level (primarily concerned with overall planning) and the component level (primarily concerned with operational planning and execution) comes most sharply into focus. This provides an excellent opportunity to graphically portray a notional model for the division of functional responsibility between the JFC and the components for execution of the targeting process in Figure III-1. However the JFC establishes the targeting process, the process should have access to secure facilities, receive support from targeting specialists, and have a mechanism in place to ensure that all subordinate commanders have the ability to nominate targets for joint targeting consideration.

NOTE: The targeting process will occur at many levels. Subordinate commanders, functional and Service, will have their own targeting process that will complement and support the JFC's targeting process.

b. It is incumbent upon the JFC to determine the relative burden sharing for the joint targeting process between the JFC staff and those of the component commanders.

The JFC develops guidance that directs and focuses operation planning and targeting to support the concept of operations.

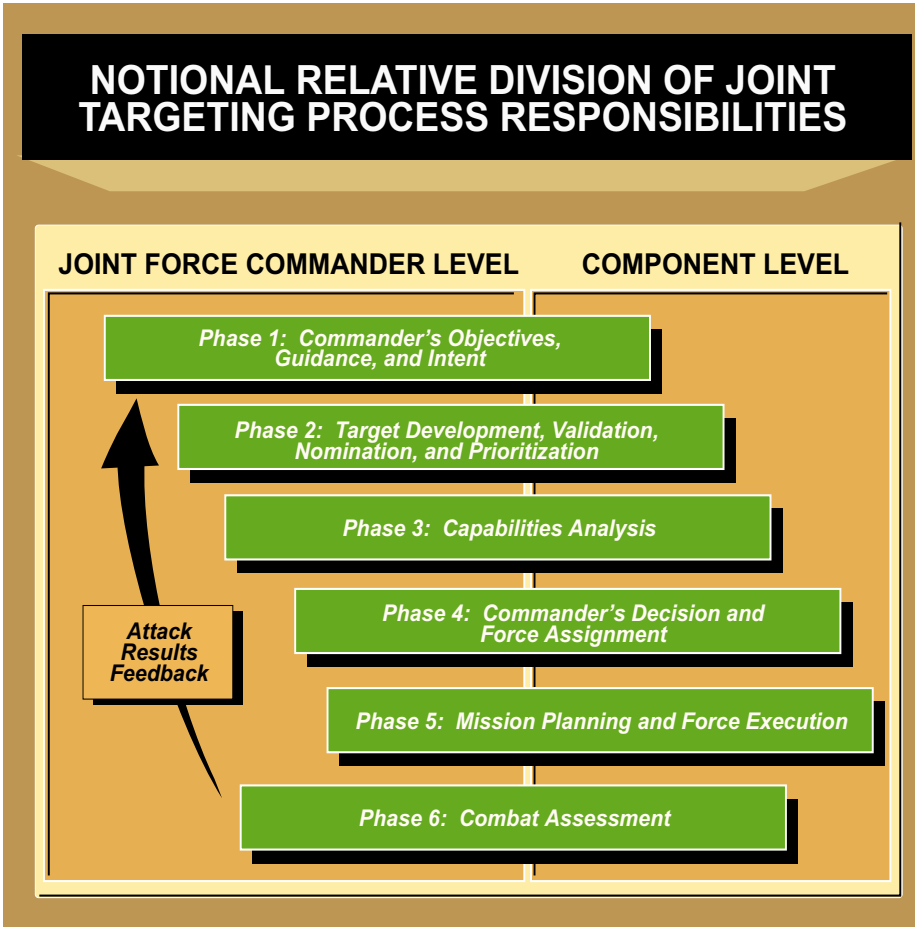

Figure III-1. Notional Relative Division of Joint Targeting Process Responsibilities

6. Joint Force Commander Staff Responsibilities

a. **Operations Directorate.** The J-3 assists the commander in the discharge of assigned responsibility for the direction and control of operations, beginning with initial planning, follow-through, and completion of specific operations. In this capacity, the directorate plans, coordinates, and integrates operations. The flexibility and range of modern forces require close coordination and integration for effective unity of effort. If a JTCB is established by the JFC, the J-3 will normally organize the JTCB and serves as a member. (This may not apply if the JFC delegates broad targeting oversight functions to a subordinate commander.)

- At the joint force level, the joint operations center (JOC) is the focal point for synchronizing and integrating joint operations at the macro level. Joint targeting related duties are normally performed by the J-3 as follows.

  •• Provides current operational assessment.

  •• Publishes JFC's targeting guidance and objectives. Publishes JFC's daily guidance letter in coordination with

Intelligence Directorate of a joint staff (J-2), Logistics Directorate of a joint staff (J-4), Plans Directorate of a joint staff (J-5), special staff to include legal (i.e., Staff Judge Advocate (SJA) for review of ROE) and public and civil affairs (e.g., for post-attack media coordination requirements), and components.

•• The JIPTL, RTL, and NSL are reviewed at the JTCB with inputs from the components and in coordination with representatives from J-2, J-5, and the SJA. The J-3 forwards these lists to the JFC or a designated representative for approval. Following approval, they are used in the joint targeting planning process.

•• Provides for JFC's approval the theater fire support coordinating measures and other appropriate measures submitted by components.

•• In coordination with the component commanders, develops proposed placement of the land and maritime force boundaries.

•• Provides the JTCB with targeting options, boundary, and fire support coordinating measure (FSCM) changes for future operations to assist in the development of future targeting requirements.

•• Recommends targets for inclusion in the JIPTL as part of the JFC's planning staff.

•• Monitors, and integrates as appropriate, targets in support of information operations (IO) objectives.

•• Nominates targets in support of the theater deception plan.

•• Serves as executive agent for overall coordination and direction of the JFC CA cell.

- Additionally, if directed by the JFC, the J-3 acts as executive agent for the JTCB.

- The JFC may approve the formation within the J-3 of a **joint fires element** (JFE). The JFE is an optional staff element that provides recommendations to the J-3 to accomplish fires planning and coordination. The JFE assists the J-3 to accomplish responsibilities and tasks as a staff advisor to the J-3 with approval by the JFC and may include any or all of the J-3's tasks. In addition, the JFE may perform the following functions related to joint targeting.

  •• Coordinates the drafting of the JFC's JIPTL with the J-2.

  •• Assists the joint intelligence center (JIC) in developing HVTs and HPTs.

  •• Prepares and disseminates target bulletins.

  •• Monitors for the J-3 TST attack operations and makes recommendations for deconfliction.

  •• Deconflicts and validates target nominations originating at the JFC level and higher, then prioritizes and forwards to the J-3 for review and eventual transmission to the joint force air component commander's (JFACC's) joint air operations center (JAOC) for inclusion in the JIPTL.

  •• Identifies potential conflicts in preparation for the JTCB.

•• Organizes a strategy team to address intermediate targeting efforts to bridge the gap between current operations and future plans being developed.

b. **Intelligence Directorate.** The J-2 has the primary responsibility for prioritization of intelligence collection efforts, analysis, validation, and BDA for all joint operations. In addition, the J-2 provides a major input to the J-3 and/or J-5 in the form of adversary course of action (COA) assessments critical to the joint target prioritization process and identification of HVTs and HPTs. Joint targeting related duties that are normally performed by the J-2 are as follows.

- Assists J-3 and J-5 in developing targeting guidance, priorities, and objectives for inclusion in the JFC's planning guidance, planning directives, and daily guidance letter.
- Nominates targets for immediate attack based on inputs using all-source fusion analysis in the JIC or joint intelligence support element.
- Recommends targets for inclusion in the JIPTL as part of the JFC's planning staff.
- Supports target development for components via the JOC.
- Assists the J-3 in development of the JFC RTL and/or NSL.
- Manages theater collection priorities via the daily aerial reconnaissance and surveillance conference and maintains appropriate collection operations management liaison with the components and national intelligence agencies during execution.
- Manages JFC's PIR.
- Serves as executive agent for overall coordination and direction of BDA within the JIC or joint intelligence support element in support of the J-3's CA.
- Provides the theater and/or JOA intelligence assessment.

For more detailed information, see JP 2-01.1, Intelligence Support to Targeting.

c. **Logistics Directorate.** The J-4 identifies logistic issues unique or specific to targeting. Of particular interest, the J-4 compares the operational logistic plans to developing target lists to ensure protection of infrastructure and/or supplies required to support current and future operations.

d. **Plans Directorate.** When the joint staff includes a J-5, it also performs the long-range or future joint targeting planning responsibilities. Planning is conducted by various organizations in conjunction with J-3. Joint targeting related duties are normally performed by the J-5 as follows.

- Publishes JFC's planning guidance and planning directives.
- Identifies possible branches and sequels to the theater campaign plan.
- Develops, analyzes, compares, and recommends COAs for JFC approval.

e. **Staff Judge Advocate Responsibilities.** The SJA advises the JFC on applicable international and domestic laws, LOAC issues, and other pertinent issues involved in joint target recommendations and decisions processes and reviews target selection for, among other issues, domestic laws, LOAC requirements, harmful environmental impacts, and compliance with published ROE.

For additional information see Appendix A, "International Law and Legal Considerations in Targeting."

7. Service and Functional Component Commander Responsibilities

With regard to joint targeting, the Service and functional components' responsibilities normally include the following.

a. Conduct target development.

b. Provide appropriate representation to the JTCB process.

c. For joint targeting, consolidate and nominate deconflicted and prioritized targets for inclusion in the JIPTL.

d. Provide BDA to the JFC for incorporation into JFC BDA and CA efforts.

e. Coordinate component targeting for immediate targets via component liaisons or other established procedures. Examples include the liaison elements to the JAOC — battlefield coordination detachment, Marine liaison officer, naval and amphibious liaison element, Air Force liaison element, and special operations liaison element (SOLE).

8. Target Nomination Procedures

a. **Timing and Duration.** The recurring target nomination process supporting the JFC's joint targeting effort can be from 72 to 96 hours in duration (from target nomination to complete execution). Shorter durations of 48 hours or less are possible with proper coordination between the appropriate supporting and supported commanders.

b. **Target Nomination Procedures. The sequential steps below explain the major functions that normally occur.**

- The Service or functional components submit prioritized target nominations to the JFC. At the same time, copies of the nominations are normally submitted to the JAOC. Submissions should be in United States message text format, target information report format, or by other means as designated by the JFC.

- If a JFACC is established, components pass their target nominations to the JFACC at the same time they pass their list to the JFC or designated representative. A targeting team will draw up a draft list of targets for the JTCB. The joint guidance, apportionment, and targeting (JGAT) team will apply available forces in compliance with the JFC apportionment guidance. This integration allows the JFACC to attack more targets and produce more responsive ATOs.

- Component representatives at the JTCB also receive copies of their component's target nominations. It is essential that the component representatives at the JTCB are fully attuned to the priorities, objectives, and supporting rationale behind their commander's targeting effort. Failure to receive timely targeting information will result in an inability of component representatives to properly represent their commander's interests at the JTCB.

- The JFC targeting representative reviews all Service or functional component target nominations in preparation for each JTCB. The intent is to compare nominations with JFC target guidance and priorities in order to identify potential conflicts or problems and prevent the JTCB from becoming bogged down in working detailed coordination.

- Some targets are often developed by higher headquarters (NCA, combatant commander) and forwarded to the

subordinate JFC. Mostly, they are critical HPTs of strategic military or political importance. These targets will normally be forwarded from the combatant commander to the subordinate JFC by direct tasking order.

- Some targeting is normally controlled at the combatant commander level, including release authority for use of national asset capabilities and/or weapons.

- The draft JIPTL is submitted to the JFC or designated representative for approval. Once approved, this list is transmitted to the components as the daily JIPTL. The JIPTL is a listing of all approved targets (including those to be attacked by air and surface weapons systems) that prioritizes those targets most critical to the joint effort. Some targets may indicate which component is tasked to attack that target. The JIPTL also identifies those targets that likely will not be attacked due to competing concerns and asset limitations. **This prioritized listing of targets is essential in order to give Service or functional components as well as the JFC staff feedback on how their specific target nominations are projected for attack.**

9. Joint Guidance, Apportionment, and Targeting Team Functions

a. **The JGAT Team.** The JFACC may organize a JGAT team. The JGAT team may be a separate section where component representatives reside to provide input to the targeting process or it may be a meeting that convenes on a periodic basis (normally daily). The JGAT team responsibilities are varied but key to the targeting process. The JGAT team links targets to be attacked by aviation assets to commander's (JFC and component) guidance, deconflicts and coordinates target nominations based on estimates of how many targets can be attacked, makes a recommendation for the air apportionment, and provides other targeting support requiring component input at the JFACC level. If the JFC delegates joint targeting coordination authority to the JFACC, the JGAT team also receives all target nominations and prioritizes them into the draft JIPTL. Common organizational guidelines of the JGAT team include the following.

- Chaired by the deputy JFACC or the designated representative.

- Senior component liaison officers and key JFACC staff members comprise the JGAT team membership.

- The Combat Plans Division provides the staff support to the JGAT team during the air-tasking planning and execution process.

b. **Draft JIPTL Construction.** The draft JIPTL is formed from a prioritized listing of targets based on component and JFC target priorities. Members consider the estimated available air capabilities and their ability to effect the targets on the list. A draft JIPTL "cut line" is normally established. The draft JIPTL "cut line" should reflect which targets will most likely be attacked (barring technical problems with aircraft, weather, retasking for higher priority targets, or other operational circumstances) with the projected apportionment of air assets assigned or made available to the JFACC. The "cut line" is an important concept since targets below the line may not be tasked in that day's targeting cycle. Component liaison officers (LNOs) should be ready to justify and/or prioritize target nominations among all the priorities of the joint operation. The JFACC may also **recommend** that other component assets be used against targets on the draft JIPTL.

c. **The Air Apportionment Recommendation.** The JGAT team formulates air apportionment recommendations that the JFACC submits to the JFC for upcoming targeting cycles. The JGAT team provides a useful forum for component input into the air apportionment recommendation process. With the air capabilities required to attack targets on the draft JIPTL as a benchmark, the JGAT can recommend the level of air effort to be applied to counterair, close air support (CAS), air interdiction, strategic attack, and other air missions. The way that the level of effort is presented may vary. Regardless of the format for presentation, the end result is the draft JIPTL and apportionment recommendation. These products are normally forwarded to the JTCB for coordination and final approval by the JFC. Common formats for presentation of the air apportionment recommendation may include:

- Percentages of available sorties to be tasked against mission types;
- Mission types prioritized by weight of air effort; and/or
- Prioritized mission tasks to be addressed by available air assets.

10. Joint Targeting Coordination Board

a. Typically, JFCs organize a JTCB. 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, it must be a joint activity comprised of representatives from the joint force staff, all components and, if deemed necessary, their subordinate units.

b. **The JFC defines the role of the JTCB.** The JTCB provides a forum in which all components can articulate strategies and priorities for future operations to ensure that they are synchronized and integrated. **The JTCB normally facilitates and coordinates the targeting activities of the components to ensure that the JFC's priorities are met.** The JTCB and/or JFC typically address specific target issues not previously resolved. The JTCB normally refines the draft JIPTL for approval by the JFC.

c. **In multinational operations, the JTCB may be subordinate to a multinational targeting coordination board**, with JFCs or their agents representing the joint force on the multinational board.

JFC approves and directs execution of the joint integrated prioritized target list developed from component and staff nominations.

d. **Directorship of the JTCB will be determined by the JFC.** (See JP 5-00.2, *Joint Task Force Planning Guidance and Procedures*.) The JTCB is often led by the deputy JFC or designated representative to provide the appropriate level of rank, experience, and focus. Component and JFC staff representation on the JTCB should also possess the necessary rank, experience, and knowledge to speak authoritatively for their respective components and staff elements. According to JP 5-00.2, *Joint Task Force Planning Guidance and Procedures*, the JTCB is typically responsible for the following.

- Reviews targeting information.
- Develops targeting guidance and priorities.
- Refines the draft JIPTL (this responsibility may be delegated).
- Maintains a complete list of restricted targets and areas where special operations forces (SOF) or component reconnaissance units are operating to avoid fratricide and conflicts with other current or future operations.
- Maintains a macro-level view of the JOA and ensures that targeting nominations are consistent with the JFC's concept of operations.
- Ensures that IO considerations are adequately addressed.

e. **JTCB Scope and Focus.** The focus of the JTCB is on the operational level of war. The primary focus of the JTCB is to develop target priorities and other targeting guidance in accordance with the JFC's objectives. The JTCB must be flexible enough to adjust its attention to whatever scope or fidelity it needs to address targeting issues. Briefings conducted at the JTCB should focus on ensuring that intelligence, operations (by all components and applicable staff elements), and fires are on track, coordinated, and synchronized. In order to function as effectively and efficiently as possible, the JTCB requires a focused agenda to guide the daily conduct of business. An established agenda assists the board members in preparation of briefings and keeps the board focused on the important recurring issues. A possible JTCB agenda is outlined below. By breaking the meeting into three parts, the JTCB may address at least three joint planning cycles that are either being planned or are about to be executed. A three-part possible agenda follows.

