ATP 3-60 (FM 3-60)

TARGETING

MAY 2015

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HEADQUARTERS, DEPARTMENT OF THE ARMY

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Targeting

Contents

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* This publication supersedes FM 3-60, dated 26 November 2010

Figures

Tables

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Preface

Army techniques publication (ATP) 3-60, *Targeting* provides the techniques used for targeting by the United States Army. This manual has applicability in any theater of operations. The manual offers considerations for commanders and staffs in preparing for challenges with targeting, yet is flexible enough to adapt to a dynamic situation. ATP 3-60 will replace field manual (FM) 3-60, *Tactics, Techniques, and Procedures for the Targeting Process*. ATP 3-60 supports Army doctrine reference publications (ADRP) 3-0, and 3-09.

The principal audience for ATP 3-60 is all members of the profession arms. Commanders and staffs of Army headquarters serving as joint task force or multinational headquarters should also refer to applicable joint or multinational doctrine concerning the range of military operations and joint or multinational forces. Trainers and educators throughout the Army will also use this publication.

Commanders, staffs, and subordinates ensure that their decisions and actions comply with applicable United States, international, and in some cases host-nation laws and regulations. Commanders at all levels ensure that their Soldiers operate in accordance with the law of war and the rules of engagement. (See FM 27-10.)

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

ATP 3-60 uses joint terms where applicable. Selected joint and Army terms and definitions appear in both the glossary and the text. Terms for which ATP 3-60 is the proponent publication are italicized in the text and marked with an asterisk (*) in the glossary. Terms and definitions for which ATP 3-60 is the proponent publication are boldfaced in the text. For other definitions shown in the text, the term is italicized and the number of the proponent publication follows the definition.

This publication applies to the Active Army, the Army National Guard, Army National Guard of The United States and United States Army Reserve unless otherwise stated.

The proponent for ATP 3-60 is the United States Army Fires Center of Excellence. The preparing agency is the Directorate of Training and Doctrine, Doctrine Division. Users are invited to send written comments and recommendations on a Department of the Army (DA) Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Directorate of Training and Doctrine, 700 McNair Avenue, Suite 128 ATTN: ATSF-DD, Fort Sill, OK 73503-4436; by e-mail to usarmy.sill.fcoe.mbx.dotd-doctrine-inbox@mail.mil; or submit an electronic DA Form 2028.

Introduction

SCOPE

ATP 3-60, *Targeting* describes Army targeting. Each chapter and appendix addresses how decide, detect, deliver, and assess (D3A) methodology enhances targeting. D3A is a methodology which optimizes the integration and synchronization of maneuver, fire support, intelligence, mission command, and information related capabilities from task force to corps level operations.

ATP 3-60 addresses how D3A methodology interfaces with the joint targeting cycle, military decision-making process (MDMP), and operations process.

Successful targeting requires that the leadership team and their staff possess an understanding of the functions and ethical decision making associated with targeting. ATP 3-60 builds on the collective knowledge, experience gained through recent operations, and numerous exercises.

SUMMARY OF NEW MATERIAL AND CHANGES FROM FM 3-60

This manual has been updated to reflect current changes in terminology and techniques used for targeting. It has been reformatted to comply with the 2015 Doctrine Strategy.

Chapter 1 discusses the targeting guidelines and philosophy associated with targeting techniques.

Chapter 2 discusses targeting methodology relating to lethal and nonlethal effects. It discusses the D3A methodology and the integration and synchronization with maneuver forces.

Chapter 3 discusses the corps and division targeting requirements and details the commanders and staff officers D3A methodology in support of tactical operations.

Chapter 4 discusses brigade level targeting.

Appendix A discusses find, fix, track, target, engage, and assesses functions relating to targeting techniques.

Appendix B discusses find, fix, finish, exploit, analyze, and disseminate functions relating to targeting techniques.

Appendix C discusses target value analysis using criticality, accessibility, recuperability, vulnerability, effect, and recognizability (CARVER) tool.

Appendix D provides example formats and targeting reports.

Appendix E provides an updated targeting checklist using the D3A methodology**.**

Appendix F provides targeting working group standard operating procedures samples.

Appendix G provides common datum.

Appendix H provides example of target numbering.

Chapter 1

Targeting Guidelines and Philosophy

A *target* is 1. An entity or object that performs a function for the adversary considered for possible engagement or other action. 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 (joint publication [JP] 3-60). Targets include mobile and stationary forces, equipment, and facilities that an enemy commander can use to conduct operations. *Targeting* is the process of selecting and prioritizing targets and matching the appropriate response to them considering operational requirements and capabilities (JP 3-0). The emphasis of targeting is on identifying enemy resources (targets) that if destroyed or degraded will contribute to the success of the friendly commander's mission. The expected results of a successful attack eliminating a resource begin to place limits on the enemy commander's available tactical options. Targeting personnel identify critical target subsets that when successfully acquired and attacked significantly diminish enemy capabilities. Denying critical resources to the enemy makes him vulnerable and expands friendly opportunities for success in battle. Successful targeting requires that the commander synchronize information related capabilities, intelligence, maneuver, fire support systems, nonlethal effects, and special operations forces to attack and eliminate critical target(s) using the most effective system in the right time and place. Targeting is a complex and multidiscipline effort that requires coordinated interaction among many command and staff elements. The functional elements necessary for effective collaboration are represented in the targeting working group. A *working group* is a grouping of predetermined staff representatives who meet to provide analysis, coordinate and provide recommendations for a particular purpose or function (FM 6-0). These representatives include, but are not limited to, the fires, intelligence, current operations, future operations, and plans cells. Representatives from these cells are essential to the execution of targeting. Other members of the staff may help them in the planning and execution phases of targeting. Close coordination among all cells is crucial for a successful targeting effort. Sensors and collection capabilities under the control of external agencies must be closely coordinated and carefully integrated into the execution of attacks especially those involving rapidly moving, fleeting, or dangerous targets. In addition, the appropriate means and munitions must attack the vulnerabilities of different types of targets.

SECTION I – GUIDELINES OF TARGETING

DOCTRINAL BASIS

1-1.   Targeting is a critical component of the fires warfighting function. The *fires warfighting function* is the related tasks and systems that provide collective and coordinated use of Army indirect fires, air and missile defense, and joint fires through the targeting process (ADRP 3-0). It includes tasks associated with integrating and synchronizing the effects of the types of fires with the effects of other warfighting functions. Commanders integrate these tasks into the concept of operations during planning and adjust them based on the targeting guidance. Fires normally contribute to the overall effect of maneuver, but commanders may use them separately for decisive and shaping operations. The fires warfighting function includes the following tasks:

- Deliver fires.
- Integrate all forms Army, joint, and multinational fires.
- Conduct targeting.

1-2. These tasks are integrated into military operations during planning and adjusted based on the targeting guidance.

TARGETING

1-3. The enemy presents a large number of targets that must be engaged with available intelligence, acquisition, and attack assets. The targeting process weighs the benefits and the cost of engaging various targets in order to determine which targets, if engaged, are most likely to contribute to achieving the desired end state. Adhering to the five targeting guidelines should increase the probability of creating desired effects while diminishing undesired or adverse collateral effects. These guidelines are:

- Targeting focuses on achieving the commander's objectives. It is the function of targeting to achieve efficiently those objectives within the parameters set at the operational level, directed limitations, the rules of engagement, or rules for the use of force, the law of war, and other guidance given by the commander. Every target nominated must contribute to attaining the commander's objectives.
- Targeting seeks to create specific desired effects through lethal and nonlethal actions. Target analysis encompasses all possible means to create desired effects, drawing from all available capabilities. The art of targeting seeks to create desired effects with the least risk and expenditure of time and resources.
- Targeting directs lethal and nonlethal actions to create desired effects.
- Targeting is a fundamental task of the fires warfighting function that encompasses many disciplines and requires participation from many staff elements and components.
- Targeting creates effects systematically. A targeting methodology is a rational and iterative process that methodically analyzes, prioritizes, and assigns assets against targets systematically to create those effects that will contribute to achieving the commander's objectives. If the desired effects are not created, targets may be considered again in the process or operations may have to be modified.

TARGETING GUIDANCE

1-4. The commander's targeting guidance must be articulated clearly and simply to enhance understanding. The guidance must be easily understood by all warfighting functions. Targeting guidance must focus on essential threat capabilities and functions that could interfere with the achievement of friendly objectives.

1-5. The commander's targeting guidance describes the desired effects to be generated by fires, physical attack, cyber electromagnetic activities, and other information related capabilities against threat operations. An *effect* is 1. The physical or behavioral state of a system that results from an action, a set of actions, or another effect. 2. The result, outcome, or consequence of an action. 3. A change to a condition, behavior, or degree of freedom (JP 3-0). Targeting enables the commander through various lethal and nonlethal capabilities the ability to produce the desired effects. Capabilities associated with one desired effect may also contribute to other desired effects. For example, delay can result from disrupting, diverting, or destroying enemy capabilities or targets.

1-6. Terms that are used to describe the desired effects include:

- **Deceive.** Military leaders attempt to mislead threat decision makers by manipulating their understanding of reality.
- **Defeat.** *Defeat* is a tactical mission task that occurs when an enemy force has temporarily or permanently lost the physical means or the will to fight. The defeated force's commander is unwilling or unable to pursue that individual's adopted course of action, thereby yielding to the friendly commander's will and can no longer interfere to a significant degree with the actions of friendly forces. Defeat can result from the use of force or the threat of its use (FM 3-90-1). Defeat manifests itself in some sort of physical action, such as mass surrenders, abandonment of positions, equipment and supplies, or retrograde operations. A commander can create different effects against an enemy to defeat that force. For example a commander's employment of field artillery fires to attack an enemy force may result in the enemy no longer having sufficient

personnel, weapons systems, equipment, or supplies to carry out its mission. Likewise the delivery of massed, synchronized and intense fires can cause enemy personnel to lose the will to continue to fight.

- **Degrade.** To degrade is to reduce the effectiveness or efficiency of a threat.
- **Delay.** To *delay* is to slow the time of arrival of enemy forces or capabilities or alter the ability of the enemy or adversary to project forces or capabilities. (FM 3-09) When enemy forces are delayed, friendly forces gain time. For delay to have a major impact the enemy must face urgent movement requirements or the delay must enhance the effect(s) of friendly operations. When delayed enemy forces mass behind a damaged route segment a more concentrated set of targets and a longer period of exposure to friendly fires results.
- **Deny.** An example of deny is to destroy the threats communications equipment as a means of denying his use of the electromagnetic spectrum; however, the duration of denial will depend on the enemy's ability to reconstitute. *Denial operations* are actions to hinder or deny the enemy the use of space, personnel, supplies, or facilities (FM 3-90-1).
- **Destroy.** *Destroy* is a tactical mission task that physically renders an enemy force combat-ineffective until it is reconstituted. Alternatively, to destroy a combat system is to damage it so badly that it cannot perform any function or be restored to a usable condition without being entirely rebuilt. (FM 3-90-1).
- **Destruction**. *Destruction* is 1. In the context of the computed effects of field artillery fires, destruction renders a target out of action permanently, or ineffective for a long period of time, producing 30-percent casualties or materiel damage. 2. A type of adjustment for destroying a given target (FM 3-09).
- **Disrupt.** *Disrupt* is 1. A tactical mission task in which a commander integrates direct and indirect fires, terrain, and obstacles to upset an enemy's formation or tempo, interrupt the enemy's timetable, or cause enemy forces to commit prematurely or attack in a piecemeal fashion (FM 3-90-1). 2. An obstacle effect that focuses fire planning and obstacle effort to cause the enemy force to break up its formation and tempo, interrupt its timetable, commit breaching assets prematurely, and attack in a piecemeal effort (FM 3-90-1).
- **Divert.** To divert is to turn aside or from a path or course of action. A *diversion* is the act of drawing the attention and forces of an enemy from the point of the principal operation; an attack, alarm, or feint that diverts attention (JP 3-03). Diversion causes enemy forces to consume resources or capabilities critical to enemy operations in a way that is advantageous to friendly operations. Diversions draw the attention of enemy forces away from critical friendly operations and prevent enemy forces and their support resources from being employed for their intended purpose. Diversions can also cause more circuitous routing along lines of communication, resulting in delays for enemy forces. An option for field artillery employment in support of a commander's diversion is to use high explosive fires to encourage an enemy to adopt a different route.
- **Exploitation.** *Exploitation* is an offensive task that usually follows a successful attack and is designed to disorganize the enemy in depth (ADRP 3-90).
- **Interdict.** *Interdict* is a tactical mission task where the commander prevents, disrupts, or delays the enemy's use of an area or route (FM 3-90-1).
- **Neutralize.** *Neutralize* is a tactical mission task that results in rendering enemy personnel or materiel incapable of interfering with a particular operation (FM 3-90-1).
- **Neutralization.** *Neutralization* in the context of the computed effects of field artillery fires, neutralization renders a target ineffective for a short period of time, producing 10-percent casualties or materiel damage (FM 3-09).
- **Suppress.** *Suppress* is a tactical mission task that results in temporary degradation of the performance of a force or weapons system below the level needed to accomplish the mission (FM 3-90-1). Also see suppressive fire and suppression. (FM 3-09)

1-7.   The commander can also direct a variety of nonlethal actions or effects separately or in conjunction with lethal actions or effects.

1-8. The commander can also provide restrictions as part of his targeting guidance. Targeting restrictions fall into two categories—the no-strike list and the restricted target list.

1-9. The no-strike list consists of objects or entities protected by:
- Law of war.
- International laws.
- Rules of engagement.
- Other considerations.

1-10. A restricted target list is a valid target with specific restrictions such as:
- Limit collateral damage.
- Preserve select ammo for final protective fires.
- Do not strike during daytime.
- Strike only with a certain weapon.
- Proximity to protected facilities and locations.

Note. See FM 1-04, FM 3-57, JP 1-04, JP 3-57, JP 2-0 and JP 3-60 for additional information on legal considerations and targeting restrictions.

TARGETING CATEGORIES

1-11. There are two targeting categories—deliberate targeting and dynamic targeting.

DELIBERATE TARGETING

1-12. Deliberate targeting prosecutes planned targets. These targets are known to exist in the area of operations and have actions scheduled against them. Examples range from targets on target lists in the applicable plan or order, targets detected in sufficient time to be placed in the joint air tasking cycle, mission type orders, or fire support plans.

1-13. There are two types of planned targets: scheduled and on-call:
- Scheduled targets exist in the area of operations and are located in sufficient time so that fires or other actions upon them are identified for engagement at a specific, planned time.
- On-call targets have actions planned, but not for a specific delivery time. The commander expects to locate these targets in sufficient time to execute planned actions.

DYNAMIC TARGETING

1-14. Dynamic targeting prosecutes targets of opportunity and changes to planned targets or objectives. Targets of opportunity are targets identified too late, or not selected for action in time, to be included in deliberate targeting. Targets engaged as part of dynamic targeting are previously unanticipated, unplanned, or newly detected.

1-15. There are two types of targets of opportunity: unplanned and unanticipated:
- Unplanned targets are known to exist in the area of operations, but no action has been planned against them. The target may not have been detected or located in sufficient time to meet planning deadlines. Alternatively, the target may have been located, but not previously considered of sufficient importance to engage.
- Unanticipated targets are unknown or not expected to exist in the area of operations.

TIME-SENSITIVE TARGETS

1-16. A *time-sensitive target* is a joint force commander validated target or set of targets requiring immediate response because it is a highly lucrative, fleeting target of opportunity or it poses (or will soon pose) a danger to friendly forces (JP 3-60). A time-sensitive target (TST) is a joint force commander (JFC) designated target or target type of such high importance to the accomplishment of the JFC mission

and objectives or one that presents such a significant strategic or operational threat to friendly forces or allies, that the JFC dedicates intelligence collection and attack assets to ensure success.

1-17. TSTs comprise a very small or limited number of planned targets due to the required investment of assets and potential disruption of planned execution, and are only those targets designated by the JFC and identified as such in the JFC guidance and intent. TSTs are normally executed dynamically; however, to be targeted successfully, they require considerable deliberate planning and preparation within the joint targeting cycle.

1-18. Service component commanders may designate high-priority targets that present significant risks to or opportunities for component forces and missions. These are generally targets that the Service component commander(s) have nominated to the JFC TST list, but were not approved as TSTs. This class of targets known as component critical targets may still require dynamic execution with cross-component coordination and assistance in a time-compressed fashion. The JFC and Service component commanders should clearly designate these targets prior to execution of military operations. Such targets will generally be prosecuted using dynamic targeting. These targets should receive the highest priority possible, just below targets on the JFC TST list.

SENSITIVE TARGETS

1-19. Certain targets require special care or caution in treatment because failure to engage them or to engage them improperly can lead to major adverse consequences. Examples include leadership targets (high-value individuals [HVI]) that must be handled sensitively due to potential political repercussions; targets located in areas with a high risk of collateral damage; and weapons of mass destruction facilities, where an attack can lead to major long term environmental damage. Such targets are often characterized as "sensitive" in one respect or another, without having the intrinsic characteristics, by definition, of a sensitive target. Nonetheless, the manner in which they are attacked is sensitive and may require coordination with and approval from the JFC or higher authorities. In most cases, it is best to establish criteria for engaging such targets in as much detail as possible during planning, before combat commences. (See figure 1-1.)
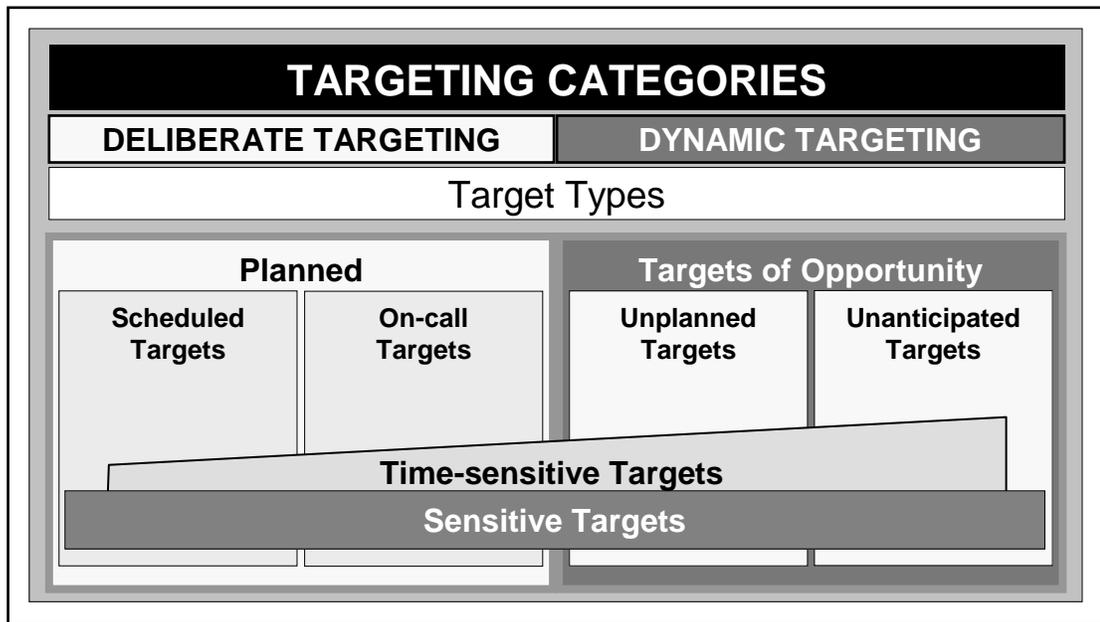
Figure 1-1. Targeting categories