- **Review.** The first section is a review of previous assumptions, plans, and decisions that will be executed within the next 24-48 hours. This is a final review of the next day's targeting plan(s) to ensure that it is still valid. The plan is balanced against the latest CA and the projected adversary and friendly situations. This review is the JTCB's final chance to modify the approved targeting priorities before it is executed. It should be noted that the JTCB is concerned with future operations, not the current battle. The operators already have the current day's targeting plan(s) in hand and are preparing to execute. Changing priorities on the day of execution is possible, but that will normally be handled through the J-3 rather than the JTCB. Moreover, component commanders are normally authorized to make execution day changes compelled by current conditions consistent with the JFC's intent and mission objectives.

- **Plan.** The second portion of the agenda covers the main focus of the daily JTCB; i.e., approving or validating the joint fires plan to be executed 48-72 hours out. The board will review the proposed JIPTL

and apportionment recommendation. If necessary, the board may recommend a target or target set be handled by a specific component. The planning phase of the JTCB ensures that operations (to include SOF), IO, fires, and intelligence are fully integrated and coordinated in a complementary effort throughout the depth of the battlespace.

- **Guidance.** The third section of the JTCB agenda will focus on anticipating what the targeting effort should be 72-96 hours out. The targeting guidance and priorities approved for the 72 to 96 hour window will guide the components targeting effort for the upcoming joint targeting cycle. The approval of the JFC or designated representative is usually sought immediately upon adjournment of the JTCB. The targeting-related decisions are then promulgated in message format throughout the joint force.

11. Joint Targeting Steering Group

To assist the combatant commander in developing targeting guidance and reconciling competing requests for assets (within a combatant commander's AOR), a joint targeting steering group (JTSG) may be established. If a combatant commander has more than one joint task force (JTF) operating in the theater requiring targeting support or resources, the JTSG can assist the combatant commander and the J-3 and/or J-5 in deciding how limited assets and resources will be deployed (e.g., missiles, aircraft, and personnel). The JTSG should have appropriate Service and functional component, national agency, multinational, and (combatant commander-level) joint staff representatives (as appropriate) to make recommendations regarding theater strategic and/or operational issues.

12. Federated Targeting Support

A federated target development and BDA process can provide reachback support to the JFC and component commanders during the joint targeting process. Under a federated joint targeting process architecture, the supported combatant commander works in conjunction with the Joint Staff to establish federated targeting support partners and BDA reporting responsibilities between unified commands in accordance with the supported combatant commander's requirements. The supported combatant commander may request that the Joint Staff facilitate in identifying targeting support and BDA federated partners or work directly with other unified commands to provide information to the Joint Staff regarding any inter-command targeting coordination. The Joint Staff normally ensures that federated targeting support requirements are addressed in the Chairman of the Joint Chiefs of Staff orders and will assist in the dissemination of targeting support-related information between the federated partners and the supported combatant commander.

For more detailed information on federated targeting support, see JP 2-01.1, Intelligence Support to Targeting.

13. Department of Defense Organizations Supporting Joint Targeting

Many organizations provide critical support to joint targeting efforts at the national and combatant command levels. The most important organizations within the Department of Defense (DOD) include the Joint Staff, Defense Intelligence Agency (DIA), National Security Agency (NSA), and National Imagery and Mapping Agency (NIMA) as well as the combatant commands. Besides these organizations, there are also other hybrid entities within the Department of

Defense, including the joint space support team (JSST), joint information operations center (JIOC), and the joint warfare analysis center (JWAC), which provide important targeting data.

a. **Joint Staff J-2.** The Joint Staff J-2 is a unique organization in that it is a major component of the DIA, which is a combat support agency, as well as a fully integrated element of the Joint Staff. The Joint Staff J-2 is the primary coordination element for national-level intelligence support to joint targeting. The J-2 Deputy Directorate for Targets functions as the lead agent for providing and coordinating national-level intelligence support to joint targeting. Specific J-2 responsibilities include providing the Chairman of the Joint Chiefs of Staff and Joint Staff J-3 with joint crisis and contingency targeting, BDA, and technical planning support; providing the combatant commands, if requested, with intelligence community target development and analytic support through all phases of the targeting cycle; and managing the National Military Joint Intelligence Center (NMJIC).

For additional details see JP 2-0, Doctrine for Intelligence Support to Joint Operations.

b. **National Military Joint Intelligence Center.** The NMJIC is the primary conduit through which national-level target intelligence support is provided to the combatant commands and subordinate joint forces. The NMJIC provides the combatant commanders and subordinate JFCs with direct access to national intelligence support through a national intelligence support team (NIST).

For additional details see JP 2-02, National Intelligence Support to Joint Operations.

c. **Defense Intelligence Agency.** DIA is responsible for providing finished target intelligence to the NCA and JFCs in support of joint worldwide operations. DIA's Contingency Support Division directly supports Joint Staff J-2 targeting efforts by consolidating all-source target development and material production. Another important DIA contributor to targeting support is the agency's Defense Human Intelligence (HUMINT) Service (DHS). DHS provides a dedicated DOD HUMINT capability. These military intelligence professionals play an important role in collecting target intelligence in support of combatant commands across the range of military operations.

For additional details see JP 2-02, National Intelligence Support to Joint Operations.

d. **National Security Agency.** NSA's Information Warfare Support Center (IWSC) serves as the agency's primary point of contact for organizations seeking specific targeting or targeting-related analytical information. In this capacity, the IWSC directly assists with the preparation of IO and/or information warfare (IW) strategies as well as all-source targeting studies for the Department of Defense, Chairman of the Joint Chiefs of Staff, combatant commands, and JTFs. Specific NSA contributions to these targeting studies include detailed analyses of adversary leadership and communications nodes. Other important NSA contributions to targeting support include the intelligence gain and/or loss assessment (used to evaluate the quantity and quality of intelligence data lost when a particular target is attacked), as well as signals intelligence analysis in support of BDA.

For additional details see JP 2-02, National Intelligence Support to Joint Operations.

e. **National Imagery and Mapping Agency.** NIMA, a DOD combat support agency, provides targeting support with tailored imagery and geospatial products and services to the Department of Defense, Chairman of the Joint Chiefs of Staff, combatant commands, and JTFs. Targeting support products use geodetically-controlled

source material and refined mensuration techniques and data. Major targeting assistance is provided by NIMA's database of 125,000 mensurated point targets and its production of the digital point positioning database. NIMA also provides seamless management of national imagery programs and procedures across national, theater, and tactical lines. NIMA is the central authority responsible for managing the imagery intelligence community support center (CSC). The CSC validates all national imagery nomination requests, deconflicts multiple requirements, and implements tasking of national imagery assets. For this reason NIMA plays a critical role in providing collection support to target intelligence efforts. To support targeting during crisis operations, NIMA may deploy imagery and/or geospatial equipment and personnel knowledgeable in imagery and geospatial capabilities to a combatant commander or a deployed JTF. This capability may deploy at the combatant commander's request or as part of the NIST.

For more on NIMA target support products and services, see JP 2-03, Joint Tactics, Techniques, and Procedures for Geospatial Information and Services Support to Joint Operations.

f. **United States Space Command (USSPACECOM).**

- **Joint Space Support Team.** The JSST provides the JFCs and subordinate component commanders staffs with direct access to space and missile intelligence and operations support. USSPACECOM is the primary source for space-related targeting and deploys a JSST upon request from a combatant commander. The JSST is task-organized and consists of, at a minimum, operations and intelligence personnel, with communications and warning specialists added if required. The JSST provides a link to USSPACECOM products, databases, and services, giving JFCs and subordinate component commanders access to information beyond organic command resources. The JSST coordinates with NISTs to avoid duplication of effort and provide synergistic support to the warfighter.

  For additional details see JP 3-14, Joint Doctrine for Space Operations.

- **Joint Information Operations Center.** As part of USSPACECOM, the JIOC provides direct IO support to combatant commanders. This support is focused on the planning and execution of the IO portion of joint operations. JIOC personnel work through the supported combatant commander and JTF IO organization to ensure that the portion of the IO plan that must be addressed through the targeting process is given an appropriate priority in the overall targeting effort. JIOC personnel, representing the supported combatant commander or JTF IO officer, often work directly with the supported command's targeting personnel from the earliest stages of the targeting process to ensure that IO considerations are fully integrated into the targeting process.

  For additional details see JP 3-13, Joint Doctrine for Information Operations.

g. **Joint Warfare Analysis Center.** JWAC provides the Joint Staff, combatant commands, and other DOD and non-DOD agencies with effects-based, precision targeting and deterrent options for selected networks and nodes. JWAC conducts engineering and modeling analysis, fused with scientific and intelligence data, to produce optimized target sets that support the combatant commander's objectives.

14. Non-DOD Organizations Supporting Joint Targeting

Non-DOD organizations provide significant intelligence and operational support to joint targeting. The principal non-DOD organizations supporting joint targeting are the Central Intelligence Agency (CIA) and Department of State (DOS) as well as the Departments of Justice, Transportation, Health and Human Services, and Energy.

a. **Central Intelligence Agency.** The CIA, through its Target Support Group, works closely with the Department of Defense on many issues relating to every phase of the targeting cycle. The target support group makes a variety of CIA resources available to military target planners. Additionally, in peacetime, applicable requests for information are routed to the CIA for addressal by the agency's Office of Military Affairs.

b. **Department of State.** Because of the DOS worldwide network of diplomatic missions and posts staffed with representatives of numerous national agencies, the DOS is a key source of information during war or crises. The central point of contact within the DOS for intelligence, analysis, and research is the Bureau of Intelligence and Research (INR). INR produces intelligence studies and analyses, which have provided valuable information in support to targeting. Additionally, all-source reporting via Foreign Service channels at American Embassy or consular posts has also proven useful, particularly during the objectives and guidance, target development, and CA phases of the targeting cycle.

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APPENDIX A
INTERNATIONAL LAW AND LEGAL CONSIDERATIONS IN TARGETING

1. Introduction

It is the policy of the Department of Defense that the armed forces of the United States will comply with the LOAC during all armed conflicts, however such conflicts are characterized, and, unless otherwise directed by competent authorities, will comply with the principles and spirit of the LOAC during all other operations. **International law considerations will directly affect all phases of the joint targeting process.** Target planners must understand and be able to apply the basic principles of international law as they relate to targeting. This appendix supports the joint targeting process by providing a discussion of those aspects of international law that impact targeting decisions; in particular, issues related to the basic principles of LOAC, ROE, general restrictions, precautions in attack, separation of military activities, special protections, and environmental considerations.

2. International Law and the Law of Armed Conflict

The LOAC is defined as that part of international law that regulates the conduct of armed hostilities. It encompasses all international law for the conduct of hostilities binding on the United States or its individual citizens, including treaties and international agreements to which the United States is a party, and applicable customary international law. The LOAC rests on fundamental principles of military necessity, unnecessary suffering, proportionality, and distinction (discrimination) which will apply to targeting decisions.

a. **Military Necessity.** This principle justifies those measures not forbidden by international law, and which are indispensable for securing the complete submission of the enemy as soon as possible. While military necessity gives commanders great latitude in conducting military operations, it does not authorize all military action and destruction. For instance, under no circumstance would military necessity authorize actions specifically prohibited by LOAC, such as the murder of prisoners of war or the deliberate targeting of innocent civilians.

b. **Unnecessary Suffering.** This principle forbids the employment of arms, projectiles, or material calculated to cause unnecessary suffering. This concept also extends to unnecessary destruction of property. Combatants may not use arms that are per se calculated to cause unnecessary suffering, e.g., projectiles filled with glass, and may not use otherwise lawful weapons in a manner that causes unnecessary suffering, i.e., with the intent to cause unnecessary suffering.

c. **Proportionality.** The principle of proportionality prohibits occurrence of collateral civilian casualties so excessive in nature when compared to the expected military advantage to be gained as to be tantamount to the intentional attack of civilians, or to a wanton disregard for the safety of the civilian population. The principle of proportionality is weighed by a commander in determining whether, in engaging in offensive or defensive operations, the commander's actions may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, that would be excessive in relation to the concrete and direct military advantage anticipated by those actions. The military advantage anticipated is intended to refer to the advantage anticipated from those

actions considered as a whole, and not only from isolated or particular parts thereof. Generally, "military advantage" is not restricted to tactical gains, but is linked to the full context of a war strategy.

d. **Distinction (Discrimination).** This is the customary international law obligation of parties to a conflict to engage only in military operations the effects of which distinguish between the civilian population (or individual civilians not taking a direct part in the hostilities) and combatant forces, directing the application of force solely against the latter. Similarly, military force may be directed only against military objects or objectives, and not against civilian objects.

3. Rules of Engagement

ROE are defined in JP 1-02, *Department of Defense Dictionary of Military and Associated Terms*, as "directives . . . that delineate the circumstances and limitations under which United States forces will initiate and/or continue combat engagement with other forces encountered."

a. ROE are the means by which the NCA and operational commanders regulate the use of armed force in the context of applicable political and military policy, and domestic and international law. ROE provide a framework that encompasses national policy goals, mission requirements, and the rule of law. All targeting decisions must be made in light of the applicable ROE. Supplemental measures enable a commander to obtain or grant those additional authorities necessary to accomplish an assigned mission.

b. **Standing Rules of Engagement (SROE).** The SROE provide implementation guidance on the inherent right of self-defense, and the application of force for mission accomplishment. The SROE apply to all US forces responding to military attacks within the United States, and to all military operations outside the United States, with limited exceptions; the most noteworthy being for multinational force operations. The SROE is designed to provide a common template for development and implementation of ROE for the full range of operations, from peace to war.

c. **Combatant Commanders' Theater-Specific ROE.** These special ROE address specific strategic and political sensitivities of the combatant commander's AOR and must be approved by the Chairman of the Joint Chiefs of Staff. They can be found in Enclosure K to the SROE.

4. General Restrictions on Targeting

a. **Protection of the Civilian Population and Civilian Objects.** Civilian populations and objects as such may not be intentionally targeted for attack. Civilian objects consist of all civilian property and activities other than those used to support or sustain the adversary's warfighting capability. Acts of violence intended to spread terror among the civilian population are prohibited.

- **Nonparticipation in Hostilities.** The protection offered civilians carries a strict obligation on the part of civilians not to participate directly in armed combat, become combatants, or engage in acts of war. Civilians engaging in fighting or otherwise participating in combat operations, singularly or as a group, become unlawful combatants and lose their protected civilian status.

- **Requirement to Distinguish Between Military Targets and Civilian Objects.** It is necessary to distinguish between military targets and civilian objects regardless of the legal status of the territory on or over which combat occurs. Civilians may not be used as human shields in an attempt to protect, conceal, or render military objects immune from

military operations. Neither may civilians be forced to leave their homes or shelters to disrupt the movement of an adversary. Joint force responsibilities during such situations are driven by the principle of proportionality as mentioned above. When an adversary employs illegal means to shield legitimate targets, the decision to attack should be reviewed by higher authority in light of military considerations, international law, and precedent.

b. **Lawful Military Attacks. Military attacks will be directed only at military targets.** Only a military target is a lawful object of direct attack. By their nature, location, purpose, or use, military targets are those objects whose total or partial destruction, capture, or neutralization offer a military advantage.

- **Many objects are clearly military targets**, such as military barracks, military airfields, armaments, aircraft, tanks, antiaircraft emplacements, or troops. Economic targets (i.e., factories, workshops, and plants) that make an effective contribution to adversary military capability are considered legitimate military targets. Dual-use objects, those serving both a military and a civilian purpose, may be lawful targets as determined by the application of the LOAC and, in large measure, the principle of proportionality. This may include economic targets that indirectly but effectively support and sustain the adversary's warfighting capability. Attacks on objects such as dikes and dams are prohibited if their breach or destruction would result in the loss of civilian lives disproportionate to the military advantage to be gained. Traditionally, modern transportation and communications systems were considered military targets because of heavy use by the military during conflicts. Similarly, some civilian infrastructure (such as radio or television transmitters) may be a legitimate target if used by their government to support military operations.

- **An object's normal use does not automatically determine its status.** Even a traditionally civilian object such as a house can be a military target if it is occupied and used by military forces.

- The key factor is whether its capture, destruction, or neutralization offers a military advantage in the prevailing circumstances without excessive collateral damage.