SECTION II- METHODOLOGY OF TARGETING

TARGETING METHODOLOGY

1-20. Targeting and the D3A methodology is designed to be performed by the commander's staff in planning the engagement of targets. The methodology has four functions. Details of each function are presented in Chapter 2. The D3A methodology organizes the efforts of the commander and staff to accomplish key targeting requirements. Targeting is an outgrowth of the commander's decisions and establishes the requirements for the development of an effective information and intelligence collection effort. It helps the staff and targeting working group decide which targets must be acquired and engaged. Targeting working groups can vary in make-up and size as determined by the commander and standard operating procedures of the unit. Targeting working groups, their-duties and make-up are discussed throughout this publication. Targeting develops options used to engage targets. Options can be lethal or nonlethal, organic or supporting at all levels throughout the range of military operations as listed– maneuver, electronic attack, psychological, attack aircraft, surface-to-surface fires, air to surface, other information related capabilities, or a combination of these operations. In addition, D3A assists in the decision of who will engage the target at the prescribed time. It also assists targeting working groups determine requirements for combat assessment to assess targeting and attack effectiveness. (See Figure 1-2)
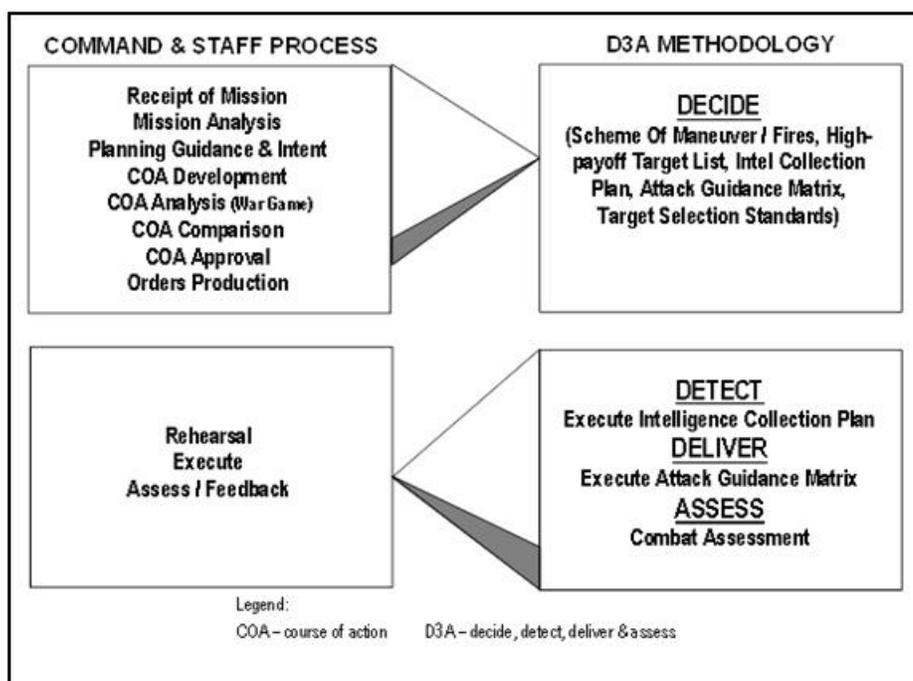
Figure 1-2. Targeting methodology

TARGETING AND THE MILITARY DECISIONMAKING PROCESS

1-21. The D3A methodology is an integral part of the MDMP. Targeting begins with the receipt of the mission and continues through operation order (OPORD) execution and assessment phases. Like MDMP, targeting is a leadership driven process. As the MDMP is conducted, targeting becomes more focused based on the commander's guidance and intent. Figure 1-3 illustrates the relationship between the D3A methodology and the MDMP along with products generated during targeting.
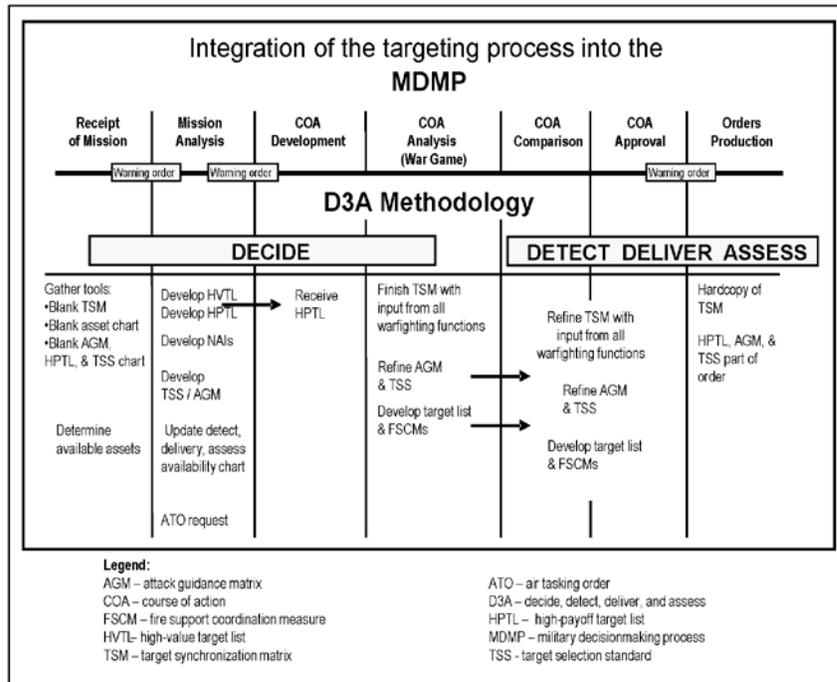
Figure 1-3. D3A methodology and the MDMP

D3A IN MILITARY DECISIONMAKING PROCESS

1-22. The decide function coincides with the MDMP from the receipt of mission through the issuing of the approved plan or order. The detect function is a continuing function that starts with the commanders approval of the plan or order and is accomplished during execution of the plan or order. Once detected, targets are attacked and assessed as required. Targeting working groups are used as a vehicle to focus the targeting process within specified time.

1-23. D3A methodology functions occur simultaneously and sequentially during the operations process. Decisions are made during the planning of future operations. Current operations simultaneously detect, deliver, and assess targets based on current targeting decisions.

Decide

1-24. The decide function is the most important and requires close interaction between the commander and the intelligence, plans, operations, fires cell, and servicing judge advocate. The staff officers must clearly understand the following:

- Unit mission.
- Threat vulnerabilities.
- Commander's intent.
- Commander's planning guidance.
- Rules of engagement.

1-25. With this information, the staff officers can prepare their respective running estimates. From the standpoint of targeting–the fire support, intelligence, information related capabilities, and operations estimates are interrelated and closely coordinated among each cell. Key staff products include target value analysis and the intelligence estimate from the targeting and intelligence officers. War gaming allows the deputy fire support coordinator (DFSCOORD) or fire support officer (FSO) to develop the decide function products.

Detect

1-26. The detect function is conducted during the execution of the OPORD. Target acquisition assets gather information and report their findings back to their controlling headquarters, which in turn pass pertinent information to the tasking agency. Some collection assets provide actual targets, while other assets must have their information processed to produce valid targets. Not all of the information reported would benefit the targeting effort, but it may be valuable to the development of the overall situation. The target priorities developed in the decide function are used to expedite the processing of targets. Situations arise when the engagement, upon location and identification, of a target is either impossible (for example out of range) or undesirable (outside of but moving toward an advantageous location for the attack). Critical targets that we cannot or choose not to attack in accordance with the attack guidance should be tracked to ensure they are not lost. Tracking suspected targets expedites execution of the attack guidance. Tracking suspected targets keeps them in view while they are validated. Planners and executers must keep in mind that assets used for target tracking may be unavailable for target acquisition.

Deliver

1-27. The deliver function's main objective is to attack targets in accordance with the attack guidance provided. The tactical solution (the selection of a weapon system or a combination of weapons systems) leads to a technical solution for the selected weapon. The technical solution includes the following:

- Specific attack unit.
- Type of ordnance.
- Time of attack.
- Coordinating instructions.

Assess

1-28. Commanders continuously assess the operational environment and the progress of operations, and compare them to their initial vision and intent. Commanders adjust operations based on their assessment to ensure objectives are met and the military end state is achieved. The commander and his staff assess the results of mission execution. If combat assessment reveals that the commander's guidance or conditions of operational success have not been met, detect and deliver functions of the targeting process must continue to focus on the targets involved.

1-29. The assessment process is continuous and directly tied to the commander's decisions throughout planning, preparation, and execution of operations. Staffs assist the commander by monitoring the numerous aspects that can influence the outcome of operations and provide the commander timely information needed for decisions. The commander's critical information requirements are linked to the assessment process by the commander's need for timely information and recommendations to make decisions. Planning for the assessment identifies key aspects of the operation that the commander is interested in closely monitoring, and where the commander wants to make decisions.

Targeting Interralationship

1-30. While the targeting tasks may be labeled differently at the joint level the same targeting tasks are being accomplished in D3A, as demonstrated in table 1-1. For more information on the Joint Targeting Process see JP 3-60.

Table 1-1. Crosswalk of operations, joint targeting cycle, D3A, and MDMP

Operations Process		Joint Targeting Cycle	D3A	MDMP	Targeting Task
Continuous Assessment	**Plan**	**1. The End State and Commanders Objectives**	**Decide**	**Mission Analysis**	・Perform target value analysis to develop fire support (including cyber electromagnetic and information related capablitiies) high-value targets. ・Provide fire support, information related capabilities, and cyber electromagnetic activities input to the commander's targeting guidance and desired effects.
		2. Target Development and Prioritization		**Course of Action Development**	・Designate potential high-payoff targets. ・Deconflict and coordinate potential high-payoff targets. ・Develop high-payoff target list. ・Establish target selection standards. ・Develop attack guidance matrix. ・Develop fire support and cyber electromagnetic activities tasks. ・Develop associated measures of performance and measures of effectiveness.
		3. Capabilities Analysis		**Course of Action Analysis**	・Refine the high-payoff target list. ・Refine target selection standards. ・Refine the attack guidance matrix. ・Refine fire support tasks. ・Refine associated measures of performance and measures of effectiveness. ・Develop the target synchronization matrix. ・Draft airspace control means requests.
		4. Commander's Decision and Force Assignment		**Orders Production**	・Finalize the high-payoff target list. ・Finalize target selection standards. ・Finalize the attack guidance matrix. ・Finalize the targeting synchronization matrix. ・Finalize fire support tasks. ・Finalize associated measures of performance and measures of effectiveness. ・Submit information requirements to battalion or brigade intelligence staff officer - S-2.
	Prepare	**5. Mission Planning and Force Execution**	**Detect**		・Execute Information Collection Plan. ・Update information requirements as they are answered. ・Update the high-payoff target list, attack guidance matrix, and targeting synchronization matrix. ・Update fire support and cyber electromagnetic activities tasks. ・Update associated measures of performance and measures of effectiveness.
	Execute	**6. Assessment** **D3A – decide, detect, deliver and assess**	**Deliver**		・Execute fire support and electronic attacks in accordance with the attack guidance matrix and the targeting synchronization matrix.
	Assess	**MDMP – military decisionmaking process**	**Assess**		・Assess task accomplishment (as determined by measures of performance). ・Assess effects (as determined by measures of effectiveness).

1-31. This common approach to targeting mirrors the D3A methodology functions presented in this manual. Each Service component conducts targeting applying their methodology within a joint framework established by the JFC. The organizational challenge for the JFC is to meld existing Service component architecture into an effective joint targeting working group for operational level targets without degrading their primary mission of targeting support to their respective components.

1-32. From the JFC perspective, a target is designated because its presence in the battle area has strategic or operational consequences. Subsequently, a decision made whether to engage the target involves asset or capability employment. The targets selected in this process must support the JFC campaign plan and contribute to the success of present and future major operations. The JFC relies on the tactical level commanders to orchestrate the execution by attacking those targets and target sets that meet the commander's success criteria. Control measures, such as a fire support coordination line, must be repositioned when needed to take full advantage of all assets available to the joint force. The JFC best influences the outcome of future tactical battles by setting the conditions for those battles, assigning missions and allocating resources to each of the Service components.

TARGETING PERSONNEL RESPONSIBILITY

1-33. The commander is responsible for the targeting effort. Intelligence, operations, and fire support staff officers form the core of the targeting working group at each level. The targeting working group has three primary functions in assisting the commander:

- Helps in synchronizing operations.
- Recommends targets to acquire and engage. The team also recommends the most efficient and available assets to detect and engage these targets.
- Identifies the level of combat assessment required. Combat assessment can provide crucial and timely information to allow analysis of the success of the plan or to initiate revision of the plan. See Chapter 2 for more details on combat assessment.

1-34. The targeting effort is continuous at all levels of command. Continuity is achieved through parallel planning by targeting working groups from corps through battalion task force. Targeting is not just a wartime function. This process must be exercised before battle if it is to operate effectively. The members of the targeting working group must be familiar with their roles and the roles of the other team members. That familiarity can only be gained through staff training

Chapter 2

Targeting Methodology

The purpose of targeting methodology is to integrate and synchronize all available capabilities with maneuver operations. This chapter explains the D3A methodology which is designed to enhance mission planning and targeting.

SECTION I- GENERAL TARGETING METHODOLOGY

GENERAL TARGETING METHODOLOGY

2-1. Effective targeting identifies the targeting options, both lethal and nonlethal, that support the commander's objectives. The D3A methodology facilitates the engagement of the right target with the right asset at the right time. Figure 2-1 is an example of how D3A is conducted continuously.
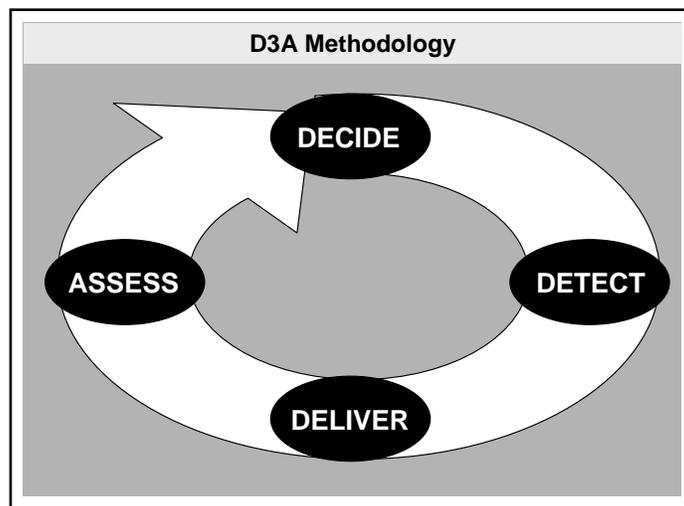
Figure 2-1, D3A methodology cycle

2-2. Targeting provides an effective method for matching the friendly force capabilities against enemy targets. Targets are addressed with either lethal, nonlethal, or a combination of lethal and nonlethal effects.

2-3. A very important part of targeting is the identification of potential fratricide situations and the necessary coordination measures to positively manage and control the attack of targets. These measures are incorporated in the coordinating instructions and appropriate annexes of the operation plan (OPLAN) or OPORD.

2-4. Targeting must keep up with the constant changing situation within the area of operations. The tools and products described in this chapter must be updated based on combat assessment. Remember also, that targeting is cyclic. It is very seldom that decisions are made without any information from a previous targeting cycle.

SECTION II- DECIDE, DETECT, DELIVER, ASSESS (D3A)

2-5. D3A consists of four functions:

- Decide which targets to engage.
- Detect the targets.
- Deliver the appropriate effects (conduct the operation).
- Assess the effects of the engagement(s).

DECIDE

2-6.   The decide function begins the targeting cycle. This step provides the overall focus and sets priorities and criteria for intelligence collection and engagement planning. The decide function draws heavily on the staff's knowledge of the enemy, (to include their tactics, culture, and ideology), a detailed intelligence preparation of the battlefield (IPB), and continuous assessment of the situation. Targeting priorities must be addressed for each phase or critical event of an operation. The decisions made are reflected in visual products. The products are as follows:

- The *high-payoff target list* is a prioritized list of high-payoff targets by phase of the operation (FM 3-09). A *high-payoff target* is a target whose loss to the enemy will significantly contribute to the success of the friendly course of action (JP 3-60). A high-payoff target (HPT) is a high-value target (HVT) that must be acquired and successfully engaged for the success of the friendly commander's mission. A *high-value target* is a target the enemy commander requires for the successful completion of the mission (JP 3-60).
- The Decide function helps build the information collection plan. HPTs are nearly always a priority intelligence requirement (PIR).
- Target selection standards address accuracy or other specific criteria that must be met before targets can be attacked.
- **The *attack guidance matrix* is a targeting product approved by the commander, which addresses the how and when targets are engaged and the desired effects.**

2-7.   The products of the decide function are briefed to the commander. Upon his approval, his decisions are translated into the OPORD.

INTELLIGENCE PREPARATION OF THE BATTLEFIELD

2-8.   IPB is a continuous process which analyzes the mission variables of mission, enemy, terrain and weather, troops and support available, time available, and civil considerations to analyze enemy doctrine and capabilities. IPB begins with analysis of enemy doctrine and capabilities in the area of operations. The IPB focuses on the terrain and the effects of weather on that terrain, to include tactics, techniques, and procedures that enemy forces prefer to employ. The products of IPB are, civil considerations, modified combined obstacle overlay, threat modes, threat capabilities, weather effects matrix, and event template matrix. These products are used to visualize the enemy characteristics, predict enemy intentions, and develop an enemy course of action (COA) with statements. These products assist in target value analysis and initial identification of potential HVT. Threat templates convert the threat characteristics into graphics. Situation graphics help in refining HVT for specific area of operations and enemy COA.

2-9.   Concurrent with development of the situation graphics are an examination of enemy decision points and critical nodes as a part of each COA. The examination shows what might happen if the enemy commander's plan fails and what actions make up his failure options. Evaluation of the enemy COA with statement leads to identification of critical enemy functions in each COA and the HVT associated with each function.

2-10. Applying IPB helps the commander to selectively apply and maximize combat power at critical points in time and space. It does this by describing the operating environment, how the natural environment affects friendly units and likely enemy COAs. Situational graphics support the development of event templates. Event templates help identify critical enemy activities. It also identifies any named area of interest (NAI) where specific enemy activities or events will help confirm or deny the adoption of a particular COA. See ATP 2-01.3 for additional details.

TARGET VALUE ANALYSIS AND WARGAMING

2-11. The intelligence staff and targeting officer evaluates and integrates the relevant mission variables and operational factors of the operational environment that affects both friendly and enemy operations. This coordination helps to develop the intelligence summary which contains HVT lists, and may include HVI lists. Target value analysis yields HVT for a specific enemy COA. Target value analysis involves a detailed analysis of enemy doctrine, tactics, equipment, organizations, and expected behavior for a selected COA. The target value analysis process identifies potential HVT sets associated with critical enemy functions that could interfere with the friendly COA or that are vital to enemy success.

2-12. Target spreadsheets (or target folders, as appropriate) identify the HVT in relation to a type of operation. The target spreadsheets give detailed targeting information for each HVT. The information on target spreadsheets and target sheets are used during the IPB and the war gaming processes. The targeting section within the analysis and control element (ACE) under the operational control of the assistant chief of staff, intelligence (G-2) incorporates all-source intelligence to develop both tools.

2-13. The commander and his staff analyze the criticality of friendly battlefield functions with regard to a specific COA. The best places to attack HPT become more refined during war gaming. These places are known as a target area of interest (TAI). A TAI is a point or area where the commander can acquire and engage HPTs. Decision points or decision time phase lines are used to ensure that the decision to engage or not to engage occurs at the proper time. Decision points and TAI are recorded on the, decision support template. The purpose of war gaming is to finalize individual running estimates and to develop all of the following:

- Scheme of maneuver.
- Scheme of fires.
- Friendly decision support template.

2-14. HVTs are identified and prioritized during the war gaming phase of planning. In addition, it identifies the subset of HVTs that must be acquired and attacked for the friendly mission to succeed. HVTs may be nominated as HPTs when these targets can be successfully acquired are vulnerable to attacks, and such an attack supports the commander's scheme of maneuver. Once identified and nominated, HPTs are grouped into a list identifying them for a specific point in the battle. The completed HPTL is submitted to the commander for approval. The approved HPTL becomes a formal part of targeting.

2-15. The DFSCOORD or FSO advises the operations officer on using available fire support weapons system and records the needs for fire support. The operations officer uses the war game to determine adequacy of fire support. Operations staff works directly with the intelligence section to ensure full use of fire support target acquisition assets in the information collection plan. Other key staff officers who are vital and should be consulted, consist of:

- The operations officer, air, or brigade aviation officer for airspace integration.
- Civil affairs and information officer for civil affairs and information related capabilities.
- Military information support officer.
- Logistics officer for supportability considerations.
- Engineer officer for mobility, counter mobility, survivability, and environmental considerations.
- Air defense artillery officer for air defense coverage.

2-16. Input from the rest of the staff achieves a complete analysis of the impact of all warfighting functions. This ensures the attack guidance matrix (AGM) is synchronized with the decision support template, and selection of HPT is supported by PIR and the information collection tasks.