5. Precautions in Attack

a. When conducting military operations, positive steps and precautions must be taken to avoid or minimize incidental civilian casualties and damage to civilian property. The extent of danger to the civilian population varies with the type of military target attacked, terrain, weapons used, weather, and civilian proximity.

b. Threats to civilians depend on engagement techniques, weapons used, nature of conflict, commingling of civilian and military objects, and armed resistance encountered. Precautions include the following.

- **Military Objectives.** Attack planners should ensure that military targets, and not civilian objects, are directly attacked. Sound target intelligence enhances military effectiveness and target validity.

- **Minimization of Civilian Casualties.** Attacks are not prohibited against military targets even if they cause incidental injury or damage to civilians

or civilian objects. In spite of precautions, such incidental casualties are inevitable during armed conflict.

•• Incidental civilian injury or collateral damage to civilian objects must not be excessive in relation to the expected military advantage to be gained. If the attack is directed against dual-use objects that might be legitimate military targets but also serve a legitimate civilian need (e.g., electrical power or telecommunications), then this factor must be carefully balanced against the military benefits when making a proportionality determination.

•• Required precautionary measures are reinforced by traditional tenets of military doctrine, such as surprise, economy of force, and concentration of effort. Warnings should be considered if no military advantage would be lost.

- **Cancellation or Suspension of Attacks in Case of Mistake.** Target intelligence may be found to be faulty before an attack is started or completed. If it becomes apparent that a target is no longer a lawful military objective, the attack must be canceled or suspended.

6. Separation of Military Activities

a. **General Information.** The LOAC gives civilians protection from attack during armed conflict. Civilians may lose this protection based upon specific warlike acts. Once civilians become combatants, they become lawful targets.

- The parties to a conflict are obligated to remove their own civilian population, individual civilians, and civilian objects from areas or locations where military objects are located.

- Under the LOAC, safety zones or demilitarized zones may be created by or between the warring parties. While the creation of such zones rarely occurs, if created, they must only be used for their intended purposes. Examples are open cities, civilians, prisoner of war (POW) camps, hospitals, etc.

- Similarly, the LOAC requires that combatants wear uniforms, insignia, or other clearly identifiable markings. Facilities such as hospitals and POW camps must be clearly marked as required by the Geneva Conventions. To the maximum extent feasible, the LOAC requires combatants to locate military facilities away from protected civilian objects, such as hospitals and schools.

b. **Result of Failure to Separate Military Activities.** When an adversary places military objectives in or near a populated area, this failure will weaken effective protection of their nearby civilian population and constitutes a breach of the LOAC.

7. Special Protection

Direct attacks on civilians or civilian objects are prohibited. However, the incidental injury or death of civilian personnel or damage to civilian objects at or near a military target is not cause for redress. Special protections are discussed below.

a. **Wounded and Sick Personnel, Medical Units, Hospitals, and Medical Transport.** Under the LOAC, the following are protected.

- Fixed hospitals and mobile medical establishments.

- Medical personnel and chaplains.

- Medical transports.

- Medical aircraft.

- Hospital ships and, where possible, sick bays of warships.

- Wounded, sick, and shipwrecked persons, military or civilian.

b. **Distinctive Medical Emblems.** Since 1864, the international medical emblem used to protect medical activities in wartime has been a Red Cross on a white field. Subsequently, the Red Crescent on a white field was also approved to indicate medical activities. However, some countries use other distinctive emblems such as a red star of David by Israel, a red cedar tree by Lebanon, and a red wheel by India. Although not recognized in the Geneva Conventions, when parties to the conflict are placed on notice that another party is using a unique emblem to mark its medical facilities, such facilities must be given due respect as such. The key purpose of the Conventions is not the emblem per se, but rather the notice that a facility is a protected medical installation.

- These emblems may be used to mark civilian and military medical personnel, vehicles, and hospitals. The International Committee of the Red Cross and national Red Cross societies also use these symbols.

- The Geneva Convention authorizes use of symbols to mark zones established for the wounded and sick. Safety zones for wounded, sick, aged, expectant mothers, children under 15, and mothers with children under 7 are to be marked with an oblique red band on white ground.

c. **Religious, Cultural, and Charitable Buildings and Monuments.** As long as buildings and monuments devoted to religion, art, charitable purposes, or historical sites are not used for military purposes, they may not be targets. Combatants have a duty to identify such places with distinctive and visible signs. When these buildings are used for military purposes, they may qualify as military targets. Lawful military targets located near protected buildings are not immune from attack, but precautions must be taken to limit collateral damage to the protected buildings. Many allies and potential adversaries of the United States are party to the Protection of Cultural Property in the Event of Armed Conflict treaty. This treaty establishes a royal blue and white shield as the distinctive emblem for protected cultural property in war.

d. **Prisoner of War Camps.** POWs may not be targets, be kept in a combat zone, or used to render an area immune from military operations. When military considerations permit, the letters "PW" or "PG" clearly visible from the air identifies POW camps. The use of POW camp markings for any other purpose is prohibited.

8. Environmental Considerations

a. Joint operations have the potential to adversely affect natural and cultural resources. Consistent with operational requirements, action should be taken to identify these resources and develop plans to prevent or mitigate adverse effects. These resources include historic or archeological resources and other natural resources in the operational area. Additionally, attacks against installations containing dangerous natural forces — including dams, dikes, and nuclear power facilities — must be carefully considered for potentially catastrophic collateral damage.

b. It is generally lawful under the LOAC to cause collateral damage to the environment during an attack on a legitimate military target. However, the commander has an affirmative obligation to avoid unnecessary damage to the environment to the extent that it is practical to do so consistent with mission accomplishment. To that end and as far as

military requirements dictate, methods and means of attack should be employed with due regard to the protection and preservation of the natural environment. Destruction of the environment not necessitated by military necessity and carried out wantonly is prohibited.

9. Role of the Judge Advocate

Due to complexity and extent of international law considerations involved in the joint targeting process, a judge advocate (JA) must be immediately available at all levels of command to provide advice about law of war compliance during planning and execution of exercises and operations. Early involvement by the JA will improve the targeting process and can prevent possible violations of international or domestic law.

For additional details see JP 1-04, Joint Tactics, Techniques, and Procedures for Legal Support to Military Operations.

APPENDIX B
TIME-SENSITIVE TARGET CONSIDERATIONS

1. General

TSTs are those targets of such high priority to friendly forces that the JFC designates them as requiring immediate response because they pose (or will soon pose) a danger to friendly forces or they are highly lucrative, fleeting targets of opportunity. The JFC normally provides specific guidance and prioritization for TSTs within the operational area. TSTs such as airborne aircraft and missiles and submerged submarines may be handled by separate components while others, including those on the surface of the earth, may require detailed inter-Service and/or functional component planning and coordination. The presence of TSTs in the battlespace requires the JFC to address functions and responsibilities in addition to those previously discussed.

a. **JFC's Objectives and Guidance for TSTs.** The JFC's objectives and guidance set the basic procedural framework for components to expedite targeting TSTs. The JFC specifically prioritizes TSTs for immediate response. Additionally, the JFC establishes guidance on procedures for coordination, deconfliction, and synchronization among components in a theater and/or JOA. Once this guidance is set forth, the components establish planned and reactive procedures for attacking the prioritized TSTs. JFC guidance on TSTs to component commanders supports different phases of the joint targeting process and include the following.

- Establishing planned and deconflicted FSCMs against specific TSTs.

- Defining TST engagement authority based on a component commander's operational area, a component commander's assigned functional mission, or a combination thereof. The JFC should normally define those situations, if any, where immediate destruction of the imminent TST threat outweighs the potential for duplication of effort. The JFC should carefully balance the risk between the TST threat and the potential for fratricide.

- Identifying specific communication data links between component C2 elements of the joint force to conduct rapid TST attacks. This normally includes authorizing direct liaison and coordinating authority.

b. **JFC's Risk Assessment Considerations for TSTs**

- A critical aspect of successful TST engagement is understanding the level of risk acceptable to the JFC. This is a complex task. Items to be considered in the risk assessment include: risk to friendly forces and noncombatants, possible collateral damage, and the disruption of diverting attack assets from their deliberately planned missions. These considerations must be balanced against the danger of not attacking the TST in time and thus risking mission failure or harm to friendly forces.

- The key to accomplishing the required steps quickly enough to be effective against TSTs is to do as much of the coordination and decisionmaking as possible ahead of time. Successful prosecution of TSTs requires a well organized and well rehearsed process for sharing sensor data and targeting information, identifying suitable strike assets, obtaining mission approval, and

rapidly deconflicting weapon employment.

- The reaction time between the sensor and shooter can be greatly accelerated if the on-scene commander knows exactly what the JFC desires when time compression precludes thoroughly coordinating all decisions and actions. For this to occur, the JFC must articulate objectives, guidance, priorities, and intent for TSTs before the target is even identified.

- The appropriate response for each TST is often heavily dependent on the level of conflict, the clarity of the desired outcome, and ROE. For example, during a major theater war the JFC may be able to accept a higher level of risk to friendly forces and noncombatants when attacking adversary weapons of mass destruction to ensure a quicker response. But during a limited contingency operation, the risk of collateral damage may require more detailed and time-consuming coordination.

2. Command and Control for TST Operations

a. **Focused Operations. A critical factor in prosecuting TSTs is the requirement to conduct all the steps of the joint targeting cycle in a short time.** The JFC has several options with which to structure C2 operations for attacks against TSTs. Overall responsibility for mission execution remains with the components in order to affect coordination and deconfliction tasks, and the authority to plan and engage should be delegated to the C2 node that has the best information or situational awareness to execute the mission and direct communications (e.g., hotlines, radio net) to the operators and crews of the weapon systems. Placing the appropriate level of battlespace awareness at subordinate C2 nodes can streamline the C2 cycle and allow timely engagement of these targets. The decentralized C2 nodes can exchange sensor, status, and target information with a fidelity that permits them to operate as a single, integrated C2 entity. Tied together by wide area networks and common interactive displays, they can effectively perform decentralized, coordinated execution of time-sensitive attacks.

b. **Compressed Decision Cycle.** Although successful attack of TSTs requires the targeting process to be significantly compressed, the individual steps still must be executed. To successfully compress the targeting cycle, the joint force and component staffs must be thoroughly familiar with the details of each step of the process and with the specific nodes or cells in the joint force and components responsible for each portion of the process. Time is saved by conducting detailed prior planning and coordination between joint forces, a thorough intelligence preparation of the battlespace (IPB), employment of interoperable command, control, communications, computers, and intelligence (C4I) systems, and clear guidance on what constitutes a TST. Undefined, ambiguous TSTs can potentially direct assets away from prosecuting the JFC's overall plan. Mission planning and execution activities must take place simultaneously or on a compressed time line. Targeting plays a key role in the commander's decision to employ attack forces; this decisionmaking process is frequently referred to as the TST mission cycle.

- There are six steps in the time-sensitive targeting cycle: detect, locate, identify, decide, strike, and assess (see Figure B-1). Several steps of this cycle may be pre-accomplished during the normal targeting process. For the initial attack, the outer cycle (detect, locate, identify, decide, and strike) is used. After the initial attack, both cycles run at the same time and interact through analysis at the

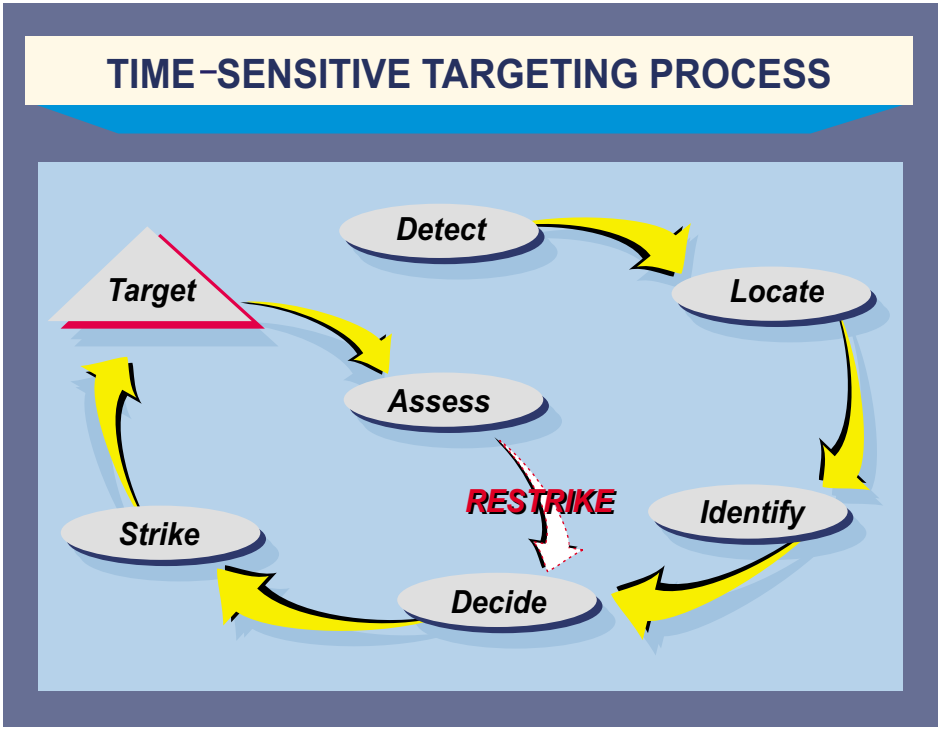

Figure B-1. Time-Sensitive Targeting Process

decision step. The six steps of the attack mission cycle interact continuously at the decision stage where target analysis is performed. The attack mission cycle works on three assumptions.

•• There normally is direction and guidance provided by commanders for each of the steps (detection, location, identification, decision, execution, and assessment).

•• There should normally be ISR and target acquisition (TA) capabilities to support timely target detection.

•• The time to complete one entire cycle may vary.

- **Component Integration.** These functions should be performed quickly enough for component commanders to act decisively upon the information developed during the attack mission cycle in order to direct forces against a TST. A relatively short attack mission cycle should be integrated among all components to achieve JFC objectives against TSTs.

c. **C2 Centers.** Component commanders, through their respective C2 centers, select TST attack assets based on several factors. These normally include the location of attack assets, weather conditions, ROE, operational status of attack assets, target ranges, the number and type of missions in progress, munitions available, the adversary air defense threat, and the accuracy of targeting acquisition data. Components should always inform the joint headquarters and other component LNOs when a TST is identified and when executing TST attacks, particularly when a TST might be engaged quicker by another component's assets. Components must establish timely communications channels to select the

appropriate force to engage each TST. Component commanders may recommend direct sensor-to-shooter dissemination of targeting information to meet critical timelines associated with TSTs.

Refer to Paragraph 4 for TST integration operations.

d. **Special Operations.** Special operations should be coordinated and deconflicted with TST attacks. The primary method to accomplish this is via liaison with established conventional C2 agencies. The SOLE is linked with the JAOC for interface with regard to air operations. The special operations coordination element (SOCOORD) or special operations command and control element (SOCCE), if established, is linked with surface C2 agencies (deep operations coordination cell (DOCC), fire support element (FSE), fire support coordination center (FSCC), supporting arms coordination center (SACC)) for ground operations. The SOLE, SOCOORD, and SOCCE have situational awareness on the locations and activities of SOF in and outside of the operational area. Most special operations can be protected by restrictive fire areas, no-fire areas or, in some instances, restricted operations zones, restricted operations areas, or the establishment of joint special operations areas. Clandestine and/or covert special operations, where published control and coordinating measures may not be permitted, require direct coordination and deconfliction with friendly forces by the SOLE, SOCOORD, or SOCCE. Should conventional force operations put SOF at risk, the SOLE, SOCOORD, or SOCCE is normally responsible for deconfliction and/or recommending disapproval due to the potential for fratricide.

e. **TST Information Considerations.** Each component will possess the ability to view the battlespace with a multitude of ISR and TA assets (organic, joint, and national). Near real time sharing of this information may facilitate planning among components. Sharing TST information among components normally requires a common language. Sharing this information also requires systems that can use this common language and can correlate individual component requirements and communicate them simultaneously to all components. These systems, combined with joint force targeting procedures, facilitate effective and efficient use of all joint force capabilities. The critical links between these systems should include a robust and dedicated

Near real time sharing of TST data among components normally requires a common language.

component liaison organization with qualified personnel to accomplish coordination as required.