TARGET SELECTION

2-17. The war game phase identifies HPTs and helps the commander synchronize collection assets on those HPTs. The ACE collection manager helps identify and the operations officer tasks the sensors needed for collection of the HPT. The collection manager will determine the best sensor and its availability by referencing the collection synchronization matrix. A detailed discussion of the collection synchronization matrix is contained in ATP 2-01.

HIGH-PAYOFF TARGET LIST

2-18. The HPTL identifies the HPTs by phases in the battle and order of priority. Other considerations include the following:

- The sequence or order of appearance.

- The ability to detect, identify, classify, locate, and track the target. (This decision must include sensor availability and processing timeline considerations.)

- The degree of accuracy available from the acquisition system(s).

- The ability to engage the target.

- The ability to achieve the desired effects on the basis of attack guidance.

2-19. Targets are prioritized according to the considerations above within specific time windows. The targeting working group recommends priorities for the targets according to its judgment and the advice of the fires cell targeting officer and the field artillery intelligence officer (FAIO). Target spreadsheets give a recommended priority and engagement sequence. If the target spreadsheet or war gaming departs from the commander's guidance, it is noted on the proposed HPTL to inform the commander of the conflict. The target category of the HPT is shown, either by name or by number, on the list. The category name and number are shown on the target spreadsheet. The number of target priorities should not be excessive. Too many priorities will dilute the intelligence collection acquisition and engagement efforts. The approved list is given to the operations, intelligence, and fires cell. It is used as a planning tool to determine attack guidance and to refine the collection plan. This list may also indicate the commander's operational need for battle damage assessment (BDA) of the specific target and the time window for collecting and reporting it.

> *Note.* Any format serves the purpose of a HPTL for linking targets with phases of battle.

2-20. One way to organize the HPTL is to group all HPTs into target sets that reflect the capabilities and functions the commander has decided to engage. Target sets are identified and prioritized for each phase of the operation. Within the sets, individual targets are rank ordered by target value, sequence of appearance, importance, or other criteria that satisfy the commander's desired effects. In this way, the targeting working group reduces, modifies, and reprioritizes HVTs while ensuring that HPTs support the concept of operations.

2-21. The commander's guidance may require changes, which should be annotated on the HPTL. The target name or number and description are placed on the list for specific HPTs in each category. Once the commander approves or amends the HPTL, it goes back to the targeting working group to help them develop the AGM and collection plan. See appendix D for a sample HPTL.

TARGET SELECTION STANDARDS

2-22. Target selection standards are criteria applied to enemy activity (acquisitions and battlefield information) and used in deciding whether the activity is a target. Target selection standards put nominations into two categories: targets and suspected targets. Targets meet accuracy and timeliness requirements for engagement. Suspected targets must be confirmed before any engagement. See Appendix D for a sample target selection standards worksheet. Units may develop their own worksheet format.

2-23. Target selection standards are based on the enemy activity under consideration and available weapon systems by using the following:

- Weapon system target location accuracy requirements (target location error [TLE]).
- Size of the enemy activity (point or area).
- Status of the activity (moving or stationary).
- Timeliness of the information.

2-24. Considering these factors, different target selection standards may exist for a given enemy activity based on different weapons system. For example, an enemy artillery battery may have a 150-meter TLE requirement for attack by cannon artillery and a 1 kilometer requirement for attack aircraft. Target selection standards are developed by the fires cell in conjunction with military intelligence personnel. Intelligence analysts use target selection standards to quickly determine targets from battlefield information and pass the targets to the fires cell. Weapon system managers such as fires cells, fire control elements, or fire direction centers use the target selection standards to identify targets for expeditious attack. Commands can develop standard target selection standards based on threat characteristics and doctrine matched with the standard available weapon systems.

2-25. Target selection standards worksheets are given to the intelligence officer by the fires cell. The FAIO uses Target selection standards to identify targets that are forwarded to a fires cell. Intelligence analysts evaluate the source of the information as to its reliability and accuracy, confirm that the size and status of the activity meet the target selection standards, and then compare the time of acquisition with the dwell time. Accurate information from a reliable source must be verified before declaring it a target if the elapsed time exceeds dwell time.

> *Note.* Dwell time is the length of time a target is doctrinally expected to remain in one location.

2-26. Some situations require intelligence assets to identify friendly or foe before approval to fire is given. HPT that meet all the criteria should be tracked until they are attacked in accordance with the AGM. Location of targets that do not meet target selection standards should be confirmed before they are attacked. The target selection standards can be depicted in a target selection standards matrix. See appendix D for a sample target selection standards matrix.

2-27. The matrix lists each weapon system that forwards targets directly to the fires cell, fire control element, or fire direction center. The effects of weather and terrain on the collection assets and on enemy equipment are considered. Target selection standards are keyed to the situation. However, the greatest emphasis is on the enemy situation, considering deception and the reliability of the source or agency that is reporting.

ATTACK GUIDANCE

2-28. Knowing target vulnerabilities and analyzing the probable effect an engagement will have on enemy operations allows a staff to propose the most efficient available engagement option. Key guidance is whether the commander wishes to disrupt delay, damage, or destroy the enemy. During war gaming, decision points linked to events, areas of interest, or points on the battlefield are developed. These decision points cue the command decisions and staff actions where tactical decisions are needed.

2-29. Based on commander's guidance, the targeting working group recommends how each target should be engaged in terms of the desired effects and engagement options. Desired effects are translated into automation system default values to more effectively engage targets.

2-30. The decision of what engagement means or system to use is made at the same time as the decision on when to acquire and engage the target. Coordination is required when deciding to engage with two or more means such as electronic attack, information related capabilities, and attack aviation.

2-31. The commander, with recommendations from the targeting working group, must approve the attack guidance. This guidance should detail the following:

- A prioritized HPTL.
- When, how, and desired effects of engagement.

- Any special instructions.
- BDA requirements.

2-32. This information is developed during the war game. Attack guidance applies to both planned targets and targets of opportunity. Accordingly, attack guidance may address specific or general target descriptions. Attack guidance is provided to weapons systems managers via the AGM.

ATTACK GUIDANCE MATRIX

2-33. The AGM include as a minimum:
- Specific HPT.
- Timing of engagement.
- How targets are engaged.
- Desired Effects.
- Remarks to include restrictions.

Note. A sample AGM is shown in appendix D.

High-Payoff Target Column

2-34. This column lists the HPTs identified during war gaming. These targets have priority for engagement.

When Column

2-35. Timing the engagement of targets is critical to maximizing the effects. During war gaming, the optimum time is identified and reflected in the WHEN column. The letter P indicates that the target should not be engaged now but should be planned for future firing or simply should be put on file. Immediate engagements the letter I take precedence over all others and are conducted even if weapon systems must be diverted from engagements already underway. The letter A means the target should be engaged when acquired.

2-36. The operations officer, fire support coordinator (FSCOORD), and brigade FSO must establish procedures within the main command post (CP) that allow for immediate engagement of targets.

How Column

2-37. The HOW column links the engagement means to the HPT. It is best to identify a primary and alternate engagement means of HPTs.

Effects Column

2-38. Effects column refers to the target engagement criteria. The targeting working group should specify engagement criteria according to the commander's general guidance. Target engagement criteria should be given in quantifiable terms.

Remarks Column

2-39. This column should note which targets should not be engaged in certain tactical situations (for example, targets not to be engaged if the enemy is withdrawing). Some examples of how this column should be used are:
- Collateral Damage Estimate Limitations
- Note accuracy or time constraints.
- Note required coordination.
- Limitations on the amount or type of ammunition.
- Any need for BDA.

2-40. As the operation progresses the AGM may change. The AGM is a tool that must be updated based on the changing enemy situation. The AGM should be discussed and updated during routine staff planning meetings. Consider a separate AGM for each phase of the concept of operations.

FORMATS

2-41. The formats for the HPTL, target selection standards, and AGM presented in the preceding paragraphs are examples only. Targeting personnel must understand all the considerations that are involved in building these targeting tools. However, experienced staffs may prefer to develop their own formats tailored for their situation.

DETECT

2-42. Detect is the next critical function in targeting. The operations officer at all levels is responsible for directing the effort to detect HPTs identified in the decide function. In order to have the ability to identify the specific who, what, when, and how for target acquisition, the operations officer must work closely with the:

- The intelligence officer.
- ACE.
- Information operations officer.
- FAIO.
- Targeting officer.
- FSO.

2-43. Targets are detected and tracked by the maximum use of all available assets. The G-2 or S-2 must focus the intelligence acquisition efforts on the designated HPTs and PIRs. The collection manager considers the availability and capability of all collection assets. The intelligence officer translates the PIR and intelligence requirement into specific information requirements and specific orders and requests. If possible, he arranges direct dissemination of targeting information from the collector to the targeting cell or targeting intelligence to the fires cell.

2-44. Intelligence factors of the operational environment that affect the populace require particular attention. Such intelligence is important for developing political, social, and economic programs. Intelligence personnel continuously analyze large quantities of all-source intelligence reporting to determine:

- Threat validity.
- Actual importance of potential targets.
- Best means to engage the target.
- Expected effects of engaging the targets (which will guide actions to mitigate negative effects).

DETECTION PROCEDURES

2-45. HPTs must be detected in a timely, accurate manner. Clear and concise tasks must be given to the reconnaissance units or surveillance systems that can detect a given target. Mobile HPTs must be detected and tracked to maintain a current target location. Target tracking is inherent to detection. Tracking priorities are based on the commander's concept of the operation and targeting priorities. The fires cell tells the G-2 or S-2 the degree of accuracy required and dwell time for a target to be eligible for engagement. The G-2 or S-2 must match accuracy requirements to the TLE of the collection systems. If the target type and its associated signatures (electronic, visual, thermal, and so forth) are known, the most capable collection asset can be directed against the target. The asset can be placed in the best position according to estimates of when and where the enemy target will be located.

2-46. As the assets collect information for target development, it is forwarded to the intelligence analysts of the ACE. They use the information in performing situation and target development. When the analysts identify a target specified for engagement, it is passed to the fires cell. The fires cell executes the attack

guidance against the target. Close coordination among the intelligence staff and the fires cell is essential and is facilitated by the FAIO.

THE INFORMATION COLLECTION MATRIX

2-47. The information collection matrix is a product used by the intelligence officer to ensure that collection tasks are tied to scheme of maneuver in time and space, effectively linking reconnaissance and surveillance to maneuver and effects.

ESSENTIAL TARGET INFORMATION

2-48. Targets and suspected targets may be passed to the targeting working group by a number of means. It is important that the essential information be passed for proper analysis and engagement to take place. As a minimum, the target report must include the following:

- Reporting agency.
- Date time group of acquisition by the sensor.
- Description of the activity.
- Size of the target.
- Target location and altitude.
- TLE.
- Dwell time.
- Status (stationary or moving).

2-49. The date time group is important as the dwell time of the target is analyzed. The dwell time of the target determines whether to engage based on the likelihood of the target moving.

2-50. The target description and size are compared with the AGM. This information is used to determine the following:

- Engagement means.
- Intensity of attack.
- Number of assets to be committed.
- Other considerations such as collateral damage estimation, target mensuration only, and weaponeering.

2-51. See appendix D for a sample target report.

TARGET DEVELOPMENT

2-52.   *Target development* is the systematic examination of potential target systems and their components, individual targets, and even elements of targets to determine the necessary type and duration of the action that must be exerted on each target to create an effect that is consistent with the commander's specific objectives (joint publication [JP] 3-60). Target development includes functions such as target research, nomination, deconfliction, aimpoint recommendation, target materials production, and collateral damage estimation. Target development generally results in four products: target development nominations, target folders, collection and exploitation requirements, and target briefs. Detailed analysis should characterize the function, criticality, and vulnerabilities of each potential target, linking targets back to targeting objectives and measures of effectiveness. Target development includes target vetting and target validation.

TARGET VETTING

2-53.   *Vetting* is a part of target development that assesses the accuracy of the supporting intelligence to targeting (JP 3-60). Vetting is a key component of the target development process to establish a reasonable level of confidence in a candidate target's functional characterization. In target vetting, the intelligence officer coordinates an intelligence community review of the target data for accuracy of the supporting intelligence. An assessment of the supporting intelligence will include a minimum of target identification, significance, collateral data estimation, geospatial or location issues, impact on the enemy or friendly

forces, impact of not conducting operations against the target, environmental sensitivity, and intelligence gain or loss concerns. Vetting does not include an assessment of compliance with the law of war or rules of engagement.

TARGET VALIDATION

2-54.   *Validation* is a part of target development that ensures all vetted targets meet the objectives and criteria outlined in the commander's guidance and ensures compliance with the law of war and rules of engagement (JP 3-60). Targets are validated against multinational concerns in a bilateral environment. Target vetting and validation should be revisited as new intelligence becomes available or the situation changes. Target validation is done by targeting personnel, in consultation with the planners, servicing advocate general, and other experts and agencies, as required.

2-55.   Target validation asks such questions as:
- Does the desired target effect contribute to achieving one or more of the commander's, objectives, desired operational effects, or supporting sub tasks?
- Does the desired target effect support the end state?
- Does the desired target effect comply with the commander's guidance and intent?
- Is engaging the target lawful? What is the law of war and rules of engagement considerations?
- Does the target contribute to the enemy capability and will to wage war?
- Is the target (still) operational? Is it (still) a viable element of a target system? Where is the target located?
- Will striking the target arouse political or cultural "sensitivities?"
- How will striking the target affect public opinion (enemy, friendly, and neutral)?
- Are there any facilities or targets on the no-strike list or restricted target list collocated with the target being validated?
- What is the relative potential for collateral damage or collateral effects, to include casualties? Consider collateral damage concerns in relation to law of war, rules of engagement, and commander's guidance.
- What psychological impact will operations against the target have on the adversary, indigenous populations, friendly forces, and multinational partners?
- Is it feasible to engage this target at this time? If not, could it be targeted at another time? What is the risk?
- Would engaging the target generate significant environmental impacts or arouse environmental sensitivities?
- Will engaging the target negatively affect friendly operations due to current or planned friendly exploitation of the target?
- How will actions taken against the target impact other operations?

2-56.   Figure 2-2 on page 2-10 provides several examples of both desirable and undesirable effects to be considered during target validation.

Figure 2-2. Target validation considerations

DELIVER

2-57. The deliver function of the targeting process executes the target engagement guidance and supports the commander's battle plan once the HPT has been located and identified.

ENGAGEMENT OF TARGETS

2-58. The engagement of targets must satisfy the engagement guidance developed in the decide function. Target engagement requires several decisions and actions. These decisions fall into two categories: tactical and technical.

2-59. Tactical decisions determine the:
- Time of the engagement.
- Desired effect, degree of damage, or both.
- Asset to be used.
- Potential for collateral damage.

2-60. These decisions result in the physical engagement of the target.

TACTICAL DECISIONS

Time of Engagement

2-61. The time of engagement is determined according to the type of target: planned target or target of opportunity. Time of engagement is a consideration in the effect that will be achieved on the target. The

decision maker needs to weigh the operational risk of tactical patience balanced with the immediacy of the directed action in the attack guidance matrix.

Targets

2-62. Current operations anticipate the enemy and friendly conditions for target engagement. Some targets will not appear as anticipated. The detection and tracking of enemy activities and associated friendly maneuver with the target trigger the target engagement. Once the designated activity is detected the targeting working group does the following:

- The intelligence officer or operations officer verifies the enemy activity as the planned target to be engaged. Monitoring decision points to include NAIs and TAIs associated with HPTs.
- The G-2 validates the target by conducting a final check of the reliability of the source and the accuracy (time and location) of the target. Then he passes the target to the fires cell.
- The current operations officer checks the rules of engagement and if necessary with the operational law personnel to determine the legality of the target.
- The current operations officer determines if the delivery means planned is available and still the best weapon for the engagement.
- The G-2 alerts the appropriate assessment asset responsible for BDA (when applicable).

Targets of Opportunity

2-63. Targets of opportunity are processed the same as planned targets. Targets of opportunity are first evaluated to determine when, or if, they should be engaged. The decision to engage targets of opportunity follows the engagement guidance and is based on a number of factors such as the:

- Activity of the target.
- Dwell time.
- Criticality of target compared to other targets being processed for engagement.

2-64. If the decision is made to engage immediately, the target is processed further. The availability and capabilities of assets to engage the target are assessed. If the target exceeds the capabilities or availability of the unit delivery asset, the target should be sent to a higher headquarters for immediate engagement. If the decision is to defer the engagement, then continue tracking, determine decision point(s) for engagement, and modify collection tasking as appropriate.

Desired Effects

2-65. Desired effects may result in a change in attitude, the will to fight, or the damage or casualties to personnel or material that a commander desires to achieve.

2-66. Effects can only be properly assessed by a trained observer or an analyst. It is important that each target has a primary and alternate observer. Each observer must understand the desired effects to include the when and for how long they are required.

Delivery Systems

2-67. The last tactical decision to be made is the selection of the appropriate delivery system. For planned targets, this decision is made during the decide function of the targeting process. A check must be made to ensure that the selected delivery system is still available and can conduct the engagement. If not, the targeting working group must determine the best delivery system available to engage the target.

2-68. A key part of determining the appropriate method of engagement is weaponeering. *Weaponeering* is defined as the process of determining the quantity of a specific type of lethal or nonlethal means required to create a desired effect on a given target (JP 3-60). Weaponeering also considers such things as enemy actions (the effects of actions and countermeasures), munition delivery errors and accuracy, damage mechanism and criteria, probability of kill, weapon reliability, and trajectory. The commander's intent and end state, desired effects, tasks, and guidance provide the basis for weaponeering assessment activities. Targeting personnel quantify the expected results of fires against prioritized targets to produce desired

effects. Since time constraints may preclude calculations of potential effects against all targets, calculations should proceed in a prioritized fashion that mirrors the HPTL.

2-69. The weaponeering process is divided into several general steps and is not tied to a specific methodology or organization. The steps are not rigid and may be accomplished in different order or combined. The steps of the weaponeering process are:

- Identify collection requirements.
- Obtain information on friendly forces.
- Determine target elements to be analyzed.
- Determine damage criteria.
- Determine weapons effectiveness index.
- Determine aim points and impact points.
- Evaluate weapon effectiveness.
- Prepare preliminary documentation.
- Review collection requirements.

2-70. Collateral damage estimation is a methodology that assists the commander in staying within the law of war and rules of engagement. The law of war requires:

- Reasonable precautions to ensure only legitimate military objects are targeted.
- Combatants to refrain from intentionally targeting civilian or noncombatant populations or facilities.
- Anticipated civilian or noncombatant injury or loss of life and damage to civilian or noncombatant property incidental to engagements must not be excessive in relation to the expected military advantage to be gained.

2-71. Failure to observe these obligations could result in disproportionate negative effects on civilians and noncombatants and be considered a law of war violation. Furthermore, United States leadership and the military could be subject to global criticism, which could adversely affect achievement of current and future military objectives and national goals.

2-72. During targeting the staff has the responsibility to mitigate the unintended or incidental risk of damage or injury to the civilian populace and noncombatants, military personnel, structures in the immediate area, targets that are on the no-strike, restricted target list, livestock, the environment, civil air, and anything that could have a negative effect on military operations. This will assist the commander in weighing risk against military necessity and in assessing proportionality within the framework of the MDMP.

2-73. Taking into account the weaponeering for a given target, the collateral damage estimation level 2 (see CJCSI 3505.01B) provides the assessment of whether a target meets the minimum requirement (criteria and approving authority) for employment of surface-to-surface scalable fires. A qualified individual with a current certification helps the commander and staff to evaluate collateral risk against targets during planning and the execution phases.

2-74. One method of mitigating collateral damage is reducing TLE by conducting target coordinate mensuration. Mensuration is the application of mathematical principles to a two dimensional surface in order to accurately determine the most accurate location of a target on all three planes of a Cartesian surface. Correlating the expected target location to a highly refined coordinate reduces the TLE and provides a accurate aimpoint that can be engaged with only the force necessary to achieve the desired effect.

2-75. The targeting working group determines the delivery means subject to the maneuver commander's approval. All available engagement assets should be considered. Engaging targets should optimize the capabilities of:

- Light and heavy ground forces.
- Army aviation.
- Field artillery.

- Mortars.
- Naval gunfire.
- Close air support (CAS) and air interdiction.
- EW.
- Military information support operations.
- Information related capabilities.
- Civil affairs teams.

2-76. The availability and capabilities of each resource is considered using the following:

- Desired effects on the target.
- Degree of risk in the use of the asset against the target.
- Impact on friendly operations.

TECHNICAL DECISION

2-77. Once the tactical decisions have been made, the S-3 directs the appropriate to engage the target. The fires cell provides the asset manager with the following:

- Selected time of engagement.
- Desired effects.
- Any special restraints or requests for particular munitions types.

2-78. The asset or systems managers, for example field artillery battalion S-3, psychological officer, air liaison officer (ALO), aviation, and brigade naval gunfire liaison officer, determine if their system can meet the requirements. The fires cell is notified when a delivery system or asset is unable to meet the requirements. There are various reasons a delivery system or asset may not be able to meet the requirements which may include the following:

- Systems or asset not available at the specified time.
- Required munitions or asset not available.
- Targets out of range.

2-79. The fires cell must decide if the selected delivery system or asset should engage under different criteria or if a different delivery system or asset should be used.

ASSESS

2-80. Commanders continuously assess the operational environment and the progress of operations, and compare them to their initial vision and intent. Commanders adjust operations based on their assessment to ensure objectives are met and the military end state is achieved.

2-81. The assessment process is continuous and directly tied to the commander's decisions throughout planning, preparation, and execution of operations. Staffs help the commander by monitoring the numerous aspects that can influence the outcome of operations and provide the commander timely information needed for decisions. The commander's critical information requirement is linked to the assessment process by the commander's need for timely information and recommendations to make decisions. Planning for the assessment process identifies key aspects of the operation that the commander is interested in closely monitoring, and where the commander wants to make decisions.

2-82. Figure 2-3 on page 2-14 shows how assessment occurs at all levels and across the range of military operations. Even in operations that do not include combat, assessment of progress is just as important. As a rule, the level at which a specific operation, task, or action is directed should be the level at which such activity is assessed. To do this, commanders and their staffs consider assessment ways, means, and measures during planning, preparation, and execution. This properly focuses assessment and collection at each level, reduces redundancy, and enhances the efficiency of the overall assessment process.
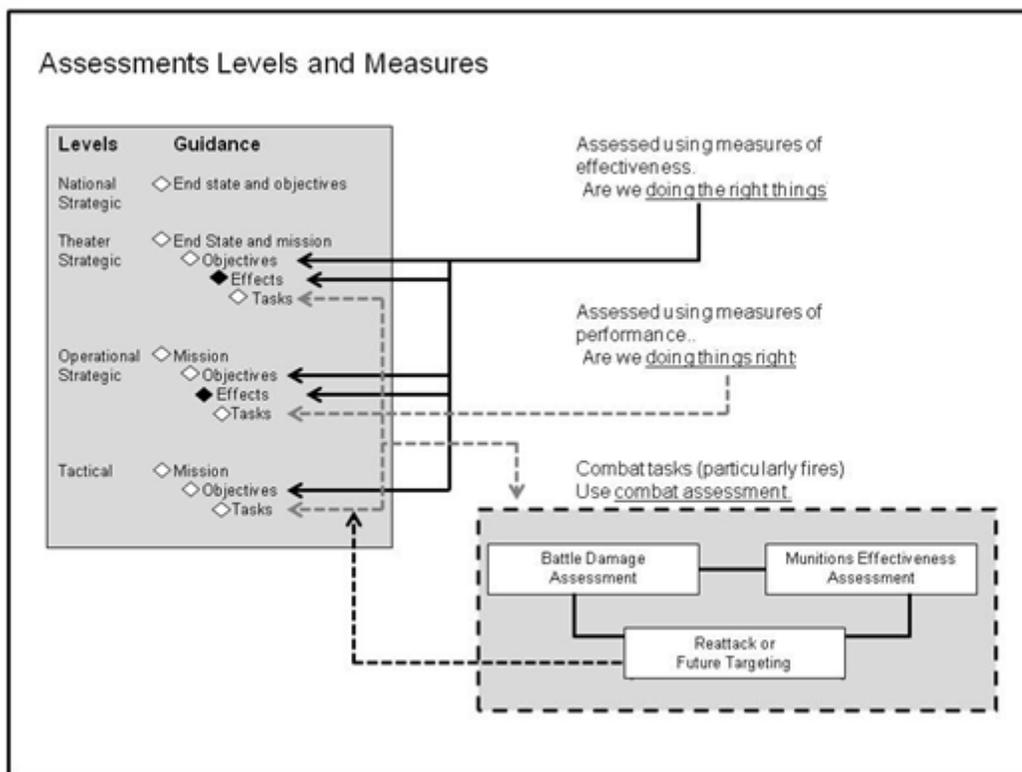
Figure 2-3. Assessment levels and measures

COMBAT ASSESSMENT

2-83. Combat assessment is the determination of the effectiveness of force employment during military operations.

2-84. Combat assessment is composed of three elements:

- BDA.
- Munitions effectiveness assessment.
- Reengagement recommendation.

2-85. In combination, BDA and munitions effectiveness assessment inform the commander of effects against targets and target sets. Based on this information, the enemies' ability to make and sustain war and centers of gravity are continuously estimated. During the review of the effectiveness of operations, redirect recommendations are proposed or executed.

Battle Damage Assessment

2-86. BDA includes known or estimated enemy unit strengths, degraded, neutralized, or destroyed enemy weapon systems, and all known captured, wounded, or killed enemy personnel during the reporting period. BDA in targeting pertains to the results of lethal and nonlethal engagements on targets designated by the commander. Producing BDA is primarily an intelligence responsibility, but requires coordination with operational elements to be effective. BDA requirements may be translated into PIR. BDA accomplishes the following purposes:

- Commanders use BDA to get a series of timely and accurate snapshots of effects on the enemy. Assessment provides commanders an estimate of the enemy's combat effectiveness, capabilities,

and intentions. This helps the staff determine when, or if, their targeting effort is accomplishing their objectives.

● As part of targeting, BDA helps to determine if a reengagement is necessary. The information is used to allocate or redirect weapon systems to make the best use of available combat power.

2-87. The need for BDA for specific HPTs is determined during the decide function of targeting. BDA requirements should be recorded on the AGM and the information collection plan. The commander's decision must be made with the understanding that an asset used for BDA may not be available for target development and acquisition. BDA information is received and processed by the ACE, and the results of engagement are analyzed in terms of desired effects. The results are disseminated to the targeting working group. The targeting working group must keep the following BDA principles in mind:

● BDA must measure things that are important to commanders.
● BDA must be objective. The intelligence officer should verify BDA received from another echelon if time permits. Intelligence officers strive to identify and resolve discrepancies between the BDA analysts at different headquarters at all echelons.
● The degree of reliability and credibility of the assessment relies largely upon collection resources. The quantity and quality of collection assets influence whether the assessment is highly reliable (concrete, quantifiable, and precise) or has low reliability (best guess). The information collection manager plans and coordinates organic and nonorganic collection assets to obtain the most reliable information when conducting BDA for each HPT.

2-88. Each BDA has three components. They are:

● Physical damage assessment.
● Functional damage assessment.
● Target system assessment.

Physical Damage Assessment

2-89. Physical damage assessment estimates the quantitative extent of physical damage through munitions blast, fragmentation, and fire damage effects to a target. This assessment is based on observed or interpreted damage.

Functional Damage Assessment

2-90. Functional damage assessment estimates the effect of engagement on the target to perform its intended mission compared to the mission objective established against the target. This assessment is inferred based on all-source intelligence and includes an estimate of the time needed to replace the target function. A functional damage assessment is a temporary assessment (compared to target system assessment) used for specific missions.

Target System Assessment

2-91. Target system assessment is a broad assessment of the overall impact and effectiveness of all types of engagement against an entire target system capability; for example, enemy air defense artillery systems. It may also be applied against enemy unit combat effectiveness. A target system assessment may also look at subdivisions of the system compared to the commander's stated mission objectives. It is a relatively permanent assessment (compared to a functional damage assessment) that will be used for more than one mission.

2-92. BDA may take different forms besides the determination of the number of casualties or the amount of equipment destroyed. Other information of use to the targeting working group includes the following:

● Whether the targets are moving or hardening in response to the engagement.
● Changes in deception efforts and techniques.
● Increased communication efforts as the result of jamming.
● Whether the damage resulting from an engagement is affecting the enemy's combat effectiveness as expected.

2-93. Damage assessments may also be passive by compiling information in regards to a particular target or area. An example is the cessation of fires from an area. If BDA is to be made, the targeting working group must give information collection systems adequate warning for sensor(s) to be directed at the target at the proper time.

2-94. BDA results may change plans and earlier decisions. The targeting working group must periodically update the decisions made during the decide function concerning the following:

- IPB products.
- HPTL.
- Target selection standards.
- AGM.
- Information collection plan.
- OPLAN.

Munitions Effectiveness Assessment

2-95. The operations officer, in coordination with the fires cell and targeting working group, conducts munitions effectiveness assessment concurrently and interactively with BDA, as a function of combat assessment. Munitions effectiveness assessment is an assessment of the military force in terms of the weapon system and munitions effectiveness. Munitions effectiveness assessment is conducted using approved weaponeering software and provides the basis for recommendations to increase the effectiveness of:

- Methodology.
- Tactics.
- Weapon systems.
- Munitions.
- Weapon delivery parameters.

2-96. The targeting working group may recommend modifying commander's guidance concerning:

- Unit basic load.
- Required supply rate.
- Controlled supply rate.

Reengagement Recommendation

2-97. Failure to achieve BDA, or failure to achieve necessary effects as a result of BDA, requires a decision from the commander as to whether to continue as planned. The targeting team and current operations must assess operational risks associated with the HPT. They provide options to mitigate the risks. One option is to reengagement. Based on the BDA and munitions effectiveness assessment analysis, the intelligence officer in conjunction with the FSCOORD or DFSCOORD and operations officer consider the level to which objectives have been achieved and make recommendations to the commander. Reengagement and other recommendations should address objectives relative to:

- Targets.
- Target critical elements.
- Target systems.
- Enemy combat force strengths.
- Friendly maneuver.

ASSESSMENT METRICS AND MEASUREMENTS

Assessment Metrics

2-98. Metrics can be objective (using sensors or personnel to directly observe damage inflicted) or subjective (using indirect means to ascertain results), depending on the metric applied to either the

objective or task. Both qualitative and quantitative metrics should be used to avoid unsound or distorted results. Metrics can either be inductive (directly observing the operational environment and building situational awareness cumulatively) or deductive (extrapolated from what was previously known of the threat and operational environment). Success is measured by indications that the effects achieved are influencing activity in desired ways among various target systems.

Measurement Types

2-99. The assessment process uses selected measures of performance (MOP) and measures of effectiveness (MOE) to evaluate progress toward task accomplishment, effects creation, and objective achievement. Well devised measures can help the commanders and staffs understand the causal relationship between specific tasks and desired effects (JP 3-60). Figure 2-4 provides an example of assets that may be available when conducting D3A methodology.
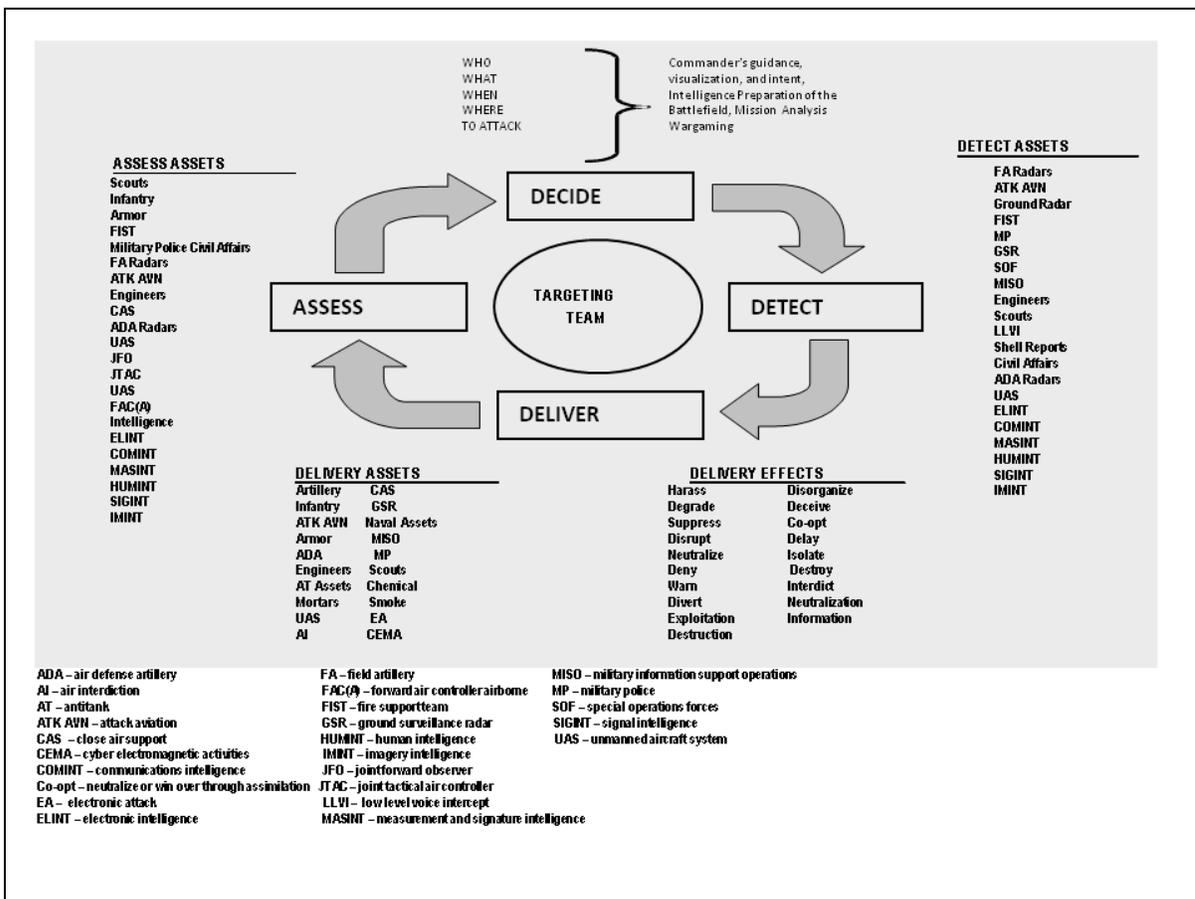
Figure 2-4. D3A methodology and assets

Measures of Performance

2-100. MOP answers the question such as are we doing things right and are the criteria for measuring task performance or accomplishment defined. MOP is quantitative, but can apply qualitative attributes to accomplish the task. Measurements are used in most aspects of combat assessment, since it typically seeks specific, quantitative data or a direct observation of an event to determine accomplishment of tactical tasks. MOP has relevance for noncombat operations such as tons of relief supplies delivered or noncombatants evacuated. Tactical level assessment typically uses MOP to measure task accomplishment (JP 3-60).

2-101. MOP helps answer questions like, "was the action taken, were the tasks completed to standard, or how much effort was involved?" Regardless of whether there was or was not a tactical, immediate effect, "did the assigned force execute the 'fires,' 'maneuver,' or 'information related capabilities' actions as

required by the specified or implied task?" MOP is used by the commander to assess whether his directives were executed by subordinate units as intended or if the units were capable of completing the specified action. Typical measures might include the following:

- Did the designated unit deliver the correct ordinance?
- Was a sufficient quantity of leaflets dropped to cover the target: was the message understood as intended: and did they reach the intended target?
- How many potholes were filled and include the time taken to complete the task?
- How much potable water was delivered to the village?

Measures of Effectiveness

2-102.   Assessment at the operational and strategic levels typically is broader than at the tactical level and uses MOEs that support strategic and operational mission accomplishment. Strategic- and operational-level assessment efforts concentrate on broader tasks, effects, objectives, and progress toward the end state. MOE answers the question, "are we doing the right things?" and are used to assess changes in system behavior, capability, or the operational environment. They are tied to measuring the attainment of an end state, achievement of an objective, or creation of an effect. They do not measure task accomplishment or performance. While MOE may be harder to derive than MOP for a discrete task, they are nonetheless essential to effective assessment (JP 3-60).

2-103.   MOE indicates progress toward attainment of each desired effect or indicate the avoidance of an undesired effect. MOE is a direct form of measurement, like an eyewitness account of a bridge span being down; some may be more circumstantial indicators, such as measurements of traffic backed up behind a downed bridge. MOE is typically more subjective than MOP but can be crafted as either qualitative or quantitative indicators to reflect a trend as well as show progress relative to a measurable threshold.

Characteristics of Metrics

2-104.   Assessment metrics should be relevant, measurable, responsive, and resourced so there is no false impression of task or objective accomplishment. Both MOP and MOE can be quantitative or qualitative in nature, but meaningful quantitative measures are preferred because they may be less susceptible to subjective interpretation (JP 3-60).

Relevant

2-105.   MOP and MOE should be relevant to the task, effect, operation, the operational environment, the desired end state, and the commander's decisions and objectives. This criterion helps avoid collecting and analyzing information that is of no value to a specific operation. It also helps ensure efficiency by eliminating redundant efforts.

Measurable

2-106.   Assessment measures should have qualitative or quantitative standards they can be measured against to avoid unsound or distorted results. To measure change effectively, a baseline measurement should be established prior to execution to facilitate accurate assessment throughout the operation.

Responsive

2-107.   Assessment processes should detect situation changes quickly enough to enable effective response by the staff and timely decisions by the commander to meet his objectives. Assessors should consider the time required for an action or actions to take effect within the operational environment and for indicators to develop. Many actions require time to implement and may take even longer to produce a measurable result.

Resourced

2-108.   To be effective, the assessment process must be adequately resourced. Staffs should ensure resource requirements for collection efforts and analysis are built into plans and monitored. An effective

assessment process can help avoid duplication of tasks and avoid taking unnecessary actions, which in turn can help preserve military power.

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Chapter 3

Corps and Division Targeting

Targeting at corps and division level may be at the operational or tactical levels of war. It involves commanders and staff officers conducting D3A methodology in support of tactical operations.

SECTION I- FIRES CELL

3-1.   The primary action agency for targeting at the corps and division level is the fires cell. The fires cell coordinates available weapon systems that provide Army indirect fires, joint fires, electronic attacks and associated targeting. The fires cell implements the commander's intent through lethal and nonlethal engagements on enemy systems and capabilities.

3-2.   The fires cell uses the D3A methodology and manages the targeting cycle. At a minimum, the fires cell will be responsible for indentifying targets for inclusion in the joint targeting process and must understand the targeting deadlines and how to influence the process to achieve the corps or division commander's objectives.

3-3.   The fires cell synchronizes all fires and directs the engagement of targets by fire support assets. The fires cell coordinates the use of airspace through the airspace element. It coordinates current operations air support requirements through the air support operations center and future operations air support requirements through the division tactical air control party (TACP). When designated the senior tactical echelon the corps or division fires cell may coordinate directly with the battlefield coordination detachment.

3-4.   There are 2 fires cells in the corps and division, one cell at the main CP and another at the tactical CP. The fires cell at the main CP includes:
- Headquarters and Fires Section.
- Fires current operations integration cell.
- Electronic Warfare (EW) section.
- Field artillery intelligence officer.

3-5.   For more information on the role of the fires cell see FM 3-09.

FIRES SECTION

3-6.   The fires section provides the FSCOORD (the division artillery or field artillery brigade commander) the ability to synchronize joint, interagency, multi-national assets, fire support, and sensor management of counterfire radar assets. It provides input to the information collection plan, information collection synchronization matrix, and the targeting process.

3-7.   Specific targeting functions include:
- Synchronize joint, interagency, and multi-national assets.
- TST nomination, management, and execution.
- Conduct target development.
- Conduct target coordinate mensuration.
- Conduct munitions effects analysis (weaponeering).
- Conduct collateral damage estimation.
- Conduct target management.
- Review and comply with rules of engagement.

- Develop and maintain the HPTL.
- Monitor and nominate targets to the restricted target list and no-strike list.
- Consolidate, prioritize, and nominate targets for inclusion in the joint integrated prioritized target list.
- Develop target selection standards.
- Provide input to collection plan; synchronizing reconnaissance and surveillance assets with designated targets.
- Integrate and synchronize fire support and cyber-electromagnetic activities into D3A.
- Chair candidate target list review board.