3. Managing Increased Risk During TST Operations

The keys to responsive TST prosecution are the commander's guidance, pre-established procedures, thorough IPB, and initial risk assessment. Particular TSTs may be determined to be of such risk to the force or to mission accomplishment that the JFC is willing to accept a higher level of risk in order to attack the target immediately upon its detection. In its simplest form, this may mean the difference between announcing that a target is about to be attacked rather than waiting for confirmation that all necessary space around the target has been positively cleared of friendly forces or fully assessed for collateral damage. More commonly, the risk associated with TSTs involves the possible trade-off of diverting acquisition and/or attack assets from another mission to that of TST. Personnel involved in the prosecution of TSTs must have a clear understanding of the risks involved and balance the time required for coordination against the danger of not engaging the target in time. Often this means that the commander must also be willing to accept the increased risk of redundant attacks against the same target, and possible attacks with non-optimum weapons.

4. TST Integration Operations

a. In examining ways to integrate joint TST C2 efforts, it is necessary to understand that current architectures and methods have not always proved effective in reducing or preventing asymmetric threats from TSTs. Developing solutions to interoperability problems will normally require staffs to explore and experiment with various options working to find joint solutions rather than single-Service remedies.

b. A joint force requires an integrated approach to TST C2. Because multiple organizations — national, theater, and component-level — have a need for TST related planning and execution data, the goal should be to create a mutually agreed to, comprehensive, and accurate common operational picture (COP). This requires effective integration of all component TST efforts to:

- Ensure integrated IPB, ISR, and targeting effort;
- Expedite access to decision makers for dynamic retasking of ISR and TA sensors;
- Reduce duplication of effort among components; and
- Ensure that information is being shared rather than being stovepiped.

c. Joint doctrine acknowledges the need for interoperable intelligence. However, currently fielded technology limits capabilities in terms of developing a commonly shared, near real time IPB picture. However, integration options for TST C2 are feasible given the constraints of current systems. JFCs should task their staffs to explore these options with the goal of creating a more cohesive TST effort.

d. TST prior planning and coordination varies by theater depending on forces available and threat capabilities. The goal of integration is achieved when a common picture of relevant TST activity is established, data flows smoothly between C2 nodes, and fewer work-arounds are required to overcome C4I architecture interoperability problems. Different options for achieving an integrated planning and coordination effort include collaboration, liaison, consolidation, and collocation.

Once TSTs are detected, responsiveness is critical to ensure that opportunities are not lost.

- **TST Planning Integration Through Collaboration.** One method for achieving TST planning integration involves "virtual" collaboration. While currently fielded C4I technology has limited virtual-sharing capabilities, advances in information technologies make this option increasingly possible and will normally improve intelligence, operations, and planning staff workload distribution. Virtual collaboration can allow all components to share data simultaneously and keep the TST-relevant COP current. There are a variety of possible techniques for improving TST coordination and synchronization using existing systems. These can include but are not limited to video teleconferencing; command, control, communications, computers, intelligence, surveillance, and reconnaissance systems dedicated collaborative tools; internet-based virtual environment utilities; direct hotlines; and dedicated sensor-to-shooter architectures.

- **TST Integration Through Liaison.** The most common means of coping with TST integration among components is through the use of direct communications (e.g., hotlines, radio nets) and liaison elements. When communication links are limited or are not fully interoperable, LNOs can be critical. LNOs provide face-to-face coordination that can alleviate problems of miscommunication and LNOs lend expertise in terms of developing a joint attack strategy and a single TST COP. Each component LNO provides Service-specific expertise, systems knowledge and, in some cases, additional collection support via organic ISR and TA capabilities. They can also provide connectivity between Service components that facilitates a cross-flow of time-sensitive information and can shorten response time.

- **TST Planning Integration Through Consolidation and Collocation.** Consolidating JFC prior planning and coordination efforts may offer the opportunity for follow-on efficient and safe execution of TST attacks by the components. The JFC may consider collocation of component TST planning elements. While collocation can be beneficial for a joint force from a planning perspective, it may not always be physically feasible, given the

component forces assigned or attached to a JFC within a theater and/or JOA.

5. Enhancements for Processing TSTs

a. Although targeting is a continuous, cyclic process, the cycle for one routine preplanned target may take hours or even days. Successful prosecution of a TST requires that this cycle be completed in a matter of minutes. To achieve this time compression, the JFC may consider implementing focused procedures that enable the phases of the targeting cycle to be performed simultaneously rather than sequentially. The joint force and components have numerous options to enhance the process.

- Preplanned target reference methods such as kill boxes and bullseyes expedite the clearance and deconfliction process.

  For more information, see Appendix D, "Common Reference Systems: Area and Point."

- Pre-positioned acquisition and strike systems ensure rapid response to TSTs. Using IPB to determine the most probable areas where TSTs will emerge, acquisition and strike assets can be most effectively scheduled and positioned.

- Organizational enhancements are achieved by process streamlining and/or organizational change. Coordination and synchronization of TST operations are expedited by streamlining TST procedures within each organization, connecting specific TST prosecution nodes within the command into a virtual cell, collocating specific TST-related functional assets, or by a combination of these options.

- Communications enhancements for TST operations include direct, dedicated, and redundant real-time links between TST cell nodes. These communications means may be as basic as dedicated telephone lines between specific nodes or as elaborate as collaborative software and video teleconferencing linking TST nodes into a single, virtual organization.

b. A significant benefit of these enhancements is reduction in risk to the force. Since TSTs will be prosecuted more efficiently and expeditiously, the probability of the TST inflicting damage on the force is reduced. Additionally, conducting the phases of the targeting cycle concurrently by means of enhanced communications and collaborative tools provides proportionally more time in the shortened process to ensure necessary coordination and deconfliction.

6. Fire Support and Airspace Coordinating Measures

Common coordinating measures employed by JFCs to facilitate effective joint operations and expedite attacks against TSTs include boundaries, FSCMs, and airspace control measures (ACMs).

For additional information on FSCMs and ACMs, see JP 3-0, Doctrine for Joint Operations, *JP 3-03,* Doctrine for Joint Interdiction Operations, *JP 3-09,* Doctrine for Joint Fire Support, *and JP 3-56.1,* Command and Control for Joint Air Operations.

7. Considerations for Attack of TSTs

a. Generally, a wide range of joint force capabilities, both lethal and nonlethal, are suitable for attacking TSTs. Some, but not all of these may include fixed- and rotary-wing aircraft, Army Tactical Missile System

(ATACMS), Multiple Launch Rocket System (MLRS), conventional artillery, conventional air-launched cruise missiles, Tomahawk land-attack missiles (TLAMs), naval surface fire support, computer network attack, electronic warfare, and SOF. The JFC's guidance regarding the selection of assets for attacking TSTs, may be significantly influenced by factors such as availability of a weapon system or capability, engagement characteristics of a weapon system, weather conditions, and ROE.

b. If forces within the theater and/or JOA are not significantly weighted towards one weapon system and/or capability or the other, the JFC should consider procedures that allow maximum flexibility in the attack of TSTs after considering all joint force options. Procedures should allow for rapid hand over of the mission tasking to another component for mission execution if one component cannot attack a TST due to a constraint such as reloading, weather, or range limitations.

c. Selection of the best TST asset (such as fixed-wing, ATACMS, TLAM, etc.) begins during the capabilities analysis and tasking phase and continues through the mission planning phase. Individual component commanders provide recommendations to the JFC highlighting the pros and cons of their available weapon systems and/or capabilities based upon the current situation. The JFC also provides guidance to component commanders to allow them the flexibility to make an effective selection decision for employing the "best capable" attack asset. Component commanders may use an attack guidance matrix for this purpose, as it offers primary and alternate weapon selection options, thereby expediting execution decisions. Determination of "best capable" normally requires the assessment of six factors.

- **Deconfliction.** Force deconfliction is critical to prevent loss of life or unnecessary expenditure of joint force assets. The flight path of missiles could conflict with friendly forces transiting the area. If a TST is attacked by multiple weapons and/or capabilities, it should be the result of a well crafted plan, not multiple concurrent engagements by uncoordinated elements of the joint force.

- **Effectiveness.** Depending on the desired effects, the appropriate weapons and/or capabilities should be selected. Some TST attack assets may be highly effective in destroying unhardened TSTs (such as TLAM or ATACMS). Destruction of hardened TSTs may require other attack assets such as aircraft-delivered, precision-guided munitions, or SOF

JFC's guidance to components allows flexibility in selection of TST-capable attack options.

direct action. Additionally, IO capabilities may be uniquely suited to affect a TST.

- **Weapon and/or Capability Responsiveness.** Once TSTs are detected, responsiveness is critical to ensure that the attack opportunities are not lost. Responsiveness can be measured in the elapsed time required from receipt of an execution order to weapons impact or effects. Responsiveness is also measured by whether or not the chosen weapon system and/or capability can operate under current environmental conditions.

- **Range.** Selected weapon systems must possess the range capability to attack.

- **Accuracy.** The weapon system should be able to attack the target accurately. Successful attacks on moving targets require accurate predicted locations. End game accuracy may be accomplished by the weapons system's technical ability to refine the search for moving targets, if required, or by the weapons systems area coverage submunitions that may compensate for anticipated target movement. Circular error of probability may not be an appropriate measure of accuracy against a mobile target.

- **Threat.** TSTs may be identified and located in heavily defended areas.

  •• The existence of a significant air defense threat may obviate the use of manned nonstealth fixed-wing aircraft, rotary-wing aircraft, and cruise missiles as strike assets. The employment of naval guns, artillery, rockets, guided missiles, or stealth aircraft may be required to achieve an acceptable level of risk. If air-delivered munitions must be employed against such heavily defended TSTs, suppression of enemy air defense (SEAD) or electronic attack capabilities may be required.

  •• The existence of a significant air, ground, or naval threat may limit options for insertion or in-place operations of SOF.

The component commanders' weapon systems or other capabilities must possess the responsiveness, range, and accuracy to effectively attack TSTs.

8. Weapon System Considerations for Attack of TSTs

Components of the joint force, and supporting DOD agencies, have numerous organizations and systems that provide flexible capabilities in detecting, tracking, attacking, and assessing TSTs. All systems and their capabilities should be considered although certain systems will possess obvious advantages in particular scenarios.

A more detailed discussion of these organizations and systems can be found in JP 3-09, Doctrine for Joint Fire Support, *JP 3-33,* Joint Force Capabilities, *and JP 3-55,* Joint Doctrine for Intelligence, Surveillance, Reconnaissance, and Target Acquisition.

a. **Surface-to-Surface Systems.**

- The MLRS and cannon artillery are usually the most numerous TST-capable systems in the battlespace. They provide near immediate response times, 24-hour availability, and all-weather capability. Cannons offer both precision and non-precision response, as well as high volume and a variety of munitions. However, their limited firing ranges make them most suitable for TSTs located in the general area between the fire support coordination line and the forward line of their own troops.

- ATACMS possesses the responsiveness of MLRS, but with a much greater range. Although the ATACMS warhead is designed for attack of soft targets, its accuracy and all-weather capability, coupled with the extended range and quick response time, make it a formidable system against TSTs. The high angle of launch and impact, along with a very high altitude flight path, does not require large amounts of airspace to be deconflicted prior to firing. However, since the missile cannot be redirected after launch, it is difficult to employ against moving targets.

- Naval surface fire support provides the advantages of responsive, all-weather, and mobile gun and missile support. However, it is relatively short ranged, limited in number, and restricted to use in the littoral area when attacking land-based targets. Navy surface vessels also have the capability to jam shore-based targets.

b. **Cruise Missiles.** The long range and accuracy of cruise missiles make them an excellent weapon for use against targets in high threat areas, but the lead time required to plan and execute cruise missile missions could be a limiting factor against TSTs.

c. **Manned Aircraft.** Due to their range, speed, and flexible weapon selection, manned aircraft are well-suited to attack TSTs. Because the aircrew can provide "eyes on" during the attack, manned aircraft are of particular advantage when attacking mobile targets or when exact target coordinates are unavailable. However, a permissive threat environment or SEAD may be required to avoid unacceptable risks to aircraft and aircrews. Rapid deconfliction of airspace can be a challenge in a congested environment. Manned aircraft possess both day and night capability, but are weather-dependent.

- **Fixed-Wing Aircraft.** The ability of fixed-wing aircraft to move long distances in relatively short times, along with their component coordination and control capabilities, provides the force with the flexibility to quickly mass throughout the battlespace. Weapon payloads (to include nonlethal systems such as jammers) can be adjusted to suit the mission, and with air-refueling they are capable of extended loiter times. If needed, these assets can be quickly

diverted in-flight to a new target as long as suitable communications links are available.

- **Rotary-Wing Aircraft.** Attack helicopters provide excellent accuracy and the capability to search for and attack targets. They feature an array of weapons but have relatively short range if extensive loiter or search and attack operations are called for. They are day- and night-capable, but are more vulnerable to adversary tactical air defenses due to low altitude and relatively slow speed. However, due to their capability of slower, low-altitude flight, rotary-wing aircraft can often operate in poorer weather conditions than fixed-wing aircraft.

d. **SOF.** SOF's primary contribution against TSTs is clandestine and/or covert reconnaissance, surveillance, and terminal guidance and control of weapons systems. If required, SOF can be employed to destroy or disable a TST, but if not planned for well in advance of the operation, this may compromise their primary mission and require extraction of the team.

e. **Sensors.** Various sensor platforms, both manned and unmanned, provide to the warfighter the capability of detecting, identifying, and tracking TSTs, as well as providing combat assessment after an attack. These sensors are most effective when cross-cued and linked to provide multiple sources and types of information.

- Manned airborne sensors allow flexible options and detailed information gathering both in their ability to be redirected and their array of sensors. A limiting consideration in their employment is their vulnerability in a high threat environment.

- Unmanned aerial vehicles (UAVs) have many of the same benefits as manned airborne sensors without risking human life. This makes them an excellent asset to provide surveillance of heavily defended areas. They are readily redirected if required, possess long loiter times, and provide real-time feedback. UAV sensor packages can be degraded by adverse weather. UAV operations are very sensitive to icing and lower level winds. Coordination must take place between planning and weather personnel to prevent loss of a UAV due to weather conditions.

- Space-based sensors provide long-term, large area surveillance with excellent resolution and with minimal vulnerability to adversary actions. Depending on orbit and positioning, they may suffer gaps in surveillance periods and may be difficult to shift to a new surveillance area. Some sensors may be degraded by adverse atmospheric weather conditions. By its nature, satellite coverage schedules are predictable and the adversary can adjust activities to avoid detection. Also, the responsiveness of information from space-based assets may not meet the timelines of time-sensitive targeting.

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APPENDIX C
INTEGRATING COMPONENT TARGETING PROCESSES

1. Joint Targeting Process: Input to Joint Operations Planning and Execution

a. Joint targeting is a tailored application of the basic estimate process that supports joint operations planning and execution (see Figure C-1).

b. Once targeting is understood to be an application of the decisionmaking process tailored to coordinate, plan, and execute joint operations, it becomes obvious that **individual components and staff sections will further tailor the decisionmaking process to meet their more detailed, specialized needs**. This maximizes the effectiveness of the joint force. As the myriad processes, sub-processes, and cycles associated with joint targeting are encountered, commanders should keep in mind that each has been developed over time to allow a particular joint force function to be accomplished as efficiently as possible. Each

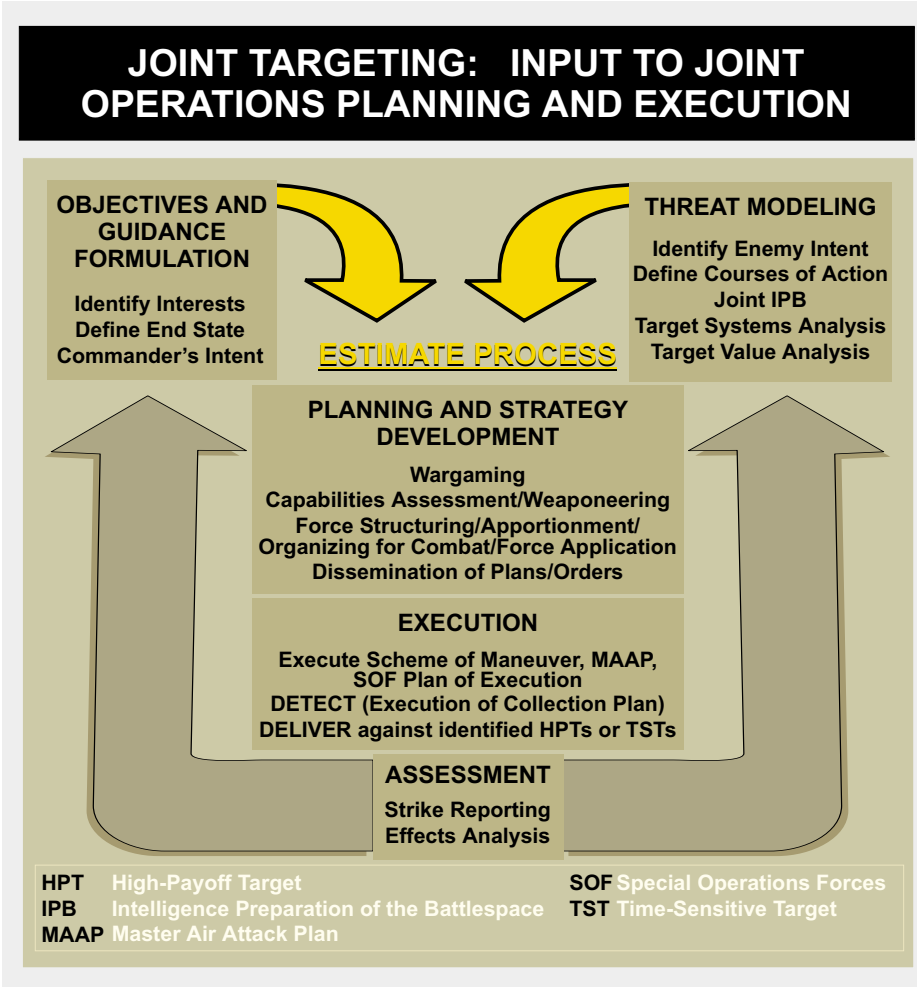

Figure C-1. Joint Targeting: Input to Joint Operations Planning and Execution

fits into the overall accomplishment of the JFC's targeting efforts.

c. **Component commanders attack targets within the joint targeting process and identify targets critical to their operations.** They are instrumental in assisting the JFC in formulating guidance, controlling many of the collection assets, executing operations against targets, and providing feedback as part of combat assessment. These functions remain constant regardless of joint force component (functional or Service). Coordination and communication between components are especially critical in regard to TSTs.