3-8. If the corps or division headquarters becomes the Army forces, joint task force, or joint force land component commander (JFLCC) headquarters, the fires element may also be required to:

- Interface with battlefield coordination detachment and higher joint fires element.
- Recommend JFLCC assets for the joint force commander's (JFC) allocation.
- Develop JFLCC priorities, timing, and effects for air interdiction within the joint operational area.
- Develop JFLCC targeting guidance and priorities.
- Develop the JFLCC command target lists and fire support coordination measures (FSCM).
- Execute both the joint targeting coordination board and working group.

FIRES CURRENT OPERATIONS INTEGRATION CELL

3-9. This cell executes and integrates current operations, and prepares and sets conditions necessary for future operations simultaneously.

FIELD ARTILLERY INTELLIGENCE OFFICER

3-10. As a participant in the division, corps, and joint targeting process, the FAIO coordinates with corps and division internal and external intelligence elements to provide input to the development, nomination, and prioritization of targets. The FAIO nominates targets to the fires cell that are provided by the all source collection element.

ELECTRONIC WARFARE SECTION

3-11. The EW section serves as the principal planning section on the corps or division staff with respect to electronic warfare planning involving the use of electromagnetic and directed energy to control the electromagnetic spectrum or to engage the enemy. The section plans, coordinates, integrates, deconflicts, and assesses the use of physical attack, electronic attack, EW support, computer network attack, and computer network exploitation for current and future operations. These capabilities are intended to degrade, destroy, and exploit an enemy's ability to use the electromagnetic spectrum, computers, and telecommunication networks. For more information see ATP 3-36.

TACTICAL COMMAND POST FIRES ELEMENT

3-12. Coordinated fires at the corps tactical CP. Specific targeting functions include:

- Conduct lethal and nonlethal engagements, assess, and provide reengagement recommendations.
- Coordinate with movement and maneuver cell.
- Synchronize joint, interagency, multinational assets.
- Interface with the battlefield coordination detachment and higher headquarters joint fires element.
- Coordinate with other components.
- Coordinate EW activities.

JOINT AIR GROUND INTEGRATION CENTER

3-13. The Joint Air Ground Integration Center is designed to fully support and enable division-level current operations through the rapid execution and clearance of fires and airspace. It is a modular and scalable center designed to integrate and synchronize fires and airspace control in the division area of operations in accordance with guidance received from the division commander, joint force component commander, and airspace control authority (ACA). It is physically located in the division current operations integration cell. For more information on the Joint Air Ground Integration Center see ATP 3-91.1.

SECTION II- REQUIREMENTS FOR SUCCESSFUL TARGETING

3-14. The operating environment and targeting capabilities influence the D3A methodology. With evolving security threats, each corps and division staff is concerned with several contingency plans. High-value targets (HVT) and high-payoff targets (HPT) are developed for plans that are regional and for which adequate intelligence is available. In addition, for planning purposes, each contingency has an associated list of forces that contains listings of available nonorganic collection and delivery assets.

3-15. Targeting selects targets and matches the appropriate response to them. Targeting is an integral part of the way the Army solves problems. Both the joint targeting cycle and the D3A methodology complement the MDMP. The D3A methodology is merely a mechanism for grouping the targeting tasks which must occur.

3-16. The corps targeting working group is a planner and an executor of targeting. It has the assets needed to see, plan, and execute targeting. To engage the enemy, it involves the coordinated use of all of the following:

- Intelligence.
- Information related capabilities.
- Cyber electromagnetic activities.
- Surface-to-surface fires.
- Army aviation.
- Air component support.
- Special operations forces.
- Unmanned aircraft system.
- Navy and Marine Corps assets.

3-17. The corps uses the collection assets in the surveillance brigade to collect data throughout the area of operations. The corps targeting working group also has various systems that link it to echelons above corps and national collection and delivery systems. The corps main CP has communications, computers, and intelligence elements to synchronize the overall operations and long range targeting.

SECTION III- D3A METHODOLOGY

3-18. The actions and functions of the corps and division targeting working groups are essentially the same with the chief difference being the capabilities of the assets available for targeting. The division relies heavily upon corps and echelons above corps assets for targeting support for its shaping operations.

3-19. One individual must supervise targeting. In the main CP, the deputy fire support coordinator is responsible for supervising targeting and the targeting working group. The targeting working group incorporates the mission statement, the commander's intent, and the concept of the operation into target value analysis.

3-20. Once the staff has this information, the targeting working group analyzes the enemy COA and identifies basic HVTs at the same time. As the staff war games friendly COAs, the targeting working group develops initial proposals on HPT and attack guidance. After the commander selects the final COA and issues further guidance, the targeting working group:

- Refines and prioritizes the HPTL.
- Develops the AGM.
- Submits these products to the commander for approval.

3-21. The targeting working group also determines the targets that require BDA. Only the most critical targets should be selected, as valuable assets must be diverted from target or situation development to perform BDA.

3-22. The G-2 ensures that appropriate HPTs are approved as PIR and a collection plan that focuses on answering the commander's PIR is developed. The collection management section provides targeting information to the intelligence analyst for analysis. The FAIO helps the analyst in this process. The FAIO provides knowledge of requirements for identifying the most important and perishable targets. The FAIO and analyst inform the targeting working group when major changes in the tactical situation warrant reevaluation of the HPTL. The targeting working group continually assesses the current situation and future needs. At the same time, the team reevaluates the HPTL, AGM, BDA requirements, and target selection standards and updates them as necessary. The FAIO works closely with the collection management section as well. The FAIO helps that section translate targeting working group requirements into guidance for the collection plan and provides expertise on field artillery target acquisition systems.

3-23. The ACE and the FAIO evaluate the information from the collection management section against the target selection standards and HPTL to determine targets or suspected targets. Targets are immediately passed to the fires cell for engagement. Enemy activities that do not achieve target selection standards are suspected targets. Enemy activities that appear on the HPTL but classified as suspected targets are passed to the fires cell for correlation with information available at the fires cell. This correlation may produce a valid target. Also, the FAIO should request the collection manager focus additional collection assets to further develop selected suspected targets. The FAIO coordinates with the collection manager to retrieve BDA data as acquired.

3-24. Staff members responsible for designated information-related capabilities that support information operations typically include, but are not limited to, military information support operations (MISO), combat camera, Soldier and leader engagement, civil affairs operations, operations security (OPSEC), and military deception. It is crucial that these staff members attend the targeting working group sessions. Other Governmental and nongovernmental organizations attend the targeting working group sessions as necessary. All available capabilities must be completely integrated to ensure every effort is directed toward achieving the commander's desired effect.

3-25. The EW officer integrates the electromagnetic activities as part of the overall military operation. The electromagnetic activities are an integral part of targeting. The electromagnetic activities effort is divided into three actions— electronic attack, electronic protection, and electronic support. The actions of EW are to seize, retain, and exploit an advantage over enemies across the corps and division electromagnetic spectrum. These actions include denying and degrading enemy information capabilities and protecting friendly tactical mission command systems. The EW officer and staff coordinate their efforts with the targeting working group to accomplish the commander's objectives. The EW officer provides recommendations before the technical control element receives the collection plan and the division EW composite target list. The limited allocation of intelligence and EW assets causes conflict between the collection plan and the division EW composite target list. The operations officer finalizes any conflicting recommendations between the intelligence officer, EW officer, and the technical control element.

3-26. The fires cell and FAIO maintain continuous collaboration on locating and attacking HPTs. The fires cell receives most of its target nominations from the FAIO. Once a target is received, the fires cell analyzes it in terms of target selection standards and the AGM, prioritizes it, and determines an appropriate attack method. The fires cell may consult with other agencies to facilitate target engagement. This is especially necessary when weapons systems availability, rules of engagement, or other considerations limit the method of attack. Coordinated attacks or any combination of fires may necessitate temporary augmentation of the fires cell. The fires cell directs the selected attack unit to engage the target and provide BDA data through the operations officer or representative of the unit at the main CP. The all-source analysis section and FAIO analyze BDA data for selected targets to evaluate the effectiveness of the attack. However, the

targeting working group determines whether the commander's attack guidance has been achieved or further fires are necessary.

3-27. Targets and missions beyond the capability of the corps or division to effectively attack with their assets are passed to higher headquarters for action. The staff must be aware of the supporting echelon's target planning cycle to know when the requests must be submitted. The synchronization of these missions with ongoing operations is critical to the successful completion of the unit mission. Close coordination between supported and supporting components is required to ensure vertical integration and synchronization of plans. The effective use of liaison teams, at all headquarters, ensures support is coordinated during both planning and execution phases of the operation.

3-28. Targeting involves the entire staff with the commander, chief of staff, intelligence officer, operations officer, Army aviation commander, FSCOORD, and DFSCOORD. Leaders must keep the targeting effort focused as the battle evolves so that the targeting cells are able to adjust plans and exploit advantages as they appear.

3-29. Targeting is a continuous and cyclical effort. Recurring events and their associated products are best managed through workable standard operating procedures (SOP). SOPs must be tailored to the unit's structure and operating environment to ensure a cohesive, coordinated targeting effort. A sample SOP for a targeting working group at corps or division level is located in Appendix F.

SECTION IV- TARGETING RESPONSIBILITIES

3-30. The Army targeting responsibility begins with the commander and the planning process includes the operations officer, fire support, airspace, intelligence, and other supporting staff and liaison personnel. The formal structure of the staff and liaison elements at corps and division depends on the resources allocated and the operating environment. Tailoring the formal staff structure to an effective and efficient working environment is routinely accomplished to ensure a cohesive, coordinated targeting effort. Key personnel and their targeting responsibilities are listed below.

COMMANDER

3-31. The commander issues targeting guidance on the concept of operation. The commander's concept of operation and mission statement define the commander's intent and are structured to facilitate a shared understanding and focus for the targeting working groups.

FIRE SUPPORT COORDINATOR

3-32. The FSCOORD is responsible for supervising targeting and chairs targeting boards.

OPERATIONS OFFICER

3-33. The operations officer duties include:
- Develop the HPTL, AGM, and BDA requirements and ensure they are integrated into the decision support template and with the other members of the targeting working group.
- Periodically reassess the HPTL, AGM, and BDA requirements with the intelligence plans and operations officers.
- Determine if an attack resulted in the desired effects or if additional attacks are required with the DFSCOORD, intelligence plans and operations officers.
- Coordinates the implementation of tailored rules of engagement to support national policies.

INTELLIGENCE OFFICER

3-34. The intelligence officer synchronizes the information collection plan and provides information on the current enemy situation as well as provides estimates as to what the enemy is capable of doing in the future.

The intelligence officer provides assessments of probable enemy actions, analyzes, and identifies targets based on the commander's guidance. The intelligence officer duties include:

- Develop and provide IPB products to the other targeting working group members.
- Develop and refine HVTs.
- Pass HPTs and suspected HPTs to the fires cell.
- Develop and refine HPT data.
- Develop, monitor, and refine the HPTL, AGM, and BDA requirements with other members of the targeting working group.
- Distribute the information collection plan to collection managers.
- Provide input to the fires cell on target selection standards.
- Periodically reassess the HPTL, AGM, and BDA requirements with the operations plans and operations officer.
- Receive BDA and, with the deputy fire support coordinator, determines if an attack achieved the desired effects or if additional attacks are required.
- Provide input for the decision support template.

FIRE SUPPORT COORDINATOR

3-35. The senior field artillery commander at corps and division is the FSCOORD and is assisted in his duties by the DFSCOORD. The FSCOORD is responsible for advising the commander on the best use of available fire support resources, providing input to necessary orders, and developing and monitoring the execution of the fire support plan.

3-36. The FSCOORD is responsible for the training and functioning of the fires cell. The FSCOORD works closely with the unit's staff elements to facilitate the integration of lethal and nonlethal effects in support of current operations. He works closely with the operations and intelligence officers and leads the fires cell in anticipating and planning for future operations. The corps fires cell coordinates available weapon systems that provide Army indirect fires, joint fires, and EW activities through targeting. Specific duties of the FSCOORD include:

- Plan, coordinate, and synchronize all aspects of fire support:
    - Physical attack.
    - Strike.
    - Electronic attack.
- Advise the corps commander and staff of available fire support, including capabilities and limitations.
- Support the staff development and analysis of potential courses of action.
- Chair the targeting working group.
- Participate in the MDMP.
- Work with the commander, deputy commander, and chief of staff to integrate army indirect fires and joint fires into the concept of operations.
- Develop, recommend, and brief the scheme of fires to the corps or division commander, and prepare the fires paragraph of all OPLANs or OPORDs.
- Coordinate training of force subordinate organization fires cells with their respective maneuver units and with the field artillery battalions.
- Accompany the force commander, when required, in the command group during execution of tactical operations.

DEPUTY FIRE SUPPORT COORDINATOR

3-37. The DFSCOORD provides the latest status of fire support resources and finalizes the attack guidance formulated by the commander and the FSCOORD. The deputy fire support coordinator duties include:

- Coordinate the functions of the targeting working group.

● Recommend target priorities for acquisition and engagement based on target value analysis and war gaming.
● Recommend to the chief of staff methods of engagement for targets.
● Support the other members of the targeting working group, develop the HPTL, AGM, and BDA requirements.
● Develop timeliness and accuracy guidelines for the target selection standards for use by the FAIO and the fires cell with the plans and operations officer.
● Assist the EW officer to develop targets for electronic attack.
● Monitor changes in the situation and reassess the HPTL, AGM, timeliness and accuracy guidelines of the target selection standards, and BDA requirements.
● Synchronize timing of engagement with the operations officer and subordinate units.
● Coordinate support for subordinate unit's engagement requirements.
● Coordinate suppression of enemy air defenses, and joint air attack team.
● Receive BDA and, with the intelligence officer and operations officer, determine if an attack resulted in the desired effects or if additional attacks are required.
● Ensure target nominations meet validation review for integration on the joint integrated prioritized target list.

FIELD ARTILLERY INTELLIGENCE OFFICER

3-38. The FAIOs duties include:
● Collocate with the intelligence staff particularly the collection manager and all-source analysis section.
● Provide the intelligence section with information on the targeting requirement that must be met for successful target attack.
● Expedite targeting information from the ACE to the fires cell.
● Monitor the enemy situation and keep the deputy fire support coordinator informed. Recommend changes to priorities and attack means.
● Provide input concerning the threat, target selection standards, attack guidance, and list of HPT types.
● Supervise or conduct weaponeering when applicable.
● Supervise or conduct collateral damage estimation when applicable.
● Provide information to the intelligence cell regarding accuracy requirements and timeliness of information for the fire support system.
● Ensure essential target information is compared to target selection standards prior to passing a target to the fires cell.
● Advise the FSCOORD or DFSCOORD when changes in the situation warrant reassessment of the HPTL and AGM.

CORPS AND DIVISION TARGETING OFFICER

3-39. The corps and division targeting officer's duties include:
● Advise and keep the deputy fire support coordinator informed on issues concerning targeting and fire support.
● Participate as a member of the targeting working group at corps or division.
● Help determine the HPTL.
● Supervise or conduct target coordinate mensuration when applicable.
● Conduct munitions effects analysis (weaponeering) when applicable.
● Supervise or conduct collateral damage estimation when applicable.
● Interface with the fires cell in subordinate units.
● Keep the FAIO informed on changes to the HPTL.

- Pass targets received from the FAIO to engagement systems in the most expedient manner.

INTELLIGENCE OPERATIONS OFFICER

3-40. The intelligence operations officer's actions follow:
- Maintain the target database.
- Evaluate and analyze combat information with the FAIO to identify HVTs and recommend HPTs.
- Apply the criteria for timeliness and accuracy from the target selection standards.
- Report HPTs to the FAIO.
- Recommend NAI and TAI to the intelligence officer to support targeting.
- Coordinate with the collection manager to ensure adequate intelligence collection to support targeting.

ELECTRONIC WARFARE OFFICER

3-41. The EW officer integrates the electronic attack in targeting and integrates electronic attack information requirements into the OPLAN, OPORD, and other planning products. The EW officer plans and coordinates electromagnetic activities. The EW officer interfaces between division and higher headquarters, the joint force air component command, multinational forces, and other components. The EW officer:
- Assists in coordinating electronic attack, electronic protection, and electronic support.
- Recommends to the commander's staff whether to engage a target with an electronic attack.
- Determines the electromagnetic requirements against specific HPT.
- Ensures electronic attacks meet the desired effect for targeting objective.
- Coordinates EW support and electronic attacks with the signals intelligence collection manager.
- Provides electronic attack requirements for airborne electronic attacks through the TACP.
- Serves as the jamming control authority for ground or airborne electronic attack.
- Coordinates with the DFSCOORD to integrate electromagnetic activities into targeting.
- Coordinates with the DFSCOORD or fire support officer to prepare the fires annex for the OPLAN and OPORD.
- Coordinates, prepares, and maintains the EW target list, electronic attack tasking, and requests.
- Identifies opportunities for effective targeting using electronic attacks.
- Assists the operations officer in coordinating EW requirements and tasking with the intelligence officer, military intelligence unit commander, and other agencies as required.
- Coordinates with the signal staff officer to deconflict frequencies and the joint restricted frequency list with EW targets.
- Determines and requests theater army electronic attack support.
- Expedites electromagnetic activities reports to the targeting working group.

ENGINEER OFFICER

3-42. The engineer officer's actions are as follow:
- Advise on the obstacle and barrier plan.
- Advise on engagement of targets with scatterable mines.
- Template potential HPT (mechanical breaching and minelayers).
- Assist in developing time-phase lines on the decision support templates and describe the effects of terrain on maneuver.
- Develop HPTL, AGM, and BDA requirements with other members of targeting working group.
- Recommend HPTs, NAIs and TAIs to support the employment of artillery scatterable mines in support of obstacles.

●   Advises on environmental issues and coordinates with other members to determine the impact of operations on the environment.

PSYCHOLOGICAL OPERATIONS OFFICER

3-43. The psychological operations officer's responsibilities include:
●   Advise the commander and unit staff on military information support operations.
●   Identify potential targets such as HPTs to be influenced.
●   Provide input to the command targeting guidance.
●   Coordinate MISO-focused targeting with relevant sections such as fires, information operations, civil affairs, and the deception officer.
●   Conduct planning.
●   Evaluate MISO effectiveness with the intelligence directorate of a joint staff.

CIVIL AFFAIRS REPRESENTATIVE

3-44. The civil affairs operations staff officer:
●   Advise on the effects of friendly operations on the civilian populace.
●   Produce input to the restricted target list.
●   Coordinate and provide situational awareness of the civil components to IPB and targeting.

PROVOST MARSHAL

3-45. The provost marshal provides a critical understanding of the criminal environment, develops linkages between criminal actors, establishing critical correlations in time and space, or identifying trends and patterns in criminal activity that contributes to the targeting process, enabling selection and prioritization of crime and criminal targets. The provost marshals duties include:
●   Develop police intelligence products that enable targeting.
●   Fuse police intelligence products within mission, regulatory, and policy constraints with the G-2.
●   Identify high-payoff criminal targets and timelines for recommended engagement.
●   Identify military police and U.S. Army criminal investigators (as required) for participation as part of the physical attack.

OTHER PERSONNEL

3-46. During certain operations, personnel and agencies that will support targeting could include the following:
●   Staff judge advocate.
●   Air-naval gunfire liaison company representative.
●   State Department and other United States government and non-governmental agencies.
●   ALO.
●   Chaplain.
●   Civil affairs officer.
●   Surgeon.
●   Public affairs officer.

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Chapter 4

Brigade Targeting

Targeting at the brigade level and below is generally not as formal as at higher headquarters. The targeting decisions at a higher headquarters affect targeting decisions at subordinate headquarters. The brigade staff uses the targeting products of the division to coordinate and integrate targeting actions of the brigade. Brigade targeting addresses targets assigned to the brigade by division and the employment of assets under brigade control. The high-payoff target list (HPTL) at brigade and below is necessarily more detailed and focused. They provide the information the sensor or observer and a weapon system require to identify and attack high-payoff targets (HPT).

SECTION I- FUNCTIONS

4-1.   Targeting functions at brigade and below include:
- Develop the HPTL to include collection and attack triggers.
- Establish target selection standards.
- Nominate targets to higher headquarters.
- Synchronize the information collection plan.
- Synchronize maneuver and fire support.
- Integrate counter-mobility, mobility, and survivability operations.
- Receive and evaluate BDA.
- Develop and synchronize the information collection plan with targeting (Focus on positioning observers early).