2. Four-Phase Targeting Process: Land and Maritime Components

a. Land and maritime force commanders normally use an interrelated process to enhance joint fire support planning and interface with the joint targeting process known as the **decide, detect, deliver, and assess (D3A)** methodology. D3A incorporates the same fundamental functions of the joint target process. The D3A methodology facilitates synchronizing maneuver, intelligence, and fire support (see Figure C-2).

For additional information see JP 3-09, Doctrine for Joint Fire Support.

b. Through IPB, the commander builds a picture of the adversary, or **threat model**. This threat model includes an order of battle, situation map (or COP), and other products. Through these efforts, the commander identifies what threat capabilities the adversary may possess.

c. The commander decides upon a scheme of maneuver, organizes available collection and fire support assets, and promulgates command guidance. Upon execution of the collections plan, ISR assets detect HPTs and firing units deliver fires on them in accordance with the commander's guidance. CA reporting allows the staff to continually assess adversary and friendly capabilities.

- **In the decide phase, target categories are identified for engagement.** Fire support, intelligence, and operations personnel decide what targets to look for, where the targets can be found on the

Component coordination and communication are especially critical for TSTs.

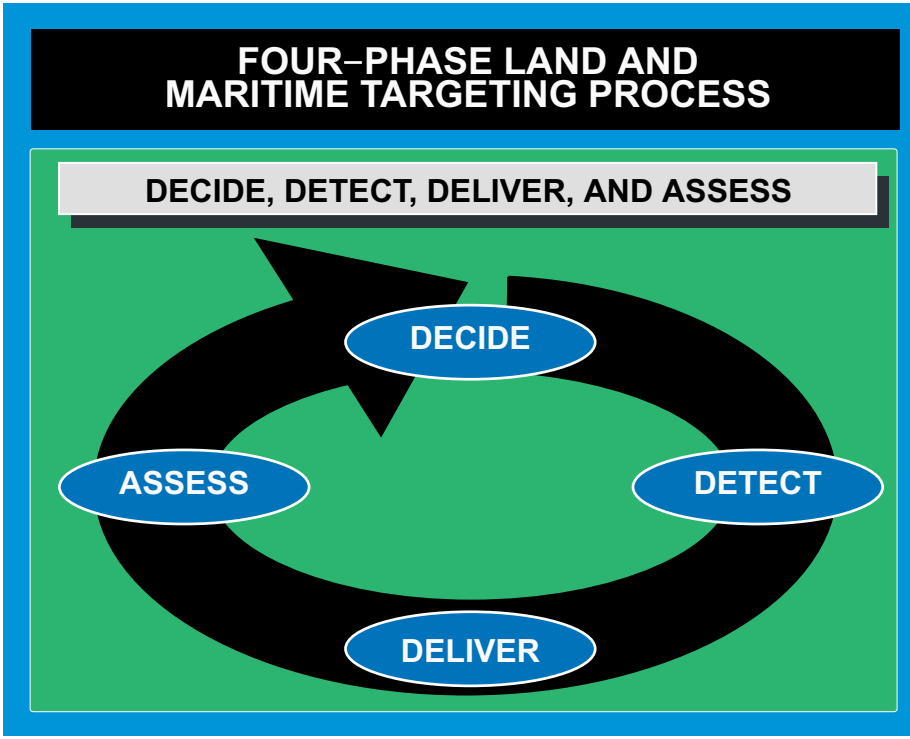

Figure C-2. Four-Phase Land and Maritime Targeting Process

battlefield, who can locate those targets, and how the targets should be attacked based on the commander's intent and the desired end state. Together, they determine the available assets to be allocated and additional assets required. They also identify channels needed to provide acquisition information on a real-time basis.

- **The detect phase is designed to acquire the targets selected in the decide phase.** In this phase, target acquisition assets and agencies execute the intelligence collection plan and focus on specific areas of interest. Targets must be monitored after detection (especially mobile targets). Tracking is an essential element of the detect function. Tracking priorities are based on the commander's concept of the operation and targeting priorities. Detection and tracking are executed through use of a collection plan. However, not all targets can be tracked constantly due to limited resources.

- **The deliver phase involves** attacking specific targets in accordance with the commander's guidance.

- **The assess phase is the estimate of damage resulting from the use of military force**, either lethal or nonlethal, against a target. Assessment requires extensive coordination between operational and intelligence elements to be effective, timely, and accurate. A key element of the assess function is to decide whether or not the target requires reattack in order to achieve results specified by the commander.

d. The commander and staff use a deliberate decisionmaking process to arrive at and to execute tactical decisions. The decisionmaking process is designed to direct

staff functions to produce a coordinated OPLAN or operation order (OPORD) to achieve the mission in accordance with the commander's concept of the operation, intent, and scheme of maneuver. Fire support planning within the decisionmaking process includes the **decide** phase in the four-phase surface targeting cycle. The six steps in the decisionmaking process are: **mission analysis; planning guidance; COA development; wargame and COA analysis; COA selection and commander's estimate;** and **plan development and approval**.

- **Mission Analysis.** Upon receiving the mission, the commander conducts a mission analysis. The fire support coordinator (FSCOORD) does preliminary analysis of the fire support mission by identifying factors pertaining to fire support.

- **Planning Guidance.** Once the commander has completed the mission analysis, the mission is restated and planning guidance is issued to the staff for their consideration when preparing individual staff estimates. The FSCOORD groups the commander's perceptions of the most dangerous types of targets as close support, counterfire, interdiction, SEAD, offensive counterair, etc.

- **Course of Action Development.** While the commander develops tentative COAs, the FSCOORD and the staff continues collecting information that will affect the provision of fire support. A key source of information at this point is from the situation development process conducted using IPB.

- **Wargame and COA Analysis.** Proposed COAs are analyzed for feasibility in order to make a recommendation to the commander. In the course of analysis, COAs become more refined. Additionally, **target value analysis conducted during this step yields HVTs and, ultimately, HPTs.**

- **COA Selection and Commander's Estimate.** After the analysis, the operations, intelligence, and FSCOORD compare the advantages and disadvantages of each COA to determine which promises to be most successful. The result of this consideration is a recommendation to the commander to be used as a basis for deciding the commander's concept of the operation. To better explain the COA to the commander, the fire support concept must be developed sufficiently enough to address (at a minimum) the allocation of fire support resources, fire support

Land and maritime components normally use D3A, a four-phase process, to enhance joint fire support planning and interface with the joint targeting process.

organization for combat, C2 relationships, and priorities of effort.

- **Plan Development and Approval.** The FSCOORD expands the fire support concept and prepares the fire support plan in detail. Key elements are summarized in the execution paragraph of the OPORD.

3. Six-Phase Air Targeting Process: Air Components

a. The JFACC normally uses an interrelated process to enhance joint air tasking and planning and to interface with the joint targeting processes known as the **six-phase air targeting process** (see Figure C-3). An effective and efficient target development process and air tasking cycle are essential to plan and execute joint air operations. This six-phase air targeting process incorporates the same fundamental functions of the joint target process and facilitates integration of targeting into the joint air tasking cycle. Each phase in the air tasking cycle is directly linked to each corresponding step in the overall air targeting process. The joint air tasking cycle applies targeting to air-specific operations over a very compressed and cyclical time frame.

For additional information see JP 3-01, Joint Doctrine for Countering Air and Missile Threats, *JP 3-03*, Doctrine for Joint Interdiction Operations, *and JP 3-56.1*, Command and Control for Joint Air Operations.

b. The commander promulgates **objectives and guidance**, which focuses the **target development** efforts. Once targets are selected for attack, the most effective weapon (lethal or nonlethal) is recommended for each target during **weaponeering**. During **force application**, a target's overall priority and

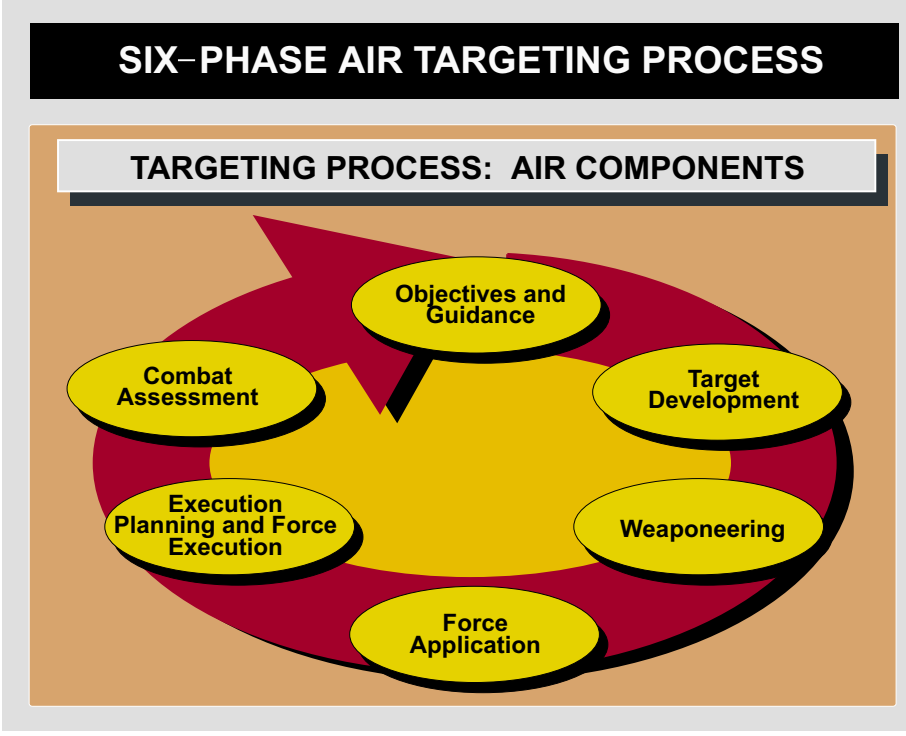

Figure C-3. Six-Phase Air Targeting Process

geographical location are considered when a delivery platform is mated to the weapon and the target. These delivery platforms are then 'packaged' with other delivery platforms by location and time in order to make the most effective use of limited escort (jamming, defensive counterair, SEAD) assets. The missions are planned and subsequently executed through **execution planning and force execution**. Reporting the results of the attacks and subsequent analysis is coordinated via **combat assessment**. This ongoing assessment allows for timely updates to target development products (updating the threat model) and for review of objectives and guidance.

- The **objectives and guidance** phase establishes or clarifies the goals for directing air targeting in a form that is understandable, requires action, is attainable, and provides measurable criteria to assess effectiveness.

- The **target development** phase examines potential adversary military, political, or economic target systems to identify subcomponents or elements and interrelationships. Target value analysis establishes criticality of a target or target system in order to select candidate aimpoints that should be attacked to achieve desired effects and accomplishes the defined objectives. Target development also assesses collateral damage considerations and LOAC and ROE limitations. Collection management requirements and target materials production are derivatives of the target development phase.

- The **weaponeering** phase determines the quantity of a specific type of lethal or nonlethal weapon required to achieve a specific level of damage to a given target. Collateral damage risks are also evaluated in this step.

- The **force application** phase matches the optimal weapon system to the specific aimpoint. Tradeoffs such as anticipated success in reaching the target, sound tactics, and collateral damage limitations are balanced among all available air capabilities.

- The **execution planning and force execution** phase prepares input for and supports the construction of missions for air sorties and weapon systems within the air tasking cycle. Input includes target identification, description, and precision location data.

- The **CA** phase conducts post-strike collection, analysis, and reporting of information on sorties and weapon system effectiveness. Post-strike assessment measures objective achievement and, as necessary, supports objective refinement, reattack recommendations, or new target development requirements. **CA** evaluates combat operations effectiveness in achieving objectives and recommends changes to tactics, strategies, objectives, and guidance. It accomplishes this via three sub-components: BDA, MEA, and future targeting and reattack recommendations. CA compares the results of the operation to the objectives to determine mission success or failure within the guidance parameters. More important than a review, it looks forward to determine if additional missions are needed and/or if modification to the objectives are necessary.

4. Joint Air Tasking Cycle and Joint ATO Phases

a. A **joint air tasking cycle** is used to provide for the efficient and effective employment of the available joint air capabilities. The cycle provides a repetitive

process for the planning, coordination, allocation, and tasking of joint air missions, within the guidance of the JFC. It accommodates changing tactical situations and JFC guidance, as well as requests for support from other component commanders. It is important to note that a timely joint ATO is critical, as other joint force components conduct their planning and operations based on a prompt, executable joint ATO, and they are dependent on its information. There are usually three joint ATOs at any given time: the joint ATO in execution (today's plan), the joint ATO in production (tomorrow's plan), and the joint ATO in planning (the following day's plan). The joint air tasking cycle begins with the JFC's air apportionment process and culminates with the CA of previous missions (see Figure C-4).

b. The **joint ATO phases** are related to the targeting cycle. The approach is the same; a systematic process that matches available capabilities with targets to achieve operational objectives. However, the number of ATO phases may vary based on theater and contingency requirements.

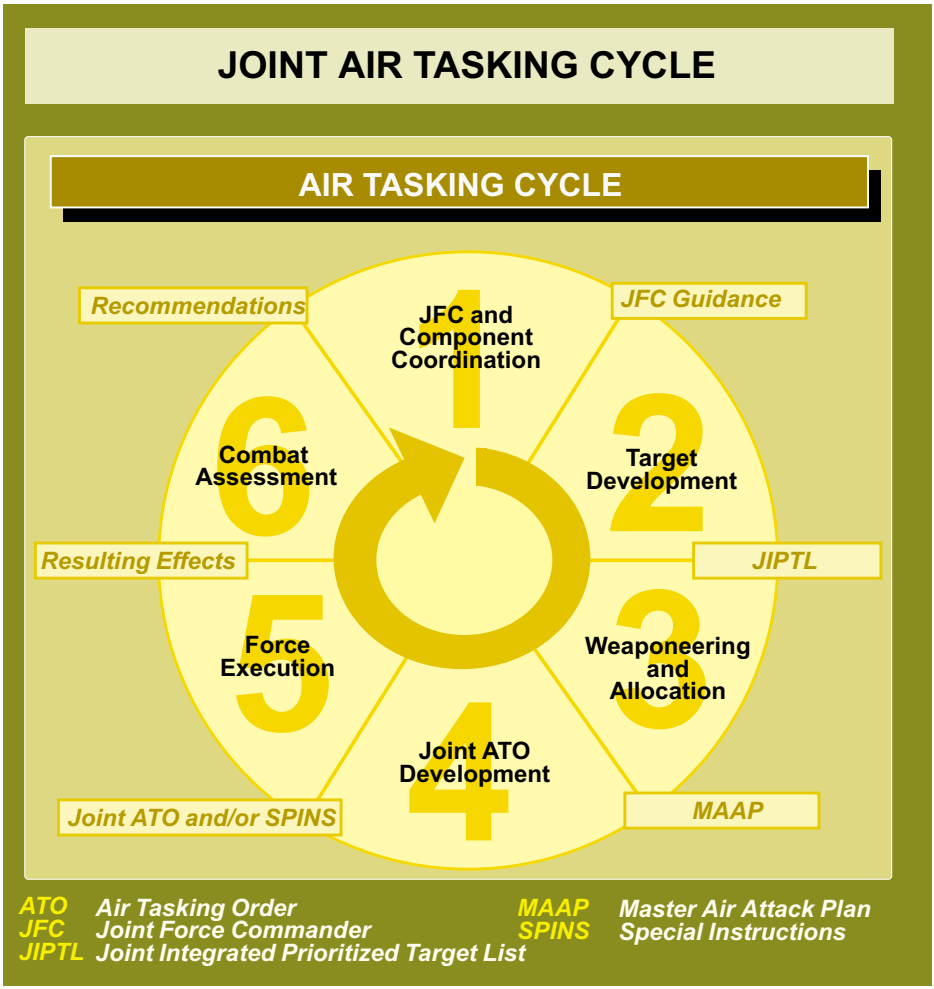

Figure C-4. Joint Air Tasking Cycle

- Phase 1 is **JFACC guidance.** The JFACC provides the combat plans (or equivalent) division with broad guidance based on the JFC's priorities and guidance, coordination with other component commanders, and the JFACC's own objectives. This is normally transmitted in a commander's intent statement and guides the planning for the duration of that ATO cycle. If a JFACC is not used, this process will be conducted for each Service component performing air operations.