SECTION II- PLANNING

4-2.   The brigade and battalion FSOs establishes a reasonable cutoff time for submitting routine changes to the target list before the start of combat operations. Targeting is a continuous and cyclic process, and emergency and critically important changes are accommodated when necessary. However, the time for routine changes must be limited to allow time to finalize, disseminate, and rehearse the fire support plan.

4-3.   Targeting functions at task force level rely heavily on the targeting products from the brigade combat team (BCT). The targeting working group must understand both the BCT and Task Force commander's targeting guidance, to include:
- Criteria for attack and engagement.
- HPTs and the conditions under which HPT attacks are launched.
- Constraints applied during each phase of the battle.

4-4.   The targeting working group must know:
- What targets are planned in the task force area of operations?
- What responsibilities the team has for brigade targets?
- What targeting detection and delivery assets are allocated to the task force?

SECTION III- TARGETING WORKING GROUP

4-5.   Figure 4-1 on page 4-2 shows targeting working group sessions must be effectively integrated into the brigade battle rhythm and nested within the higher headquarters targeting cycle to ensure that targeting focuses,

rather than disrupt operations. Thus, task organization changes, modifications to the information collection plan, target nominations that exceed organic capabilities, air support requests, and changes to the HPTL and specified fire support, information operations, and electronic warfare (EW) tasks all must be made with full awareness of time available to prepare and execute. This cycle is a continuous process for the working group throughout the battle.
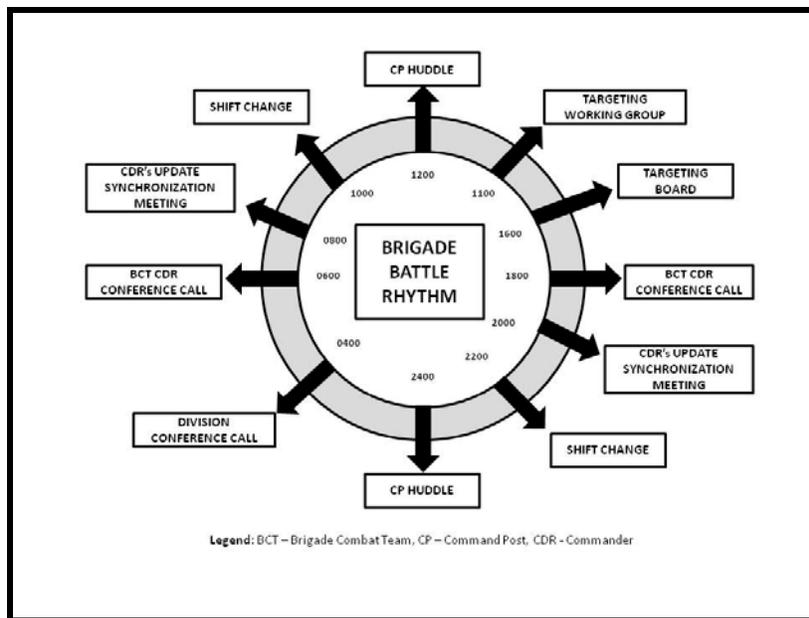
Figure 4-1. Brigade battle rhythm (example)

4-6.   The timing of targeting working group sessions is critical. While the time-focus for brigade level sessions of the targeting working group is normally 24 to 36 hours out, the brigade employment of reachback assets and certain targeting decisions, such as target nominations and air support requests, must be planned in advance and in conjunction with the division, corps, theater Army, and the joint air tasking cycle. For these reasons, the BCT targeting focus is 24, 48, and 72 hours. However, commanders must choose a targeting cycle based on the pace of operations. The brigade FSO also schedules internal fires cell targeting meetings so fire support, information operations, and EW activities related target nominations arrive within the BCT and higher echelon target nomination windows.

4-7.   The number and frequency of targeting working group meetings varies based on the battle rhythm and the commander's guidance. A preliminary session facilitated by the fires cell ensures the effects of fires and meet the brigade commander's guidance and intent. The brigade FSO, fires cell planners, and targeting working group assess ongoing targeting efforts, and ensure air support requests with target nominations are processed through higher headquarters to meet division, corps, theater Army, and joint task force targeting timelines. The second session is generally more formal than the first and is focused on updating the commander, gaining new guidance, and obtaining approval of planned and proposed targeting actions. Targeting working group sessions should be the minimum length required to present targeting information, situation updates, provide recommendations, and obtain decisions.

BRIGADE TARGETING WORKING GROUP MEMBERSHIP

4-8.   The targeting working group is a grouping of predetermined staff representatives involved with targeting who meet to provide analysis, coordination, updating, and synchronization of the targeting process, and provide recommendations to the targeting board.

4-9.   Assembling the targeting working group brings various members of the brigade staff together to synchronize the targeting process and obtain approval for any changes to the targeting products. The targeting working group focuses and synchronizes the brigade's combat power and resources toward targeting and engaging high-payoff targets. The targeting working group usually includes:

- Brigade fire support officer (leads the working group).
- Brigade operations officer.
- Brigade intelligence officer.
- Brigade information operations officer.
- Air defense airspace management and brigade aviation element representative.
- Fires cell targeting officers.
- Field artillery battalion operations and intelligence representatives.
- Fires cell representatives from the maneuver battalions, the reconnaissance squadron, and the brigade engineer battalion (if available).
- ALO or TACP representative.
- Electronic Warfare Officer or EW representative.
- Cyber electromagnetic activities representative.

4-10. Additional staff personnel may provide relevant information and recommendations to the commander, operations officer, or FSO as necessary.

BRIGADE TARGETING BOARD MEMBERSHIP

4-11. A *board* is a grouping of predetermined staff representatives with delegated decision authority for a particular purpose or function (FM 6-0). The targeting board is a temporary grouping of selected staff representatives with delegated decision authority to provide targeting decision recommendations for command approval. When the process or activity being synchronized requires command approval, a board is the appropriate forum. The targeting board usually includes:

- Brigade executive officer (chairs the board).
- Brigade operations officer.
- Brigade intelligence officer.
- FSCOORD.
- Brigade FSO.
- Air defense airspace management and brigade aviation element officer.
- Fires cell targeting officers.
- Brigade Judge Advocate.

4-12. Additional staff personnel may be present and provide relevant information and recommendations to the commander, S-3, FSCOORD, or FSO as necessary.

BRIGADE KEY PERSONNEL TARGETING RESPONSIBILITIES

4-13. The following provides a brief overview of targeting-specific responsibilities for selected brigade targeting working group and targeting board members.

Brigade Commander

4-14. The brigade commander provides command guidance. He defines the mission and objectives, concept of the operation and his intent; assigns missions; and task organizes. The commander's intent focuses and drives the targeting process.

Brigade Executive Officer

4-15. The brigade executive officer is the commander's principal staff leader. He directs, coordinates, supervises, trains, and synchronizes the work of the staff, ensuring efficient and prompt staff actions and acts as chair of the targeting board. The commander normally delegates executive management authority to the executive officer for the coordinating and special staff. These decisions often include modifications to targeting products. His decisions normally include approving or modifying:

- HPTL refinements.

- Targeting synchronization matrix.
- Air interdiction and CAS nomination(s) or the refinement of those previously submitted.
- Measures of performance (MOP) and measures of effectiveness (MOE).

Brigade Intelligence Officer (S-2)

4-16. The S-2 is responsible for preparing the information collection plan and maintaining information on the current enemy situation. He provides assessment of possible enemy actions, provides analyses, and identifies targets based on the BCT commander's guidance. Specific targeting responsibilities include:

- Developing target arrays.
- Providing enemy capabilities and projected courses of action.
- Providing IPB products to the targeting working group and targeting board.
- Developing high-value targets (HVT).
- Determining with the brigade targeting officer which HPTs can be acquired with organic assets.
- Developing support requests for acquiring high-payoff targets beyond the capabilities of organic assets.
- Coordinating the collection and dissemination of targeting information with the targeting officers in the fires cell.
- Developing and supervising implementation of the information collection plan.
- Advising the operations officer about assessment collection capabilities.
- Coordinating with the brigade FSO for indirect fires to support the information collection plan.

Brigade Operations Officer

4-17. The operations officer's targeting responsibilities include acting as alternate chair of the targeting board. His specific targeting responsibilities include:

- Working with the intelligence officer and brigade FSO to prioritize the HPTL before approval by the commander.
- Determining the targets to be engaged immediately and desired effects.
- Coordinating and integrating target engagement with maneuver operations.
- Providing a detailed interpretation of the commander's concept of the operation.
- Providing guidance about which targets are most important to the commander.
- Deciding when and where targets should be engaged.
- Periodically reassessing the HPTL, targeting synchronization matrix, MOP and MOE with the brigade FSO and intelligence officer.
- Determining with the brigade FSO and intelligence officer if desired effects have been achieved and if additional engagements are required.

Fire Support Coordinator

4-18. The Brigade's field artillery battalion commander is the FSCOORD. He is the brigade commander's primary advisor on integrating all lethal and nonlethal effects in support of brigade operations.

Brigade Fire Support Officer

4-19. The brigade FSO finalizes the engagement guidance formulated by the brigade commander and FSCOORD and leads the targeting working group. His targeting specific actions are:

- Coordinating and integrating targeting actions and execution.
- Ensuring all aspects of targeting are addressed and understood during targeting.
- Developing, maintaining, and updating targeting products including HPTL, targeting synchronization matrix, sensor-shooter matrix, MOP, and MOE for lethal and nonlethal effects. Conducting engagement assessment in conjunction with the intelligence officer and operations officer.

- Establishing target refinement standards to facilitate completion of the fire support plan prior to execution.
- Consolidating target refinements and planned targets from subordinate and supporting unit FSOs and fires cells and resolving duplications.
- Providing target refinement to higher headquarters for established division, corps and theater army targets.
- Coordinating requests for additional fire support from subordinate and supporting unit fire support officers and fires cells.
- Coordinating support for subordinate unit attack requirements.
- Receiving assessment reports and, with the intelligence officer and operations officer, determining to what extent the desired effects were achieved.
- Formulating the re-attack recommendation.
- Ensuring target nominations are validated and processed and updated to support the air tasking order (ATO).
- Coordinating with the ALO on use of tactical air assets.

Targeting Officers

4-20. The targeting officer in the fires cell facilitates the exchange of information among the military intelligence company's analysis and control team, brigade intelligence officer, subordinate and supporting unit fires cells, and other staff members as required. His responsibilities are similar to the field artillery intelligence officer at the division and corps. His targeting duties include:

- Helping the brigade intelligence officer to develop the information collection and target acquisition plans.
- Helping to provide staff supervision of target acquisition assets organic to, attached to, or under operational control of the BCT.
- Coordinating with the brigade intelligence officer for target acquisition coverage and processing of HPTs.
- Producing the targeting synchronization matrix for target acquisition assets supporting the BCT.
- Developing, recommending, and disseminating the MOP, and MOE to subordinate and supporting elements.
- Developing, recommending and disseminating approved fire support tasks to subordinate and supporting elements.
- Coordinating and distributing the restricted target list in coordination with the brigade FSO.

Engineer Officer

4-21. The BCT engineer's targeting responsibilities include:

- Providing technical information on enemy engineer units or equipment that are potential HPT nominations, to include their relative location within the area of operations.
- Providing technical information on the employment of scatterable mines.
- Providing ATO nominations for tactical air-emplaced scatterable mines.
- Updating the engineer portion of the intelligence update based on new information on enemy engineer units, activities, or obstacles (known or templated) based on results of reconnaissance and surveillance.
- Coordinating with the geospatial engineer team for tailored terrain visualization products to support targeting decisions.
- Providing input to the restricted target list based on environmental considerations.

Electronic Warfare Officer

4-22. The electronic warfare officer's targeting, responsibilities include:

- Assisting the intelligence officer with the electronic attack and the electronic warfare support portion of IPB; identifying threat electronic attack capabilities and targets.
- Recommending electronic attack methods of target engagement; assisting the targeting working group in determining electronic attack requirements against specific HPTs.
- Ensuring electronic attack can meet the BCT commander's desired effects.
- Planning and coordinating taskings and requests to satisfy electronic attack and electronic warfare support requirements.
- Coordinating with the signals intelligence staff element through the collection manager to satisfy electronic attack and electronic warfare support information collection requirements.
- Recommending to the operations officer and brigade FSO whether to engage a target with electronic attack.
- Expediting electromagnetic interference reports to the targeting working group and targeting board.

Psychological Operations Noncommissioned Officer

4-23. The psychological operations noncommissioned officer targeting responsibilities include:
- Specifying targets during the target nomination process and recommending them to the targeting working group and the targeting board.
- Providing assessments of the effectiveness of MISO activities.
- Identifying targets to avoid.
- Coordinating MISO targeting with deception.
- Coordinating with other MISO units in the area of operations.
- Providing MISO-related information and intelligence requests and PIRs for inclusion in targeting.

Civil Affairs Operations Staff Officer

4-24. The battalion or brigade civil affairs operations officer (S-9) targeting responsibilities include:
- Providing advice on the affects of friendly actions on the civilian populace.
- Producing input to the restricted target list.
- Providing assessments of the effectiveness of civil affairs operations and civil-military operations.

Brigade Judge Advocate

4-25. The brigade judge advocate's targeting responsibilities include:
- Providing advice on the impact of the rules of engagement on targeting.
- Providing advice on law of war impacts on targeting.

Brigade Provost Marshal

4-26. The provost marshal provides a critical understanding of the criminal environment, develops linkages between criminal actors, establishing critical correlations in time and space, or identifying trends and patterns in criminal activity that contributes to the targeting process, enabling selection and prioritization of crime and criminal targets.

Liaison Officers

4-27. Liaison officer targeting responsibilities include:
- Addressing concerns of their respective commanders. Submitting and explaining the significance of target nominations to support their respective unit's operations.
- Providing feedback to their respective commanders on which targets are added to the HPTL and how they are synchronized with the information collection plan.
- Providing feedback to their commanders on target nominations made to higher headquarters.
- Informing their respective units or organizations of higher level targets that fall into unit's or organization's area of operations along with the tasking and coordination measures involved.

● Providing the brigade with required targeting information from their respective subordinate or supporting units and vice versa.

SECTION IV- BRIGADE FIRES CELL

4-28. The fires cell is the centerpiece of the brigade targeting architecture, and is focused on both lethal and nonlethal effects. The targeting working group brings together representatives of all staff sections. It coordinates and synchronizes the contributions of the entire staff to the work of the fires cell. The fires cell coordinates with the brigade legal section for legal reviews of plans, targeting and orders. Primary targeting functions of the fires cell includes the following:

● Working with the information officer, S-9, public affairs officer, and brigade judge advocate to integrate appropriate aspects of information related capabilities into brigade targeting.
● Providing information to the operations officer for coordinating the tasking of sensors during development of the information collection plan with the brigade intelligence officer, the military intelligence company commander (as needed), and the reconnaissance squadron to acquire targets.
● Managing brigade targeting and facilitating the targeting working group.
● Coordinating clearance for attacks against targets (clearance of fires).
● Coordinating assessment.

LETHAL AND NONLETHAL EFFECTS ELEMENTS

4-29. An element is a component of a cell. An element is normally collocated with its parent cell but may operate within another CP cell. The lethal and nonlethal effects elements plan lethal and nonlethal effects for future brigade operations and targeting. The brigade main CP facilitates collaboration of lethal and nonlethal effects with the other warfighting functions through the targeting working group. The lethal and nonlethal effects elements prepare inputs and products used in targeting. The lethal and nonlethal effects elements prepare recommendations for the brigade targeting working group sessions and implement the resulting decisions. Leveraging the reconnaissance and surveillance assets available to the main CP, the elements plan and synchronize the fires and nonlethal effects of brigade operations. Targeting functions of the lethal and nonlethal effects elements include:

● Providing lethal fires input to the information collection plan.
● Providing nonlethal effects input to the information collection plan.
● Developing inputs to the no-strike list and identifying FSCMs.
● Developing and refining targeting guidance for each COA.
● Developing target criteria for input into computer systems for each COA.
● Producing the HPTL, targeting synchronization matrix and lethal effects tasks for the brigade OPLAN or OPORD.
● Preparing products for the targeting working group.
● Developing MOP and MOE for brigade assessment.
● Implementing targeting guidance.
● Updating and purging targeting files.

LETHAL AND NONLETHAL EFFECTS ELEMENTS PERSONNEL AND THEIR RESPONSIBILITIES

Assistant Brigade Fire Support Officer

4-30. The assistant brigade FSO assists the brigade FSO and performs the brigade FSO's duties in his absence. The assistant brigade FSO assists in developing all targeting products used by the targeting working group to include the HPTL.

4-31. Once the HPTL is approved, the assistant brigade FSO ensures that fire planning and fire support requests are processed according to the brigade commander's guidance. The assistant brigade FSO ensures that the field artillery battalion and task force FSOs receive all approved targeting products.

Targeting Officers

4-32. The brigade targeting officers serve as advisors to the brigade commander, FSCOORD, brigade FSO, and the brigade staff on all targeting matters.

4-33. Targeting officers work with the plans section, brigade FSO, and the targeting working group throughout the operations process to determine which targets need to be engaged and the desired effects for each engagement in order to achieve the commander's intent. These individuals produce the targeting and assessment guidance to be distributed with the brigade OPLAN or OPORD. The targeting officers develop the:

- HPTL.
- Targeting synchronization matrix.
- Targeting related MOP and MOE for brigade assessment.

4-34. The targeting officers collect, analyze, process, produce, and disseminate targeting information and products. The targeting officers provide counterfire guidance, and radar deployment instructions to the organic field artillery battalion S-2.

4-35. The brigade acquisition systems and assets available through reach-back are critical to locating HPTs for attack. The targeting officers assist in collateral damage estimation recommendations for the brigade commander and staff.

4-36.   The role of the targeting officer is similar to the functioning of the FAIO. In this capacity, these individuals help the S-2 and the brigade's FSO determine specific target vulnerabilities. The targeting officer, in coordination with the brigade FSO, consolidates and distributes the target list, restricted target list, and no-strike list. During operations, these individuals monitor compliances with the restrictions and report incidents where the restrictions may have been violated.

4-37. The targeting officers provide recommendations to the targeting working group on updating targeting priorities. These individuals prepare products for the targeting working group as directed by the brigade FSO. They direct updating and purging of targeting files as required. The targeting officers ensure that interoperability is maintained with collection assets of the brigade.

4-38. The targeting officers provide the targeting experience to conduct 24 hour brigade operations and targeting expertise in both the lethal and nonlethal effects elements and deploy to a tactical CP if necessary.

Fires Cell Operations Sergeant

4-39. The fires cell operations sergeant is the senior enlisted assistant to the brigade FSO. This individual must understand and actively participate in the MDMP and production of the OPLAN or OPORD. The operations sergeant serves as shift leader in the fires cell; either at the main CP or tactical CP. Major responsibilities include the following:

- Ensuring that the fires cell is fully manned for 24 hour operations and all of its equipment is fully functional.
- Ensuring the training of subordinate unit fires cell personnel.
- Ensuring the subordinate unit fires cells adhere to brigade standard operating procedures.
- Coordinating support to subordinate units.
- Performing fires cell digital network management and troubleshooting to ensure internal and external connectivity.
- Supervising the enlisted personnel in the fires cell and processing administrative matters pertaining to the fires cell.
- Managing fires cell situational understanding input to brigade common operational picture.
- Preparing required reports in accordance with brigade standard operating procedures.
- Maintaining files and documents.
- Developing and enforcing the fires cell standard operating procedures.

Fire Support Sergeants

4-40.   The fire support sergeants function as enlisted assistants to the brigade FSO and the assistant brigade FSO. The fire support noncommissioned officers assist the shift leaders as needed in either the lethal or nonlethal effects elements to enable 24 hour operations.

Targeting Noncommissioned Officers

4-41.   The targeting noncommissioned officers together with the targeting officers provide a 24-hour capability to plan and coordinate targeting operations. Their primary targeting responsibilities include:

- Operating and maintaining the targeting computer systems.
- Maintaining the targeting common operational picture display.
- Maintaining the target production display.
- Updating and purging targeting files as directed by the targeting officers.
- Ensuring voice and digital connectivity within and outside of the fires cell.

Fire Support Specialists

4-42.   Fire support specialists work under the supervision of the fire support operations noncommissioned officer. They support the lethal and nonlethal effects elements as directed. Their primary targeting responsibilities include:

- Supporting the development of targeting products as directed by the targeting officers.