- Phase 2 is **target development**. The specific objectives received during Phase 1 are used to focus target development. Targets are nominated to support the objectives and priorities provided by the JFC. In accordance with the JFC's objectives and component targeting requirements, the JFACC (or Service component commander if a JFACC is not used) conducts daily joint air planning for the employment of available capabilities and/or forces. The end product of the target development phase is the draft JIPTL that supports the objectives and conforms to guidance.

- Phase 3 is the **weaponeering and/or allocation** phase. The targeting personnel quantify the expected results of lethal and nonlethal weapons employment against prioritized targets. The JIPTL constructed during the previous phase, provides the basis for weaponeering assessment activities. The final prioritized targets are then included into the master air attack plan (MAAP). The resulting MAAP is the plan of employment that forms the foundation of the joint ATO.

- Phase 4 is **joint ATO development**. After the MAAP is approved by the JFACC, detailed preparations continue by the Combat Plans Division on the joint ATO, special instructions, and the airspace control order. The airspace control authority's and area air defense commander's instructions must be provided in sufficient detail to allow components to plan and execute all missions tasked in the joint ATO. The JAOC reviews each air capable component's allocation decision and/or air allocation request message and prepares a sortie allotment message back to the components as required, in accordance with the established OPLAN's guidelines.

The joint air tasking cycle applies targeting to air-specific operations.

- Phase 5 is **force execution**. The JFACC (or Service component commander if a JFACC is not used) directs the execution of or deconflicts all capabilities or forces made available for a given joint ATO. The JFACC has the authority to redirect

those forces for which the JFAAC has operational or tactical control. For all others, the 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 or forces not apportioned for tasking, but included in the joint ATO for coordination purposes, will be redirected only with the approval of the respective component commander or designated senior JAOC liaison officer. Components execute the joint ATO as tasked and recommend changes to the JAOC as appropriate, given emerging JFC and component requirements.

- Phase 6 is **combat assessment**. CA is conducted at all levels of the joint force. The JFC should establish a dynamic system, including a CA cell, to support CA for all components. Normally, the joint force operations officer will be responsible for coordinating CA, assisted by the joint force intelligence officer. The CA cell evaluates combat operations effectiveness to achieve command objectives.

5. Special Operations Component Targeting

Special operations targeting and mission planning are interrelated functions and processes. For SOF, neither is accomplished in isolation of the other. The targeting process supports planning by providing commanders and planners with a methodology, direct access, and detailed information concerning targets as expressed within the commander's objectives, guidance, and intent. Special operations targeting is accomplished in both deliberate planning and crisis action planning. It is founded in joint targeting principles but has many unique and SOF-specific products and processes.

For additional information, see JP 3-05.2, Joint Tactics, Techniques, and Procedures for Special Operations Targeting and Mission Planning Procedures.

6. Integration of Information Operations in Joint Targeting

a. IO involve actions taken to affect adversary information and information systems while defending friendly information and information systems. IW is IO conducted during crisis or conflict. IO is divided into offensive and defensive efforts and is accomplished through the integration of various capabilities (such as electronic warfare [EW], operations security, psychological operations [PSYOP], military deception, computer network attack, and physical destruction) and related activities (public affairs and civil affairs). IO can be accomplished across the range of military operations and may be conducted at all levels from strategic-national through tactical. IO planners consider all instruments of the adversary's national power to determine how best to achieve stated objectives by affecting information and information systems. Since destruction is an option that may be used to affect adversary information systems, successful integration of IO considerations into the targeting process is fundamental to the success of the campaign. An IO plan may call for "targeting" adversary human decision processes (human factors), information, and information systems used to support decisionmaking or adversary morale with a variety of lethal and nonlethal means. The selection of offensive IO objectives should be consistent with national objectives and applicable international conventions and ROE.

b. The JFC IO cell is another source for target requirements and should, therefore, be

closely integrated within the joint targeting process in order to deconflict redundant targeting, consider intelligence gain versus loss assessments, and provide inputs to the restricted and no-strike target lists. IO planners will coordinate and integrate IW at all levels. Most destructive IO attacks qualify as interdiction or strategic attack, and air apportionment decisions should take into consideration prospective IO target nominations.

For further information see JP 3-13, Joint Doctrine for Information Operations.

7. Joint Targeting Process Within Deliberate and Crisis Action Planning

Deliberate planning and crisis action planning are the mechanisms with which a JFC translates national military objectives into a viable COA that is supported by detailed planning. This is the context within which the joint targeting process occurs. Despite the outward differences, deliberate and crisis action planning are essentially the same processes completed under different circumstances. The joint targeting process remains the same within these processes, with shifting emphasis based upon the situation.

For further information see JP 3-33, Joint Force Capabilities, *and JP 5-0,* Doctrine for Planning Joint Operations.

8. Targeting Integration via Joint and Component Operations Centers

The JOC and/or component command centers plan for and conduct operations. Targeting mechanisms should exist at multiple levels. Joint force components identify requirements, nominate targets that are outside their boundaries or exceed the capabilities of organic or supporting assets (based on the JFC's apportionment decision), and conduct execution planning. After the JFC makes the targeting and apportionment decisions, components plan and execute assigned missions. The theater air ground system is normally the C2 architecture through which targeting should be integrated. Joint air operations are normally directed from a JAOC. The JAOC may either be an Air Force air operations center, Marine air-ground task force aviation combat element tactical air command center, or a Navy forces (NAVFOR) tactical air control center. Land operations are normally directed through an operations center, such as the Army forces (ARFOR) tactical operations center or Marine Corps forces (MARFOR) combat operations center. Other key ARFOR agencies for ground operations are the FSE, and DOCC. Other key MARFOR agencies include the force fires coordination center, the ground combat element, FSCC, and tactical air control center. The NAVFOR supports land and naval operations with the SACC. Key SOF agencies can include the SOCCE, the SOCOORD, the SOLE, and the naval special warfare task unit.

For additional information see JP 3-09, Doctrine for Joint Fire Support, *JP 3-56.1,* Command and Control for Joint Air Operations, *and JP 3-05,* Doctrine for Joint Special Operations.

9. Monitoring and Coordinating Target Execution

a. **Target Awareness.** Operation center directors, located at JOC and/or component command centers, monitoring the execution of current operations should maintain situation awareness of planned, executed, and emerging (especially time-sensitive) targets.

- Starting with the current OPORD and the JIPTL, operation center directors must also have a good knowledge of each target, its importance, when it is scheduled for attack, and the desired

outcome. Operation center directors should normally have a good idea of target vulnerabilities and susceptibility to various joint force capabilities.

- The knowledge required above enables operation center directors to better understand the significance of a report indicating that an attack on a particular target has been unsuccessful or of a report of a newly located priority target such as a theater ballistic missile. In this situation, operation center directors should be able to make recommendations to commanders on whether to put a target on the current OPORD at the expense of another one already scheduled for attack. Decisions to modify missions or direct attacks that deviate from the OPORD should be based on the commander's guidance, the theater strategy, and the campaign objectives to be accomplished. These decisions normally can only be made with an understanding of priorities of each component's targeting efforts throughout the campaign.

b. **Emerging Targets.** Operation center directors should know what forces are available, as well as their capabilities to attack an emerging target (e.g., on-call, immediate, or TSTs). This knowledge requires detailed information regarding the various forces available for employment. It also requires an understanding of joint fires and how the joint fire support and joint air operations are integrated. As shortfalls develop, component commanders normally prioritize the weight of effort, reconsider the adequacy of the concept of operations or, if the new target or mission is of sufficient priority, request or direct diversion of committed assets. During the process outlined above, the commanders normally depend upon the operation center directors to provide recommendations as to the most appropriate force and/or weapon as well as the best targets to divert. For example, when the current operations center becomes aware of a newly located tactical surface-to-air threat in the vicinity of a CAS mission, the operation center directors may determine that an available ATACMS is the most effective and responsive asset to engage that target. To provide these inputs to the commanders, the operation center directors must be familiar with weapons effects and specific weapons support requirements.

- **Weapons System Capabilities.** Operation center directors monitoring ongoing operations normally select the best available joint force capability to apply against emerging targets. Operation center directors must also have an understanding of the weapons capabilities of all joint force components, to include nonlethal assets (i.e., EW, IW, PSYOP, etc.). Operation center directors normally should understand the capabilities of delivery platforms. For example, the B-52 may be the most capable aerial platform for delivering land and sea mines, while the TLAM may be the best weapon for attacking early warning sites.

- **Support Requirements.** In addition to knowing what constitutes the best available weapons to apply against an emerging target, operation center directors should appreciate the support requirements to deliver the fires of choice on the target. Support requirements include not only such joint force capabilities as SEAD and refueling, but also how much time is required to change a direct fire mission or ordnance load.

c. **Targeting in a Dynamic Environment.** In order to maintain a current picture of a dynamic battlespace, operations center directors should normally have access to a COP. Such awareness includes the location of friendly forces, boundaries, various coordination lines, engagement zones, target locations, current threats, and all restricted and

prohibited areas (whether based upon ROE, legal considerations, or other restrictions). Operation center directors should normally understand the relationship among the various targets and attack objectives.

- **Effect on Operations.** Before recommending what assets to divert against an emerging target, operation center directors should normally comprehend what effect the change will have on the ongoing operation. For example, a particular bridge may not seem as important as a strategic command, control, and communications (C3) site. However, if that bridge is the only way for an adversary force to counterattack a friendly combat unit's flank, then diverting an attack from the bridge to the strategic C3 site may be the wrong decision. Additionally, if the objective requires three electric power sites to be simultaneously neutralized, then diverting weapons from one site may well render the attacks on the remaining sites useless.

- **Required Coordination.** If a weapons platform is diverted from a target, operation center directors should inform the target planners so they can nominate the target back on the JIPTL if still required.

- In this situation, intelligence collection operations management should also be notified so a collection mission is not wasted, and so appropriate ISR assets can be coordinated to collect BDA on the new target to determine whether a reattack is required.

- **Deconfliction.** Operation center directors must ensure that proper deconfliction is performed to minimize the potential for fratricide or duplication of effort.

APPENDIX D
COMMON REFERENCE SYSTEMS: AREA AND POINT

1. Common Reference Systems

Common reference systems provide a universal, joint perspective with which to define specific areas of the battlespace, enabling the commanders to efficiently coordinate, deconflict, integrate, and synchronize attacks. A common reference system is especially useful when used to coordinate mutually accessible areas of attack and to rapidly deconflict attack operations. Common reference systems result in rapid, deconflicted attacks, enhanced probability of mission success, and reduced potential for duplication of effort and fratricide. Also, they allow for rapid coordination of joint engagement and the employment of combined arms. They are flexible enough to be used for a variety of other purposes, such as geographically identifying search and surveillance areas, identification of restricted zones, designation of high threat areas (such as enemy surface-to-air missile battery locations), and reference points navigation, deconfliction, and target guidance. **The primary purpose of a common system is to provide an integrated common frame of reference for joint force situational awareness to facilitate attack coordination, deconfliction, integration, and synchronization.** There are two general categories of theater-established common reference systems: area and point.

2. Area Reference Systems

An area reference system provides a three-dimensional reference, enabling timely and effective coordination and control and facilitates rapid attacks throughout the designated JOA. Once identified, these areas may integrate control and coordinating measures (in particular FSCMs and ACMs), thereby enabling unhampered precision attack and flexibility of weapon system employment. Theater-level area reference systems are often described as "grid references," "kill boxes" or, in the case of Operation ALLIED FORCE, "engagement zones." Surface units have historically employed kill boxes and engagement zones to focus combat power, but these tactical-level area references do not provide the accompanying FSCMs or ACMs. Tactical-level area references require further coordination to ensure that adequate FSCMs and ACMs are in place. Theater-level kill boxes (employed as a common area reference system) often combine FSCMs with ACMs as a single coordination and control measure. This combination of fire support and airspace coordination enables the use of these area reference systems to be a reactive, timely, and simple tool for joint force employment and component integration. Missions that might utilize an area reference include counterfire, air interdiction, combat search and rescue (CSAR), close air support, and theater missile defense. **Theater established area reference systems often compliment normal airspace and fire support coordination measures.**

a. **Area Reference System Development.**

- **Area Reference System Dimensions.** Theater established procedures designate specific horizontal surface areas and their associated volumes of airspace. Optimum area reference size should accommodate the most restrictive weapon system employment tactic, yet allow flexibility (through further subdivision) so as to not overly restrict other weapon system employment.

- **Area Reference System Layout and Design.** In order for the reference system to be simple and easy to use, many theaters base their "kill box" system on

lines of latitude and longitude that are printed on the maps in use in the region resulting in a 33 nautical mile (nm) x 30 nm grid lattice. This allows maximum flexibility to rapidly coordinate and deconflict attacks and airborne surveillance operations against both known and unknown (immediate and unanticipated) targets anywhere they are located.

- **Labeling and Identification.** Area reference systems should be labeled with a simple, common, universal identifier recognizable by each component and their associated C2 and attack assets. Coordination and deconfliction of attacks is simplified by procedurally communicating "kill boxes" labeled by alphanumeric identifiers rather than complicated and detailed series of latitude and longitude coordinates. A simple alphanumeric system allows for a common "language" and perspective when components communicate in time-critical situations (example: "Kill Box D-8").

b. **Operational Considerations.** The JFC should appoint a single component or staff agency to develop the area reference system for the entire AOR or JOA. Guidance from the JFC and inputs from other component commanders are critical to ensuring the reference system fits the needs of the joint force and, more importantly, is accepted as a mutual tool. Once approved, the reference system is passed to each component to be incorporated into operational graphics and overlays of component C2 systems.

- **Area Reference System Management.** Once developed and approved, each component uses the common area reference system to rapidly coordinate, deconflict, and synchronize attack operations with other components. In a time-sensitive situation, components may coordinate and rapidly deconflict attack operations via the area reference system.

- **Status.** The JFC should identify a single agency or component that coordinates and maintains the status of the theater area reference system. Under normal circumstances, the airspace and/or surface areas identified by an area reference system are under previously established control and coordinating measure and applicable supported and supporting commander relationships apply. A single coordination point to monitor and communicate the reference status ensures unity of effort and reduces the time and amount of coordination required for dynamic attacks without negating component command relationships.

c. **Separate Area Reference Systems Within a JOA. In some cases, the JFC may elect** to establish separate area reference systems. Reasons for doing this rely heavily on geographic separation of the battlespace (that is, two distinct, geographically separate operational areas) within which two distinct kill box reference systems are located. However, multiple area reference systems within a single theater will add friction and degrade the effectiveness of a single, standardized area reference system.

3. Point Reference Systems

a. Point references complement area references by providing a multitude of common surface points to expedite coordination throughout the JOA. The point reference system is similar to the area reference system in that it can be used to provide components with a common perspective of the battlespace and allow for common identification of mutually accessible attack areas. In addition, it can be used to identify the center point for the establishment of an appropriate FSCM and/or ACM.

- **Bullseye and Search and Rescue DOT (SARDOT).** The bullseye reference system is normally used during counterair engagements for situational awareness on targeted and untargeted airborne threats and for other coordination. Normally, theaters will only establish a few bullseye reference points to ensure effectiveness. Bullseyes are not meant to provide detailed target guidance, but general reference information. SARDOTs, like bullseyes, are very few in number and provide general area reference for search and rescue operations.