OTHER MEMBERS OF THE TARGETING TEAM

4-43.   Other nonlethal effects targeting team members include the information officer, electronic attack officer, military information support operations officer, civil affairs officer, public affairs officer, and brigade judge advocate.

Information Operations Officer

4-44.   The   information operations officer is responsible for the planning, the coordination, the integration, and the synchronization of information related capabilities for the brigade. Primary targeting responsibilities include:

- Advising the BCT commander and staff on all aspects of information operations.
- Ensuring that information operations are integrated into targeting.
- Coordinating aspects of information operations with the fires cell nonlethal effects element.
- Maintaining friendly information situational awareness and providing relevant information to the BCT common operational picture.
- Identifying gaps in information necessary for planning, execution, and assessment of effects on selected audiences to support operations.

Electronic Warfare Officer

4-45.   The electronic warfare officer provides the necessary electronic warfare (EW) subject matter expertise to support targeting, execution, and assessment for all BCT EW operations. Targeting responsibilities include:

- Requesting and obtaining intelligence reports and identifying enemy intelligence targets.
- Prioritizing electronic warfare effects and targets with the fire support officer by recommending electronic attack objectives in developing high priority targets.
- Nominating targets for electronic attacks.
- Developing electronic attacks related to MOP and MOE for BCT assessment.
- Coordinating with the reconnaissance squadron for disruption of the enemy using electronic attack operations.
- Recommending electronic attack employments for inclusion into the targeting synchronization matrix.
- Recommending electronic attack objectives and synchronize reconnaissance squadron operations.
- Identifying and deconflicting potential conflicts of electromagnetic spectrum use by EW assets.

- Deciding what EW tasks are essential to the success of future operations.
- Focusing where assets are deployed to detect HPT.
- Deciding whether the intended effect achieved by electronic attack was successful or not.
- Providing electronic warfare support derived tactical targeting information to the fire support officer. For more information see ATP 3-36.

Psychological Operations Sergeant

4-46. The psychological operations sergeant provides the necessary subject matter expertise to support targeting, execution, and assessment for all brigade-level information related capabilities. Targeting responsibilities include:

- Developing and recommending supporting MISO objectives and potential targets to the brigade commander.
- Developing, related MOP and MOE, and monitoring the effectiveness of MISO for brigade assessment.
- Coordinating with public affairs regarding mitigating the effects of adversary information.
- Coordinating messages and actions to achieve psychological effects.
- Establishing voice and digital linkage with attached MISO units.
- Coordinating resources for attached MISO units.

Civil Affairs Officer

4-47. The civil affairs officer (S-9) assists the S-2 and S-3 with visualization and description of the area of operations by refining and describing the operational variables with a population focused approach. The S-9 helps in the integration of civil affairs operations, an information-related capability. Civil affairs operations complement information operations and facilitate mission accomplishment by enhancing the relationship between the civilian populace and the overall force. The brigade S-9 provides civil affairs expertise for the planning, coordinating, and the monitoring of civil affairs operations in the brigade area of operations. This by definition includes populace and resource control (including noncombatant evacuation operations and dislocated civilian operations), foreign humanitarian assistance, civil information management, nation assistance, and support to civil administration. The S-9 identifies civilian considerations during targeting. These actions help minimize civilian interference on brigade tactical operations and identify effects of military operations on the civilian population. The S-9 complements targeting by:

- Directing civil affairs forces to perform tasks to minimize the negative impact of military operations on civilian populations and to mitigate the level of interference by civilians during combat operations.
- Assisting in the development of the plans, the policies, and the programs that are needed to deconflict civilian activities with military operations within the brigade area of operations. This can include displaced civilian operations and populace and resources control measures.
- Advising the brigade commander on obligations incurred from the long and short term effects (economic, environmental, and health) of brigade operations on civilian populations.
- Conducting, coordinating, and integrating civil affairs operations in support of the targeting working group.
- Integrating civil affairs objectives with brigade HPTs.
- Developing civil affairs related MOP and MOE for brigade assessment.
- Advising the BCT commander and staff on protection of culturally significant property and facilities (religious building, shrines and consecrated places, museums, monuments, art, archives and libraries).
- Conducting engagements with key civilian authorities and leaders in the brigade area of operations.

Public Affairs Officer

4-48. The BCT public affairs officer roles include—serving as the principle adviser to the commander and staff for media engagement and conducting media operations. Public affairs officer has a legal responsibility to factually and accurately inform various publics—domestic and foreign without intent to propagandize or change

behavior. The public affairs officer plans and executes Soldier and community outreach both foreign and domestic. The public affairs officer and staff provide training and support to stability operations in coordination with the S-9 and civil affairs staff in the fires cell nonlethal effects element.

Brigade Legal Section

4-49. The brigade legal section includes at least two judge advocates—the brigade judge advocate and the trial counsel—and the brigade senior paralegal noncommissioned officer. The brigade legal section has a presence in the main CP to support the lethal and nonlethal effects elements. The section is deployable forward in whole or in part as directed by the brigade judge advocate. The legal team provides legal advice during the MDMP and all other planning and targeting working group sessions conducted by the brigade staff. The members of the brigade legal section serve as subject matter experts on rules of engagement, targeting, international law, and law of war (including treatment of detainees, civilians on the battlefield, and other noncombatants) and all other legal aspects of brigade operations.

OTHER JOINT AND ARMY AUGMENTATION TO THE FIRES CELL

4-50. Joint and Army augmentation is essential to brigade operations. In addition to the Air Force TACP, other joint augmentation includes liaison officers to plan and coordinate naval surface fire support and Marine Corps support.

Tactical Air Control Party

4-51. An Air Force TACP is collocated with the fires cell at the brigade main CP. The mission of the brigade TACP is to plan, coordinate, and direct air support for land forces. The air component ALO advises the brigade commander and staff on air support for brigade operations. The ALO leverages the expertise of the TACP with linkages to the division and corps TACP to plan, to coordinate, to synchronize, and to execute air support operations. The TACP maintains situational understanding of the total air support picture. For more information on the TACP see FM 3-52.

Naval Surface Fire Support Liaison Officer

4-52. The naval surface fire support liaison officer supervises a naval surface fire support team that may be attached to the brigade fires cell and coordinates and controls naval surface fires. The brigade naval surface fire support team communicates on the division, corps, or theater Army naval surface fire support high frequency net to gain naval surface fires. This net is also used for daily planning between the brigade, division, corps, and theater Army. For more information see FM 3-09.

United States Marine Corps Liaison Officer

4-53. A Marine Corps liaison officer (may also be a liaison team) may augment the fires cell based on the mission variables of mission, enemy, terrain and weather, troops and support available, time available, civil considerations to coordinate naval and Marine Corps air support to the brigade. The fires cell processes requests for Navy and Marine Corps air support through this liaison officer or team. A firepower control team may be attached to the maneuver battalions or reconnaissance squadron to perform terminal control of Navy and Marine Corps air support. In the absence of an observer from the firepower control team, the company fire support team or the Air Force joint terminal attack controller may control naval and Marine Corps air. For more information see FM 3-09.

BATTALION FIRES CELL AND TARGETING PERSONNEL

4-54. Fire support organizations in the maneuver battalions and the reconnaissance squadron support their respective commanders but work closely with the brigade fires cell. The maneuver battalions and the reconnaissance squadron are each supported by a fires cell and each have an Air Force TACP. The fire support teams participate in targeting by nominating and refining targeting. For more information of fire support teams see ATP 3-09.30 and FM 3-09.

BATTALION FIRES CELL PERSONNEL

Battalion Fires Cell

4-55. The battalion fires cell provides targeting and fire support coordination capability to the maneuver battalion, reconnaissance squadron, and the brigade engineer battalion.

Battalion Fire Support Officer

4-56. The battalion FSO is responsible for advising the battalion commander on targeting fire support matters. FSO targeting responsibilities include:

- Making recommendations for integrating battalion mortars into the scheme of fires.
- Supervising all functions of the battalion fires cell.
- Preparing and disseminating the fire support execution matrix and the fire support plan.
- Conducting bottom up refinement of targets for the brigade and battalion fire support plans.
- Coordinating with the TACP on CAS missions and for terminal control personnel.
- Providing coordination channels to the brigade fires cell nonlethal effects element for information operations or other fires related support.
- Translating the commander's intent into engagement guidance.
- Disseminating the approved target list and execution matrix to subordinate elements.
- Recommending appropriate changes in the target list and attack guidance when required.

Battalion Assistant Fire Support Officer

4-57. The battalion assistant FSO acts as the battalion FSO in the fire support officer's absence. The assistant FSO interfaces with the battalion intelligence officer and provides the intelligence officer and the battalion FSO with information on the vulnerabilities of targets. The vulnerabilities of targets consist of specific requirements for accuracy of target location assurance, level of target description, and duration the target may be considered viable for attack by fire support systems. The targeting responsibilities of the assistant FSO include:

- Developing, recommending to the commander, and disseminating the AGM to subordinate elements; recommending changes in attack guidance.
- Determining, recommending, and processing HPTs and targets of opportunity to the brigade fires cell.
- Coordinating with the battalion or squadron intelligence officer for target acquisition coverage and processing of battalion HPTs.
- Producing a target selection standards matrix for target acquisition assets with the battalion intelligence officer.

Battalion Targeting Officer

4-58. The battalion targeting officer is located at the FA battalion and supervises the counterfire operations section and the target processing element within the battalion CP. The targeting officer serves as the battalion counterfire officer. The targeting officer may be moved to the brigade CP to man the counterfire cell if brigade is designated the counterfire headquarters. The responsibilities of the targeting officer include:

- Advising the commander on acquisition system employment, capabilities, and limitations.
- Performing predictive analysis of enemy fire support locations.
- Assisting in the integration of intelligence and other war-fighting functions.
- Assisting the intelligence war-fighting function with the integration of reconnaissance and surveillance collection assets.
- Assisting in target production by developing the HPTL, AGM, and target selection standards.

Fire Support and Targeting Noncommissioned Officers

4-59. The fire support and targeting noncommissioned officers together with the assistant FSO and fire support sergeant provide a 24 hour capability to plan and coordinate targeting operations. Their primary responsibilities include the following:

- Operating and maintaining the targeting computer systems.
- Maintaining the targeting common operational picture display.
- Maintaining the target production display.
- Updating and purging targeting files as directed by the targeting officer.
- Ensuring targets that are acquired are processed to the appropriate fire support assets in accordance with the targeting synchronization matrix.

Fire Support Sergeant

4-60. The battalion fire support sergeant is the enlisted assistant to both the battalion FSO and assistant FSO. His targeting responsibilities include maintaining and updating targeting products and any other duties directed by the FSO.

Air Force Tactical Air Control Party

4-61. The Air Force liaison element to the battalion is identified as the TACP. The TACP primary mission is to advise the battalion commander on the capabilities and limitations of air power and assist the ground effort in planning, requesting, and coordinating CAS. The TACP has a joint terminal attack controller who is capable and authorized to perform terminal attack control of CAS for the battalion.

SECTION V- PREPARING AND CONDUCTING TARGETING WORKING GROUP SYNCHRONIZATON

PREPARING FOR TARGETING WORKING GROUP SESSIONS

4-62. Preparation and focus are keys to success of the brigade targeting working group and targeting board. Each representative must come to each session prepared to discuss available assets, capabilities, limitations and BDA requirements related to their staff area or warfighting function. This means participants must conduct detailed analysis of the situation and be prepared to provide input and information. This preparation must be focused on the brigade commander's intent and a solid understanding of the current situation.

4-63. The brigade S-3 must be prepared to provide:

- Current friendly situation.
- Maneuver assets available.
- Current combat power.
- Requirements from higher headquarters (including recent fragmentary orders or taskings).
- Changes to the commander's intent.
- Changes to existing fire support tasks.
- Changes to the task organization.
- Planned operations.

4-64. The brigade intelligence officer must be prepared to provide:

- Current enemy situation.
- Current information collection plan.
- Planned enemy courses of action (situation template) tailored to the time period discussed.
- Reconnaissance, surveillance and target acquisition collection assets available and those the intelligence officer must request from higher headquarters.

4-65. The brigade FSO must be prepared to provide:

- Fire support assets and resources available.

● Proposed HPTL and targeting synchronization matrix for the time period discussed.

4-66. The specific situation dictates the extent of the remaining targeting working group or targeting board member's participation. Members discuss in detail (within their own warfighting functional or staff section area) available assets and capabilities, the integration of their assets into targeting decisions, and the capabilities and limitations of enemy assets. The following tools should be available to facilitate the conduct of the targeting working group and targeting board: HPTL, consolidated matrices (for example, targeting synchronization matrix), or other product(s) per standard operating procedures, a list of delivery assets and resources, and a list of collection assets and resources. For example:

● The targeting synchronization matrix visually illustrates the HPTs and is designed to list specific targets with locations, in each category. The matrix has entries to identify if a target is covered by a NAI; the specific detect, deliver, and assess assets for each target; and engagement guidance. Once completed, the targeting synchronization matrix serves as a basis for updating the information collection plan and issuing a fragmentary order once the targeting working group and targeting board concludes their sessions. In addition, the targeting synchronization matrix facilitates the distribution of results produced by the targeting working group and targeting board.

● A list of all potential detection and delivery resources available to the brigade helps all attendees visualize what assets may be available for detection and delivery purposes. It is essential that targeting working group and targeting board members be prepared to discuss the potential contribution for the particular assets within their respective staff area or warfighting function.

CONDUCTING THE TARGETING WORKING GROUP SESSION

Brigade Fire Support Officer Responsibilities

4-67. The brigade FSO leads the targeting working group. The FSO is responsible for keeping the brigade targeting working group focused. He is the arbitrator for disagreements that arise (unless the brigade executive officer is present) and ensures that all participants are actively involved, are staying on track with the stated purpose and agenda.

Staff Participation

4-68. Maximum participation by the staff is essential. Staff members and warfighting function representatives must share their expertise and respective running estimate information on the capabilities and limitations of both friendly and enemy systems. They should also consider providing redundant means, if feasible, to detect, deliver, and assess targets.

Targeting Working Group Typical Agenda

4-69. The brigade FSO should open the session by conducting a roll call, detailing its purpose, the agenda, and specifying the time period or event being discussed at the session. The session may be scheduled and tailored to support the ATO cycle or a specific operation.

4-70. The following agenda (table 4-1) provides information covered by core targeting working group members. The agenda helps to validate the targeting working group visualization. The visualization allows the commanders to develop their intent and planning guidance for the operation.

Table 4-1. Targeting working group agenda (example)

AGENDA	
WHO	**WHAT**
Intelligence Representative	•Weather •Enemy situation and decision points (event template) •BDA for targets engaged since the last session •Analysis of enemy most likely and dangerous courses of action for the next 24-72 hrs. •Recommended changes to PIRs. •Briefs information collection plan.
Operations Representative	•New requirements from higher headquarters. •Summarizes current situation. •Provides status of combat power. •Commander's guidance and intent. •Planned operations during the focus period.
Brigade Targeting Officer or Fires Cell Representative	•Briefs current targeting products including the high-payoff target list, attack guidance matrix, target selection standards, targeting synchronization matrix and fire support tasks. •Status of fire support assets. •Approved preplanned air requests and targets planned for the next two ATO cycles. •Proposed high-payoff target list with target locations for concurrence and approval. •Recommends, in conjunction with the ALO, changes to working preplanned air requests. •Briefs high-payoff targets that have been attacked and associated BDA. •Provides radar status and active radar zones. •Briefs counterfire situation.
ALO	•Advises on the employment of air assets. •Recommends, in conjunction with the brigade fire support officer, changes to working planned air requests.
IO representative	•Provides assessment of information related capabilities. •Recommends new-related targets.
MISO Representative	• Advises on employment of MISO. • Provides assessment of effects. •Recommends targets, and messages and actions for psychological effect.
Electronic Warfare Officer	•Briefs brigade electronic attack plan.
Others as required	•Brigade judge advocate, psychological operations sergeant, civil affairs officer, liaison officers and others provide amplification as required.
ALO-air liaison officer ATO-air tasking order BDA-battle damage assessment IO-information operations MISO-military information support operations PIR-priority intelligence requirement	

4-71. The intelligence officer provides an intelligence update. He briefs the current enemy situational and event templates, current HVTs with locations, the commander's critical information requirements, NAI, and an overview of the current information collection plan. He provides BDA on targets previously engaged since the last session of the targeting working group and the impact on the enemy COA. Most importantly, he prepares a predictive analysis of the future enemy COA for the next 24-72 hours using the event template and a list of HVTs. Finally, he briefs changes to the commander's critical information requirements for review by the staff. The intelligence officer's products must be tailored to the designated time period to be discussed at the session but generally include:

- The enemy situation.
- Review of the current information collection plans.
- BDA of targets engaged since the last session of the targeting working group or targeting board and the impact on the enemy COA.
- An analysis of the enemy's most probable COA and locations for the next 24 to 36 hours (possibly projecting out 72 hours for targets subject to attack through ATO nominations).
- Recommended changes to the PIRs for the commander's approval (if the commander is present), or review by the staff.

4-72. The operations officer or his representative discusses any particular guidance from the commander, changes to the commander's intent, and any changes since the last session of the targeting working group or

targeting board to include task organization, requirements from higher headquarters to include recent fragmentary orders and taskings, current combat power, the current situation of subordinate units, planned operations, and maneuver assets and resources available. Finally, he informs the staff of the status of assets and resources available for the targeting process. The operations officer's products must be tailored to the designated time period to be discussed at the session but generally include a friendly situation update that:

- Briefs any new requirements from higher headquarters since the last targeting working group or targeting board session.
- Summarizes the current tactical situation.
- Informs on the status of available assets and resources (combat power).
- Briefs any particular guidance from the commander and changes to his intent.
- Briefs planned operations during the period covered by the targeting working group or targeting board session.

4-73. The targeting officer or fires cell representative briefs fire support assets available including status of fire support tasks, radars, CAS sorties available, status of naval surface fire support, ammunition availability, HPTL, target selection standards, AGM, and targeting synchronization matrix.

4-74. The brigade fire support officer reviews approved planned air requests (alternatively, this may be briefed by the Air Force ALO) for the period covered by the session and those planned for the next two ATO cycles—normally done in 24-hour increments. In coordination with the Air Force ALO, he also recommends changes to the working planned air requests and nominations for the planning cycle. He provides proposed targeting guidance for the designated periods, and a new targeting synchronization matrix with the proposed list of high-payoff targets and locations, for the staffs' concurrence and refinement.

SUBSEQUENT ACTIONS

4-75. Upon completion of the targeting working group session, targeting products are updated, written, and prepared for the targeting board. Targeting working group products include:

- The updated HPTL, AGM, and target selection standards. These, with data from the information collection plan, may be combined into a unit-specific targeting synchronization matrix.
- Updated information collection plan. The S-2 reorients his acquisition assets and updates and disseminates the information collection plan.

CONDUCT OF THE TARGETING BOARD

4-76. The targeting board is a formal meeting to gain the commander's decision on the recommendations of the targeting working group. The targeting board follows the same agenda as the targeting working group and is chaired by the BCT commander, or his designated representative. The targeting board should be nested with the higher headquarters targeting cycle.

4-77. At the completion of the targeting board the approved targeting products are disseminated to the subordinate units. The targeting products include:

- The approved HPTL, AGM, and target selection standards. These, with data from the information collection plan, may be combined into a unit-specific targeting synchronization matrix.
- Approved information collection plan. The S-2 reorients his acquisition assets and updates and disseminates the information collection plan.
- Tasks to subordinate units and assets. The S-3 should prepare and issue a fragmentary order to subordinate elements to execute the planned attack and assessment of targets developed by the targeting working group and targeting board.

4-78. Targeting is continuous and cyclical. The staff obtains the commander's approval and then prepares fragmentary orders with new tasks to subordinate units as needed.

SYNCHRONIZATION

4-79. *Synchronization* is the arrangement of military actions in time, space, and purpose to produce maximum effect relative to combat power at a decisive time and place (JP 2-0).

4-80. The key to effective synchronization of targeting is the thorough use of targeting in the planning, preparation, and execution of the maneuver plan. As the commander and staff form the operations plan during war gaming: the decision support template is developed. It is the key to synchronizing the fire support plan with the scheme of maneuver. The war gaming facilitates the BCT commander's staff decision support template development. It also identifies critical fire support triggers on the battlefield and is an aid in synchronizing the warfighting functions. The war gaming process identifies the decision points for the commander. The decision support template graphically portrays the decision points and the options available to the commander if an action occurs. The decision support template provides the information required to provide effective fires in support of the maneuver force.