- **Control Points (CPs) and Initial Points (IPs).** Theaters establish CPs and IPs to effect rapid and accurate geo-location information for joint operations. As opposed to only a few bullseye points, CPs and IPs are established throughout the theater and their effectiveness increases with promulgation. CPs and IPs provide the references for operations that require significant accuracy, such as targeting guidance. As such, they are the point reference system of choice for air-ground integration during CAS.

- **US Army Terrain Index Reference System and Target Reference Point.** These point reference systems are developed for surface component operations to quickly identify a target off a known geographic point. They differ from CPs and IPs in that they are primarily for surface unit coordination, not component coordination. As such, they are nominated and distributed more rapidly among surface units without further promulgation and coordination of the joint force.

b. **Point Reference System Design.** The JFC or designated representative shall establish a CP and/or IP point system throughout the operational area by selecting geographic points of reference and encoding them with code words, or alphanumeric. These geographic points will be incorporated into operational graphics and overlays of component C2 systems, such as Advanced Field Artillery Tactical Data System, Theater Battle Management Core System, Airborne Element Tactical Air Control System databases, and the airspace control plan.

c. **Point Reference Execution.** When only general area reference is required, bullseyes may be referenced. Examples include air-to-air threat information and SARDOTs for CSAR coordination. When accuracy is required for component integration, such as target identification, CPs and IPs should be referenced. A target's azimuth and distance from a selected CP or IP can provide effective coordination.

4. Reference Systems Examples

The following are examples of component descriptions of targets while using a common reference system.

a. An enemy aircraft identified 20 nm south of bullseye alpha should be referred to as "Bandit, Alpha, south for 20 nm." Fighter aircraft are then assigned to search for and attack the target.

b. ATACMS attacking a TST in "kill box" AF-5 (area reference system) with minimal coordination of other component operations should be referred to on US Guard frequencies (ultra-high frequency 243.0 and very high frequency 121.5) as "ATACMS attack, southwest portion of 'kill box' AF-5."

c. A CAS mission, under control of a terminal air controller, references CP 402 for enroute deconfliction and CP 543 for target guidance: "Mako 22, proceed to and hold south of CP 402, 9-line brief as follows: CP

543, 020 degrees for 6 nm, . . .” (Joint Applications of Firepower 9-line brief in accordance with JP 3-09.3, *Joint Tactics, Techniques, and Procedures for Close Air Support (CAS)*.)

APPENDIX E
REFERENCES

The development of JP 3-60 is based upon the following primary sources.

1. Joint Publications

a. JP 0-2, *Unified Action Armed Forces (UNAAF)*.

b. JP 1, *Joint Warfare of the Armed Forces of the United States*.

c. JP 1-01, *Joint Doctrine Development System*.

d. JP 1-02, *Department of Defense Dictionary of Military and Associated Terms*.

e. JP 1-04, *Joint Tactics, Techniques, and Procedures for Legal Support to Military Operations*.

f. JP 2-0, *Doctrine for Intelligence Support to Joint Operations*.

g. JP 2-01, *Joint Intelligence Support to Military Operations.*

h. JP 2-01.1, *Joint Tactics, Techniques, and Procedures for Intelligence Support to Targeting*.

i. JP 2-01.3, *Joint Tactics, Techniques, and Procedures for Joint Intelligence Preparation of the Battlespace*.

j. JP 2-02, *National Intelligence Support to Joint Operations*.

k. JP 2-03, *Joint Tactics, Techniques, and Procedures for Geospatial Information and Services Support to Joint Operations*.

l. JP 3-0, *Doctrine for Joint Operations*.

m. JP 3-01, *Joint Doctrine for Countering Air and Missile Threats*.

n. JP 3-01.5, *Doctrine for Joint Theater Missile Defense*.

o. JP 3-02, *Joint Doctrine for Amphibious Operations*.

p. JP 3-03, *Doctrine for Joint Interdiction Operations*.

q. JP 3-05, *Doctrine for Joint Special Operations*.

r. JP 3-05.2, *Joint Tactics, Techniques, and Procedures for Special Operations Targeting and Mission Planning Procedures*.

s. JP 3-09, *Doctrine for Joint Fire Support.*

t. JP 3-09.3, *Joint Tactics, Techniques, and Procedures for Close Air Support (CAS).*

u. JP 3-13, *Joint Doctrine for Information Operations.*

v. JP 3-14, *Joint Doctrine; Tactics, Techniques, and Procedures for Space Operations.*

w. JP 3-30, *Command and Control for Joint Air Operations.*

x. JP 3-31, *Joint Doctrine for Joint Force Land Component Commander.*

y. JP 3-32, *Joint Doctrine for Joint Force Maritime Component Commander.*

z. JP 3-33, *Joint Force Capabilities.*

aa. JP 3-51, *Electronic Warfare in Joint Military Operations.*

bb. JP 3-52, *Doctrine for Joint Airspace Control in the Combat Zone*.

cc. JP 3-53, *Doctrine for Joint Psychological Operations*.

dd. JP 3-54, *Joint Doctrine for Operations Security*.

ee. JP 3-55, *Joint Doctrine for Intelligence, Surveillance, Reconnaissance, and Target Acquisition.*

ff. JP 3-58, *Joint Doctrine for Military Deception.*

gg. JP 4-0, *Doctrine for Logistic Support of Joint Operations*.

hh. JP 5-0, *Doctrine for Planning Joint Operations*.

ii. JP 5-00.1, *Joint Tactics, Techniques, and Procedures for Joint Campaign Planning*.

jj. JP 5-00.2, *Joint Task Force Planning Guidance and Procedures*.

2. Multi-Service Publications

a. Multi-Service Publication FM 90-36/MCRP 3-1.6/NWP 3-60 TP/AFTTP(I) 3-2.3, *The Joint Targeting Process and Procedures for Targeting Time-Critical Targets*.

b. Multi-Service Publication FM 90-43/MCRP 3-42.1A/NWP 3-01.13/AFTTP(I) 3-2.24, *Multiservice Procedures for Joint Theater Missile Target Development*.

3. Service Publications

a. FM 6-20-10/MCRP 3-1.6.14, *Tactics, Techniques, and Procedures for the Targeting Process*.

b. FM 100-5, *Operations*.

c. FM 100-7, *Theater Decisive Operations*.

d. NWP 3-03.1, *Tomahawk Employment Manual*.

e. NWP 3-03.2, *TLAM Platform and Weapons Systems*.

f. NWP 3-03.4, *Strike Operations Against Land Targets*.

g. AFDD 1, *Air Force Basic Doctrine*.

h. AFDD 2, *Organization and Employment of Aerospace Power*.

i. AFDD 2-1, *Air Warfare*.

j. AFDD 2-1.2, *Strategic Attack.*

k. AFDD 2-1.3, *Counterland.*

l. AFI 13-1AOC, Vol. 3, *Operational Procedures –Aerospace Operations Center.*

m. AFI 14-117, *Air Force Targeting.*

n. AFP 14-210, *USAF Intelligence Targeting Guide*.

o. AFPAM 14-201, *USAF Intelligence Targeting Guide*.

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APPENDIX F
ADMINISTRATIVE INSTRUCTIONS

1. User Comments

Users in the field are highly encouraged to submit comments on this publication to: Commander, United States Joint Forces Command, Joint Warfighting Center Code JW100, 116 Lake View Parkway, Suffolk, VA 23435-2697. 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 Operations (J-3).

3. Change Recommendations

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

TO: CSAF WASHINGTON DC//XOXD//
INFO: JOINT STAFF WASHINGTON DC//J3/J7-JDETD//

Routine changes should be submitted to the Director for Operational Plans and Joint Force Development (J-7), JDETD, 7000 Joint Staff Pentagon, Washington, DC 20318-7000, with info copies to the USJFCOM JWFC.

b. When a Joint Staff directorate submits a proposal to the Chairman of the Joint Chiefs of Staff that would change source document information reflected in this publication, that directorate will include a proposed change to this publication as an enclosure to its proposal. The Military Services and other organizations are requested to notify the Director, J-7, Joint Staff, when changes to source documents reflected in this publication are initiated.

c. Record of Changes:

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Marine Corps:	Commander (Attn: Publications) 814 Radford Blvd, Suite 20321 Albany, GA 31704-0321
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GLOSSARY

PART I — ABBREVIATIONS AND ACRONYMS

ACM	airspace control measure
AOR	area of responsibility
ARFOR	Army forces
ATACMS	Army Tactical Missile System
ATO	air tasking order
BDA	battle damage assessment
C2	command and control
C3	command, control, and communications
C4I	command, control, communications, computers, and intelligence
CA	combat assessment
CAS	close air support
CC&D	camouflage, concealment, and deception
CIA	Central Intelligence Agency
COA	course of action
COG	center of gravity
COP	common operational picture
CP	control point
CSAR	combat search and rescue
CSC	community support center
D3A	decide, detect, deliver, and assess
DHS	Defense Human Intelligence (HUMINT) Service
DIA	Defense Intelligence Agency
DOCC	deep operations coordination cell
DOD	Department of Defense
DOS	Department of State
DP	decisive point
EW	electronic warfare
FSCC	fire support coordination center
FSCM	fire support coordinating measure
FSCOORD	fire support coordinator
FSE	fire support element
HPT	high-payoff target
HUMINT	human intelligence
HVT	high-value target
INR	Bureau of Intelligence and Research, Department of State
IO	information operations

IP	initial point
IPB	intelligence preparation of the battlespace
ISR	intelligence, surveillance, and reconnaissance
IW	information warfare
IWSC	Information Warfare Support Center
J-2	Intelligence Directorate of a joint staff
J-3	Operations Directorate of a joint staff
J-4	Logistics Directorate of a joint staff
J-5	Plans Directorate of a joint staff
JA	judge advocate
JAOC	joint air operations center
JFACC	joint force air component commander
JFC	joint force commander
JFE	joint fires element
JGAT	joint guidance, apportionment, and targeting
JIC	joint intelligence center
JIOC	joint information operations center
JIPTL	joint integrated prioritized target list
JOA	joint operations area
JOC	joint operations center
JP	joint publication
JSST	joint space support team
JTCB	joint targeting coordination board
JTF	joint task force
JTL	joint target list
JTSG	joint targeting steering group
JWAC	joint warfare analysis center
LNO	liaison officer
LOAC	law of armed conflict
MAAP	master air attack plan
MARFOR	Marine Corps forces
MEA	munitions effectiveness assessment
MLRS	Multiple Launch Rocket System
MOE	measure of effectiveness
NAVFOR	Navy forces
NCA	National Command Authorities
NIMA	National Imagery and Mapping Agency
NIST	national intelligence support team
nm	nautical mile
NMJIC	National Military Joint Intelligence Center
NSA	National Security Agency
NSL	no-strike list

OPLAN	operation plan
OPORD	operation order
PIR	priority intelligence requirements
POW	prisoner of war
PSYOP	psychological operations
ROE	rules of engagement
RTL	restricted target list
SACC	supporting arms coordination center
SARDOT	search and rescue DOT
SEAD	suppression of enemy air defenses
SJA	Staff Judge Advocate
SOCCE	special operations command and control element
SOCOORD	special operations coordination element
SOF	special operations forces
SOLE	special operations liaison element
SROE	standing rules of engagement
TA	target acquisition
TLAM	Tomahawk land-attack missile
TNL	target nomination list
TST	time-sensitive target
TTP	tactics, techniques, and procedures
UAV	unmanned aerial vehicle
USSPACECOM	United States Space Command

aimpoint. 1. A precise point associated with a target and assigned for a specific weapon impact to achieve the intended objective and level of destruction. May be defined descriptively (e.g., vent in center of roof), by grid reference, or geolocation. 2. A prominent radar-significant feature, for example a tip of land or bridge, used to assist an aircrew in navigating and delivering their weapons (usually in bad weather and/or at night). Also called offset aimpoint (OAP). (This term and its definition are provided for information and are proposed for inclusion in JP 1-02 by JP 2-01.1.)

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. (JP 1-02)

air tasking order. A method used to task and disseminate to components, subordinate units, and command and control agencies projected sorties, capabilities, and/or 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. (JP 1-02)

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

battle damage assessment. The timely and accurate estimate of damage resulting from the application of military force, either lethal or nonlethal, against a predetermined objective. Battle damage assessment can be applied to the employment of all types of weapon systems (air, ground, naval, and special forces weapons systems) throughout the range of military operations. Battle damage assessment is primarily an intelligence responsibility with required inputs and coordination from the operators. Battle damage assessment is composed of physical damage assessment, functional damage assessment, and target system assessment. Also called BDA. (JP 1-02)

bullseye. An established reference point from which the position of an object can be referenced. (This term and its definition are approved for inclusion in the next edition of JP 1-02.)

campaign plan. A plan for a series of related military operations aimed at accomplishing a strategic or operational objective within a given time and space. See also campaign planning. (JP 1-02)

campaign planning. The process whereby combatant commanders and subordinate joint force commanders translate national or theater strategy into operational concepts through the development of campaign plans. Campaign planning may begin during deliberate planning when the actual threat, national guidance, and available resources become evident, but is normally not completed until after the National Command Authorities select the course of action during crisis action planning. Campaign planning is conducted when contemplated military operations exceed the scope of a single major joint operation. See also campaign plan. (JP 1-02)

centers of gravity. Those characteristics, capabilities, or sources of power from which a military force derives its freedom of action, physical strength, or will to fight. Also called COGs. (JP 1-02)

clandestine operation. An operation sponsored and conducted by governmental departments or agencies in such a way as to assure secrecy or concealment. A clandestine operation differs from a covert operation in that emphasis is placed on concealment of the identity of the sponsor. In special operations, an activity may be both covert and clandestine and may focus equally on operational considerations and intelligence-related activities. (JP 1-02)

close air support. Air action by fixed- and rotary-wing aircraft against hostile targets that are in close proximity to friendly forces and that require detailed integration of each air mission with the fire and movement of those forces. Also called CAS. See also air interdiction. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

collateral damage. Unintentional or incidental injury or damage to persons or objects that would not be lawful military targets in the circumstances ruling at the time. Such damage is not unlawful so long as it is not excessive in light of the overall military advantage anticipated from the attack. (This term and its definition are approved for inclusion in the next edition of JP 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 effectiveness assessment; and (c) reattack recommendation. Also called CA. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

course of action. 1. Any sequence of activities that an individual or unit may follow. 2. A possible plan open to an individual or commander that would accomplish, or is related to the accomplishment of the mission. 3. The scheme adopted to accomplish a job or mission. 4. A line of conduct in an engagement. 5. A product of the Joint Operation Planning and Execution System concept development phase. Also called COA. (JP 1-02)

covert operation. An operation that is so planned and executed as to conceal the identity of or permit plausible denial by the sponsor. A covert operation differs from a clandestine operation in that emphasis is placed on concealment of the sponsor rather than on concealment of the operation. (JP 1-02)

damage assessment. 1. The determination of the effect of attacks on targets. 2. A determination of the effect of a compromise of classified information on national security. (JP 1-02)

decisive point. A geographic place, specific key event, critical system or function that allows commanders to gain a marked advantage over an enemy and greatly influence the outcome of an attack. (JP 1-02)

desired mean point of impact. A precise point, associated with a target, and assigned as the center for impact of multiple weapons or area munitions to achieve the intended objective and level of destruction. May be defined descriptively, by grid reference, or by geolocation. Also called DMPI. (This term and its definition are provided for information and are proposed for inclusion in JP 1-02 by JP 2-01.1.)

effective damage. That damage necessary to render a target element inoperative, unserviceable, nonproductive, or uninhabitable. (JP 1-02)

end state. The set of required conditions that defines achievement of the commander's objectives. (JP 1-02)

functional damage assessment. The estimate of the effect of military force to degrade or destroy the functional or operational capability of the target to perform its intended mission and on the level of success in achieving operational objectives established against the target. This assessment is based upon all-source information, and includes an estimation of the time required for recuperation or replacement of the target function. (This term and its definition are approved for inclusion in the next edition of JP 1-02.)

grid coordinates. Coordinates of a grid coordinate system to which numbers and letters are assigned for use in designating a point on a gridded map, photograph, or chart. (JP 1-02)

high-payoff target. A target whose loss to the enemy will significantly contribute to the success of the friendly course of action. High-payoff targets are those high-value targets that must be acquired and successfully attacked for the success of the friendly commander's mission. Also called HPT. See also high-value target; target. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

high-payoff target list. A prioritized list of high pay-off targets by phase of the joint operation. Also called HPTL. (This term and its definition are approved for inclusion in the next edition of JP 1-02.)

high-value target. A target the enemy commander requires for the successful completion of the mission. The loss of high-value targets would be expected to seriously degrade important enemy functions throughout the friendly commander's area of interest. Also called HVT. See also high pay-off target; target. (JP 1-02)

immediate targets. Targets that have been identified too late, or not selected for action in time to be included in the normal targeting process, and therefore have not been scheduled. Immediate targets have two subcategories: unplanned and unanticipated. (This term and its definition are approved for inclusion in the next edition of JP 1-02.)

information operations. Actions taken to affect adversary information and information systems while defending one's own information and information systems. Also called IO. (JP 1-02)

intention. An aim or design (as distinct from capability) to execute a specified course of action. (JP 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. (JP 1-02)

joint air operations. Air operations performed with air capabilities and/or 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. (JP 1-02)

joint air operations plan. A plan for a connected series of joint air operations to achieve the joint force commander's objectives within a given time and theater

of operations. See also joint air operations. (JP 1-02)

joint fires element. An optional staff element that provides recommendations to the operations directorate to accomplish fires planning and synchronization. Also called JFE. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

joint force. A general term applied to a force composed of significant elements, assigned or attached, of two or more Military Departments operating under a single joint force commander. See also joint force commander. (JP 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. See also joint force. (JP 1-02)

joint guidance, apportionment, and targeting team. A group that makes recommendations for air apportionment to engage targets, and provides other targeting support requiring component input at the joint force air component commander level. (This term and its definition are approved for inclusion in the next edition of JP 1-02.)

joint integrated prioritized target list. A prioritized list of targets and associated data approved by the joint force commander or designated representative and maintained by a joint force. Targets and priorities are derived from the recommendations of components in conjunction with their proposed operations supporting the joint force commander's objectives and guidance. Also called JIPTL. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 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 refining the joint integrated prioritized target list. The board is normally comprised of representatives from the joint force staff, all components and, if required, component subordinate units. Also called JTCB. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

joint targeting steering group. A group formed by a combatant commander to assist in developing targeting guidance and reconciling competing requests for assets from multiple joint task forces. Also called JTSG. (This term and its definition are approved for inclusion in the next edition of JP 1-02.)

joint target list. A consolidated list of selected targets considered to have military significance in the combatant commander's area of responsibility. Also called JTL. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

joint task force. A joint force that is constituted and so designated by the Secretary of Defense, a combatant commander, a subunified commander, or an existing joint task force commander. Also called JTF. (JP 1-02)

kill box. A three-dimensional area reference that enables timely, effective coordination

and control and facilitates rapid attacks. (This term and its definition are approved for inclusion in the next edition of JP 1-02.)

list of targets. A tabulation of confirmed or suspect targets maintained by any echelon for informational and fire support planning purposes. See also target list. (JP 1-02)

master air attack plan. A plan that contains key information that forms the foundation of the joint air tasking order. Sometimes referred to as the air employment plan or joint air tasking order shell. Information that may be found in the plan includes joint force commander guidance, joint force air component commander guidance, support plans, component requests, target update requests, availability of capabilities and forces, target information from target lists, aircraft allocation, etc. Also called MAAP. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

measures of effectiveness. Tools used to measure results achieved in the overall mission and execution of assigned tasks. Measures of effectiveness are a prerequisite to the performance of combat assessment. Also called MOEs. (This term and its definition are approved for inclusion in the next edition of JP 1-02.)

military operations other than war. Operations that encompass the use of military capabilities across the range of military operations short of war. These military actions can be applied to complement any combination of the other instruments of national power and occur before, during, and after war. Also called MOOTW. (JP 1-02)

military strategy. The art and science of employing the armed forces of a nation to secure the objectives of national policy by the application of force or the threat of force. See also strategy. (JP 1-02)

mission. 1. The task, together with the purpose, that clearly indicates the action to be taken and the reason therefore. 2. In common usage, especially when applied to lower military units, a duty assigned to an individual or unit; a task. 3. The dispatching of one or more aircraft to accomplish one particular task. (JP 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. (JP 1-02)

munitions effectiveness assessment. Conducted concurrently and interactively with battle damage assessment, the assessment of the military force applied in terms of the weapon system and munitions effectiveness to determine and recommend any required changes to the methodology, tactics, weapon system, munitions, fusing, and/or weapon delivery parameters to increase force effectiveness. Munitions effects assessment is primarily the responsibility of operations with required inputs and coordination from the intelligence community. Also called MEA. (This term and its definition are approved for inclusion in the next edition of JP 1-02.)

National Command Authorities. The President and the Secretary of Defense or their duly deputized alternates or successors. Also called NCA. (JP 1-02)

no-strike list. A list of geographic areas, complexes, or installations not planned for capture or destruction. Attacking these may violate the law of armed conflict or interfere with friendly relations with indigenous personnel or governments. Also called NSL. (This term and its definition replace

the existing term "no-strike target list" and its definition and are approved for inclusion in the next edition of JP 1-02.)

objective. 1. The clearly defined, decisive, and attainable goals towards which every military operation should be directed. 2. The specific target of the action taken (for example, a definite terrain feature, the seizure or holding of which is essential to the commander's plan, or, an enemy force or capability without regard to terrain features). See also target. (JP 1-02)

offensive counterair. Offensive operations to destroy, disrupt, or neutralize enemy aircraft, missiles, launch platforms, and their supporting structures and systems both before and after launch, but as close to their source as possible. Offensive counterair operations range throughout enemy territory and are generally conducted at the initiative of friendly forces. These operations include attack operations, fighter sweep, escort, and suppression of enemy air defenses. Also called OCA. (JP 1-02)

on-call targets. Planned targets that are known to exist in an operational area and are located in sufficient time for deliberate planning to meet emerging situations specific to campaign objectives. (This term and its definition are approved for inclusion in the next edition of JP 1-02.)

operation. 1. A military action or the carrying out of a strategic, operational, tactical, service, training, or administrative military mission. 2. The process of carrying on combat, including movement, supply, attack, defense and maneuvers needed to gain the objectives of any battle or campaign. (JP 1-02)

physical damage assessment. The estimate of the quantitative extent of physical damage (through munitions blast, fragmentation, and/or fire damage effects) to a target resulting from the application of military force. This assessment is based upon observed or interpreted damage. (This term and its definition are approved for inclusion in the next edition of JP 1-02.)

planned targets. Targets that are known to exist in an operational area, and against which effects are scheduled in advance or are on-call. Examples range from targets on joint target lists in the applicable campaign plan, to targets detected in sufficient time to list in the air tasking order, mission-type orders, or fire support plans. Planned targets have two subcategories: scheduled or on-call. (This term and its definition are approved for inclusion in the next edition of JP 1-02.)

reattack recommendation. An assessment, derived from the results of battle damage assessment and munitions effectiveness assessment, providing the commander systematic advice on reattack of targets and further target selection to achieve objectives. The reattack recommendation considers objective achievement, target, and aimpoint selection, attack timing, tactics, and weapon system and munitions selection. The reattack recommendation is a combined operations and intelligence function. Also called RR. (This term and its definition are approved for inclusion in the next edition of JP 1-02.)

restricted target. A target that has specific restrictions imposed upon it. Actions that exceed specified restrictions are prohibited until coordinated and approved by the establishing headquarters. (This term and its definition are approved for inclusion in the next edition of JP 1-02.)

restricted target list. A list of restricted targets nominated by elements of the joint force and approved by the joint force commander. This list also includes restricted targets directed by higher

authorities. Also called RTL. (This term and its definition are approved for inclusion in the next edition of JP 1-02.)

rules of engagement. Directives issued by competent military authority that delineate the circumstances and limitations under which United States forces will initiate and/or continue combat engagement with other forces encountered. Also called ROE. (JP 1-02)

SARDOT. A reference point on land that serves as a pre-designated position from which evaders and recovery forces reference their current location. The air tasking order special instructions will include SARDOT location and specific instructions on how to use the SARDOT. (This term and its definition are applicable only in the context of this publication and cannot be referenced outside this publication.)

scheduled targets. Planned targets upon which fires will be delivered at a specific time. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

special operations. Operations conducted by specially organized, trained, and equipped military and paramilitary forces to achieve military, political, economic, or informational objectives by unconventional military means in hostile, denied, or politically sensitive areas. These operations are conducted across the full range of military operations, 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. (JP 1-02)

strategic mission. A mission directed against one or more of a selected series of enemy targets with the purpose of progressive destruction and disintegration of the enemy's warmaking capacity and will to make war. Targets include key manufacturing systems, sources of raw material, critical material, stockpiles, power systems, transportation systems, communication facilities, and other such target systems. As opposed to tactical operations, strategic operations are designed to have a long-range rather than immediate effect on the enemy and its military forces. (JP 1-02)

tactics. 1. The employment of units in combat. 2. The ordered arrangement and maneuver of units in relation to each other and/or to the enemy in order to use their full potentialities. (JP 1-02)

target. 1. An area, complex, installation, force, equipment, capability, function, or behavior identified for possible action to support the commander's objectives, guidance, and intent. Targets fall into two general categories: planned and immediate. 2. In intelligence usage, a country, area, installation, agency, or person against which intelligence operations are directed. 3. An area designated and numbered for future firing. 4. In gunfire support usage, an impact burst that hits the target. See also objective area. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

target acquisition. The detection, identification, and location of a target in

sufficient detail to permit the effective employment of weapons. See also target analysis. (JP 1-02)

target analysis. An examination of potential targets to determine military importance, priority of attack, and weapons required to obtain a desired level of damage or casualties. See also target acquisition. (JP 1-02)

target complex. A geographically integrated series of target concentrations. See also target. (JP 1-02)

target component. A set of targets within a target system performing a similar function. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

target concentration. A grouping of geographically proximate targets. See also target; target complex. (JP 1-02)

target critical damage point. The part of a target component that is most vital. Also called critical node. See also target; target component. (JP 1-02)

targeting. The process of selecting and prioritizing targets and matching the appropriate response to them, taking account of operational requirements and capabilities. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

targeting effects. The cumulative results of actions taken to attack targets and target systems by lethal and nonlethal means. (This term and its definition are approved for inclusion in the next edition of JP 1-02.)

target intelligence. Intelligence that portrays and locates the components of a target or target complex and indicates its vulnerability and relative importance. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 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; list of targets. (JP 1-02)

target materials. Graphic, textual, tabular, digital, video, or other presentations of target intelligence, primarily designed to support operations against designated targets by one or more weapon(s) systems. Target materials are suitable for training, planning, executing, and evaluating military operations. (JP 1-02)

target nomination list. A list of targets nominated by component commanders, national agencies, or the joint force commander staff for potential inclusion on the joint integrated prioritized target list to support joint force commander objectives and priorities. Also called TNL. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

target of opportunity. A target visible to a surface or air sensor or observer, which is within range of available weapons and against which fire has not been scheduled or requested. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

target priority. A grouping of targets with the indicated sequence of attack. (JP 1-02)

target signature. 1. The characteristic pattern of a target displayed by detection and identification equipment. 2. In naval mine warfare, the variation in the influence field produced by the passage of a ship or sweep. (JP 1-02)

target stress point. The weakest point (most vulnerable to damage) on the critical damage point. Also called vulnerable node. See also target critical damage point. (JP 1-02)

target system. 1. All the targets situated in a particular geographic area and functionally related. 2. A group of targets that are so related that their destruction will produce some particular effect desired by the attacker. See also target complex. (This term and its definition modify the existing term and its definition and are approved for inclusion in the next edition of JP 1-02.)

target system component. A set of targets belonging to one or more groups of industries and basic utilities required to produce component parts of an end product such as periscopes, or one type of a series of interrelated commodities, such as aviation gasoline. (JP 1-02)

time-sensitive targets. Those targets requiring immediate response because they pose (or will soon pose) a danger to friendly forces or are highly lucrative, fleeting targets of opportunity. Also called TST. (JP 1-02)

unanticipated immediate targets. Those immediate targets that are unknown or not expected to exist in an operational area. (This term and its definition are approved for inclusion in the next edition of JP 1-02.)

unplanned immediate targets. Those immediate targets that are known to exist in an operational area but are not detected, located, or selected for action in sufficient time to be included in the normal targeting process. (This term and its definition are approved for inclusion in the next edition of JP 1-02.)

vulnerability. 1. The susceptibility of a nation or military force to any action by any means through which its war potential or combat effectiveness may be reduced or its will to fight diminished. 2. The characteristics of a system that cause it to suffer a definite degradation (incapability to perform the designated mission) as a result of having been subjected to a certain level of effects in an unnatural (manmade) hostile environment. 3. In information operations, a weakness in information system security design, procedures, implementation, or internal controls that could be exploited to gain unauthorized access to information or an information system. See also information operations. (JP 1-02)

weaponeering. The process of determining the quantity of a specific type of lethal or nonlethal weapons required to achieve a specific level of damage to a given target, considering target vulnerability, weapons effect, munitions delivery accuracy, damage criteria, probability of kill, and weapon reliability. (JP 1-02)

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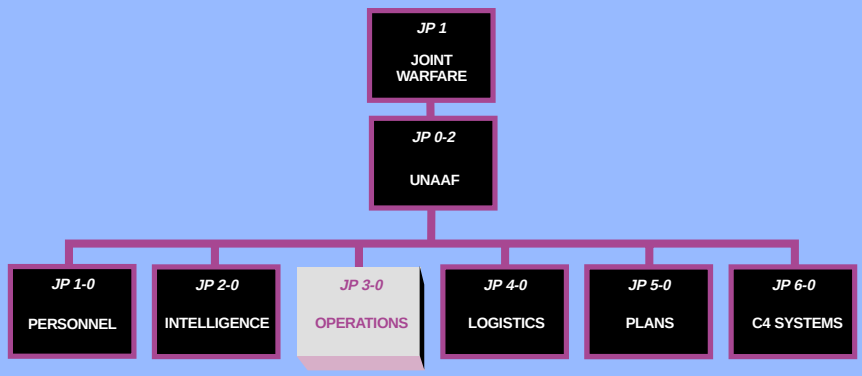
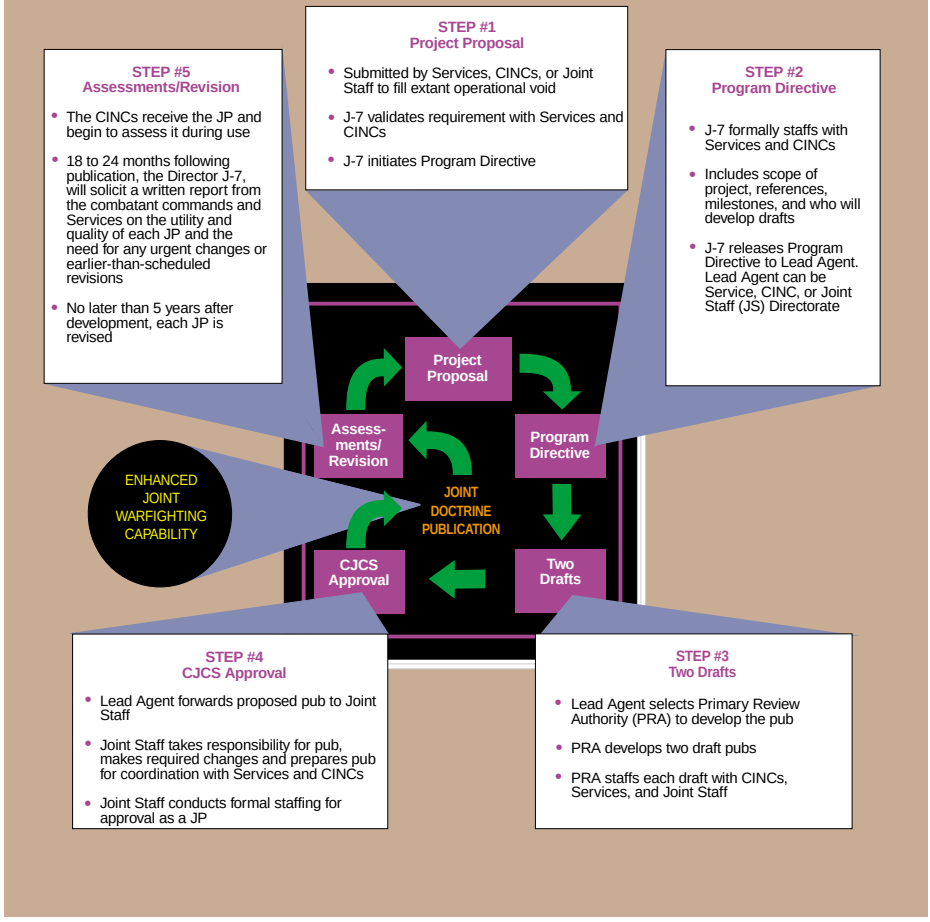


All joint doctrine and tactics, techniques, and procedures are organized into a comprehensive hierarchy as shown in the chart above. **Joint Publication (JP) 3-60** is in the **Operations** series of joint doctrine publications. The diagram below illustrates an overview of the development process:

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