4-81. Units must define how, when, with what restrictions, and in what priority to engage different targets. At task force level, the battalion FSO prepares the fire support execution matrix. The battalion FSO coordinates with the company FSO and mortar platoon leader. In conjunction with the task force S-3, the battalion FSO positions and controls the organic mortars of the task force. With the S-2, the FSO positions and controls observation assets. This coordination is needed to ensure the fire support plan meets the commander's guidance and avoids unplanned duplication. The fire support plan each FSO and forward observer is responsible for during execution may include amplifying information such as:

- Field Artillery organization for combat.
- Ammunition available.
- Delivery asset locations.
- FSCMs and restrictions.
- Coordinating instructions.
- HPTs and attack guidance.

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Appendix A

Find, Fix, Track, Target, Engage and Assess

Dynamic targeting is targeting that prosecutes targets identified too late, or not selected for action in time to be included in deliberate targeting (JP 3-60). Dynamic targeting occurs during detect, deliver and assess functions of the D3A methodology and the joint targeting cycle phase 5: mission planning and execution. A target of opportunity may emerge, or a change in the situation may necessitate a change to a planned target. These targets still require confirmation, verification, validation, and authorization, but in a shorter timeframe than deliberate targeting allows.

Dynamic targeting is primarily designed to attack TSTs and high-payoff targets (HPT). Time sensitive targets should not be confused with sensitive targets. A target may be both time-sensitive due to posing an immediate threat and sensitive depending on engagement option. Lower priority targets are normally not worth redirecting assets from previous planned or assigned missions.

The process developed to facilitate dynamic targeting at the joint level is— find, fix, track, target, engage, and assess (F2T2EA). While the steps are listed in the order presented to ease explanation, several steps are accomplished simultaneously and overlapped. For example, the track step frequently continues through the completion of the assess step.

FIND

A-1. The find step of F2T2EA involves intelligence collection based on joint intelligence preparation of the operational environment, the Army uses IPB. Traditional intelligence, surveillance, and reconnaissance (ISR) assets, as well as nontraditional assets, may provide initial detection of an entity.

A-2. Each entity is immediately evaluated as a potential target. Based on the situation and the commander's guidance, some entities are clearly identified not a target. Other entities may be clearly identified as a target already included in targeting. The remaining entities display some characteristics of a target, but need more analysis to categorize them properly. These entities requiring further analysis are called emerging targets.

EMERGING TARGET

A-3. The term "emerging target" is used to describe a detection that meets sufficient criteria to be developed as a potential target using dynamic targeting. The criticality and time sensitivity of an emerging target, and its probability of being a potential target, is initially undetermined. Emerging targets normally require further reconnaissance and analysis to develop, confirm, and continue dynamic targeting. Figure A-1 on page A-2 shows the find step determination and follow on actions.

A-4. During the find step, an emerging target will be:
- Designated a probable target or identified as a TST and the dynamic targeting process is continued.
- Designated a probable target not requiring dynamic targeting and passed to deliberate targeting.
- Discarded completely or entered on the no-strike list.
- Analyzed until a determination can be made (that is, continuing the find step).
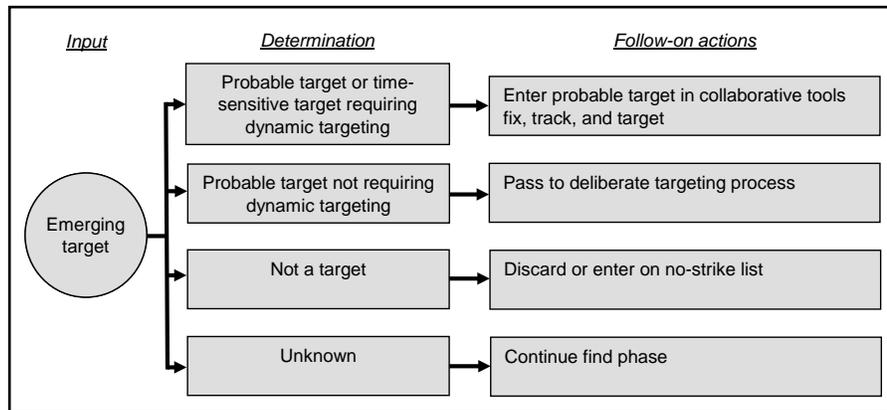
Figure A-1. Find step determination and follow-on actions

A-5. Sometimes the entire dynamic targeting process can occur within the span of a few minutes. For example an attack helicopter returning from a mission detects and identifies an emerging target, and determines it to be a potential target. The aircraft commander relays the information to higher and receives approval to engage the target.

A-6. In this example, find and fix steps are completed nearly simultaneously without the need for traditional reconnaissance. The aircraft commander continues to track the target during an abbreviated coordination and approval process. The entity is targeted, engaged, and an initial assessment is conducted by the same system that initially detected the target.

INPUTS

A-7. Inputs to the find step:
- Clearly delineated joint force commander (JFC) dynamic targeting guidance and priorities.
- Focused joint intelligence preparation of the operational environment to include identified named areas of interest, TAI, and cross cueing of intelligence disciplines to identify potential target deployment sites or operational environments. (The Army still uses IPB).
- Collection plans based on the joint intelligence preparation of the operational environment.

OUTPUTS

A-8. Outputs of the find step:
- Potential targets detected and nominated for further development within dynamic targeting.

FIX

A-9. The fix step of F2T2EA includes actions to determine the location of the probable target. This step also results in a positive identification of a probable target as worthy of engagement as well as determining its position and other data with sufficient fidelity to permit engagement.

A-10. The fix step begins after a probable target requiring dynamic targeting is detected. When a probable target is identified, sensors are focused to confirm target identification and accurate location. This may require diverting assets from other uses. The collection manager may have to make a recommendation on whether the diversion of reconnaissance assets from the established collection plan is merited. The S-3 decides if the collection, correlation, and fusing of data confirms that the target meets the criteria to be classified as a TST or other target requiring dynamic targeting.

A-11. Completing the fix step in a timely manner requires reconnaissance and surveillance with the capability to identify stationary and mobile targets, day or night, in any weather conditions, through all forms of terrain, camouflage, or concealment, to the degree of accuracy required by the engaging asset.

A-12. An unanticipated or unplanned target may be identified during the fix step, requiring JFC confirmation and classification as a TST. The determination or estimation of the target's window of vulnerability defines the timeliness required for successful prosecution, and influences the required prioritization of assets and the risk assessment. TSTs receive the highest priority in dynamic targeting.

INPUTS

A-13. Inputs to the fix step:
- Probable targets requiring dynamic targeting.
- Sensor information on the target.

OUTPUTS

A-14. Outputs of the fix step:
- Target identification, classification, and confirmation.
- Target location accuracy refined to the level required for target engagement.
- Determination or estimation of target time characteristics.

TRACK

A-15. During the track step, the target is observed and its activity and movement are monitored. Once the target is located and identified, maintain observation until an engagement decision is made and executed.

A-16. The track step of F2T2EA begins once a definite fix is obtained on the target and ends when the engagement results in the desired effect upon the target. Some targets may require continuous tracking upon initial detection as an emerging target. Sensors may be coordinated to maintain situational awareness or track continuity. Target windows of vulnerability should be updated when warranted. Relative priorities for information requirements are based on JFC guidance and objectives. If track continuity is lost, the fix step will likely have to be recompleted (and potentially the find step as well).

INPUTS

A-17. Inputs to the track step:
- Confirmed target.
- Target location and plot of movement (if applicable).

OUTPUTS

A-18. Outputs of the track step:
- Track continuity maintained on a target by appropriate sensor or combination of sensors.
- Sensor prioritization.
- Updates to target window of vulnerability.

TARGET

A-19. The target step takes an identified, classified, located, and prioritized target; finalizes the desired effect and applicable weaponeering solution against it to include obtaining required approval to engage. The target step can be time consuming due to the large number of requirements that must be satisfied. Timely decisions are more likely if target step actions can be initiated or completed in parallel with other steps.

A-20. The target step of F2T2EA begins with target validation. Operations personnel ensure that an engagement on the target complies with guidance, the law of war, and the rules of engagement. The target step matches available engagement and sensor assets against the desired effect. The target is weaponeered, engagement options are formulated, a recommendation is nominated, an option is selected to affect the target, and assessment requirements are submitted. Restrictions are resolved and the actions against the

target are coordinated and deconflicted. Risk assessment is performed before asset selection. An asset is selected for engaging the target and assessment requirements are submitted.

INPUTS

A-21. Inputs to the target step:
- Identified, classified, located, and prioritized target.
- Restrictions for consideration are— collateral damage estimation guidance, weapons of mass destruction, consequences of execution, law of war, rules of engagement, no-strike list, and restricted target list, component boundaries, and FSCMs.
- Situational awareness on available assets from all components.

OUTPUTS

A-22. Outputs of the target step:
- The desired effect is validated.
- Target data finalized in a format useable by the system that will engage it.
- Asset deconfliction and target area clearance considerations are resolved.
- Engagement authority (decision) in accordance with JFC and Service components commander's guidance.
- Assessment collection requirements are submitted.
- Consequence of execution prediction and assessment for weapons of mass destruction targets is performed.

ENGAGE

A-23. During the engage step of F2T2EA, the targets are confirmed as hostile and action is taken against the target.

A-24. The engagement is ordered and transmitted to the system selected to engage it. Engagement orders must be transmitted to, received by, and understood by those engaging the target. The engagement is managed and monitored by the engaging component and the desired result is successful action against the target.

INPUTS

A-25. Inputs to the engage step:
- Engagement authority decision.
- Selected engagement option.
- Combat identification prior to and throughout target engagement.

OUTPUTS

A-26. Outputs of the engage step:
- Issuing and passing of the engagement order.
- Lethal or Nonlethal means against target.
- Engagement direction and control.

ASSESS

A-27. The assess step of F2T2EA is the same as the assessment phase of D3A and the joint targeting cycle phase 6. Both examine the results of the target engagement and the results of both must be integrated to provide the overall combat assessment.

A-28. During the assess step, information is collected about the results of the engagement to determine whether the desired effects were achieved. TST or other HPT may require an immediate assessment to provide quick results and to allow for expeditious re-attack recommendations.

INPUTS

A-29. Inputs to the assess step:
- Assessment requests matched against desired effects or engagement system.

OUTPUTS

A-30. Outputs of the assess step:
- Confirmed engagement.
- Estimated or confirmed engagement results to decision makers in a timely manner.
- Re-attack recommendations.

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Appendix B

Find, Fix, Finish, Exploit, Analyze, and Disseminate

Find, fix, finish, exploit, analyze, and disseminate (F3EAD) provides maneuver leaders at all levels with a methodology that enables them to organize resources and array forces across the range of military operations. While the targeting aspect of F3EAD is consistent with decide, detect, deliver, and assess D3A methodology, F3EAD provides the maneuver commander an additional tool to address certain targeting challenges, particularly those found in a counterinsurgency environment. F3EAD is not a replacement for D3A nor is it exclusive to targeting; rather it is a technique that works at all levels for leaders to understand their operational environment and visualize the effects they want to achieve.

In counterinsurgency operations, engaging targets with nonlethal effects are frequently more important than engaging targets with lethal effects, and F3EAD is equally applicable for both. Effective targeting identifies options to support the commander's intent and objectives. For nonlethal effects, those options may include civil-military operations, cyber electromagnetic activities, information operations, MISO, and political, economic, and social programs. Engaging targets with lethal effects are most typically designed to kill.

F3EAD is especially well suited and is the primary means for engaging high-value individuals (HVI). **A *high-value individual* is a person of interest who is identified, surveilled, tracked, influenced, or engaged.** A HVI may become a high-payoff target that must be acquired and successfully attacked (exploited, captured, or killed) for the success of the friendly commander's mission. In this role, F3EAD features massed, persistent reconnaissance, or surveillance cued to a powerful and decentralized all source intelligence apparatus to find a HVI in the midst of civilian clutter and find his exact location. This accurate location enables surgical finishing effects (lethal or nonlethal) that emphasize speed to catch a mobile target. The emphasis on speed is not only to remove a combatant from the area of operations, but also to take the opportunity to gain more information on the threat enemy advisory. The exploit and analyze steps are often the main effort of F3EAD because these steps provide insight into the enemy's network and may open new targeting efforts. The information accumulated during the exploit and analyze steps frequently starts the cycle over again by providing leads, or start points into the network that can be observed and tracked.

THE PROCESS WITHIN THE PROCESS

B-1. To gain an understanding of the F3EAD process, it is instructive to see how F3EAD is used within D3A and can begin during any phase of D3A methodology. The process still begins with a decide function in which decisions are made on priorities and the allocation of resources. The decide step is performed continuously, and requires extensive, persistent analytical work by operations and intelligence personnel. They analyze large quantities of all-source intelligence reporting to determine the:

- Threat validity.
- Actual importance of potential targets.
- Best means to engage the target.
- Expected effects of engaging the targets (which will guide actions to mitigate negative effects).

● Changes required to the exploitation plan.

B-2. As figure B-1 indicates, the detect function is broken into two parts — find and fix. During the find step, the HVI is identified and the target's network is mapped and analyzed. During the fix step a specific location and time to engage the HVI is identified and the validity of the target is confirmed.
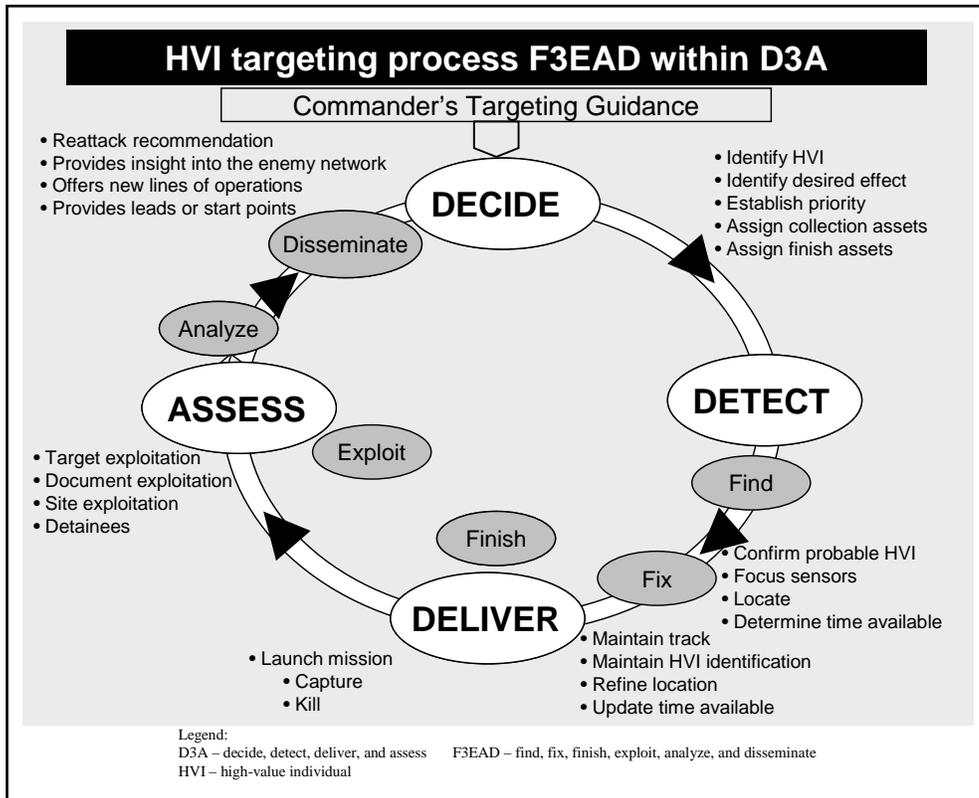
Figure B-1. High-value individual targeting process

B-3. In counterinsurgency operations, the target sets often will include HVI that require special care or caution in treatment because failure to engage them or to engage them improperly can lead to adverse consequences. As a result, the find step may take a considerable amount of time from days to even weeks as targets are identified and the target's network is mapped and analyzed.

B-4. The finish step of F3EAD mirrors the deliver function of D3A when the action planned against the target is initiated and completed. Where the finish step differs from the deliver function in D3A is the nature of the means the commander will apply against identified target sets. In addition to systems typically associated with delivering effects in the D3A methodology, means used by a maneuver commander in counterinsurgency operations can include actions such as sniper, counter sniper, tactical callout, vehicle interdiction, and small ambush teams.

B-5. The exploit, analyze, and disseminate steps amplify the assess function. The engaging unit takes the opportunity to gather additional information during the exploit step, determines the implications and relevance of the information during the analyze step, and publishes the results during the disseminate step.

B-6. It is important to remember that targeting is conducted continuously. For any given target, the process tends to follow the flow depicted in figure B-1. At any given time however, a unit may be at the find step for some targets, the exploit step for several other targets, and at the fix, finish, analyze, or disseminate step for still other targets. Similarly, the unit may disseminate information pertaining to the location of a target prior to the finish step or exploit step. Generally, the process will follow the depicted flow, do not let the process restrict what needs to happen next.

FIND

B-7. Collection plans that support the F3EAD process are, driven by the requirement for time compression. IPB and area situational awareness collection are an ongoing effort. Once an insurgent cell or HVI is identified, the targeting folder must be quickly developed. After the targeting folder is approved for collection, very specific information on possible engagement locations must be collected quickly without alerting the HVI. This requires layering of collection efforts and assets.

B-8. HVI targeting will most often be conducted in counterinsurgency operations where the enemy frequently hides among the civilian population. Persistent and high fidelity intelligence is often the key to defeating a threat whose primary strength is denying friendly forces access to a target.

B-9. Reconnaissance and surveillance assets are most effective against such enemies when massed. The insurgent's ability to hide in plain sight demands persistent collection in order to detect his presence. Persistent collection requires long dwell times and must be focused using multiple sensors on discrete parts of the network in order to achieve the fidelity of information required for targeting.

B-10. The effectiveness of reconnaissance and surveillance grows exponentially when it is cued to and driven by other sources of intelligence rather than operating alone. The enemy is so well hidden that it takes multiple sources of intelligence to corroborate information. Signals intelligence for example, can locate a target but may not be able to discern who it is. An airborne sensor with full motion video can track but not necessarily identify the target. Human intelligence can provide intent but may not be able to fix a target to a accurate location. However, these disciplines working together are able to focus the spotlight on a HVI who is hidden in the general population. Without a robust, collaborative intelligence network to guide it, sensors are often used in reactive modes that negate their true power and tend to minimize their full potential. These intelligence sources provide a start point into the enemy network that can be exploited through persistent and patient observation. With this type of start point, one can mass reconnaissance forces with confidence that assets are not being wasted.

B-11. Massing intelligence resources implies focus and priority. Selected parts of the enemy's network receive focus, which should be unwavering for a specified time. The problem with a low-contrast and fleeting target is that threat actions are not easily predictable. Without prediction, the next best things are redundancy and saturation. The inability to mass employment of collection assets over a large geographic area often results in a loss of effectiveness.

B-12. One technique that is critical to improve effectiveness against an insurgent is nodal analysis (or link analysis). Insurgent networks do not exist in a vacuum. They interact with supporters in the population and, less directly with their supporters buried in the power structure. An HVI may interact with key leaders in politics, security, the economy, and real estate, as well as the general population.

B-13. Life pattern analysis is connecting the relationships between places and people by tracking their patterns of life. While the enemy moves from point to point, reconnaissance or surveillance tracks and notes every location and person visited. Connections between those sites and persons to the target are built, and nodes in the enemy's network emerge. Link analysis and life pattern analysis identify these relationships in order to complete the targeting folder. To be effective, there must be sufficient intelligence on the network the HVI belongs to in order to know the effect of his removal. Just because he is the cell leader may not be a good enough reason to target him. How will the cell be degraded by his removal? How long will it take to replace him?

B-14. This analysis has the effect of revealing the HVI's physical infrastructure for things such as funding, meetings, headquarters, media outlets, and weapons supply points. As a result, the network becomes more visible and vulnerable. Nodal analysis uses the initial start point to generate additional start points that develop even more targeting opportunities within the enemy's network. The payoff of this analysis is huge but requires patience to allow the network's picture to develop over a long period of time.

B-15. Networks are notably resistant to the loss of any one or even several nodes. The focus of targeting is not just to identify an individual who is a leader in the network. Instead, it is to identify the critical leader whose removal will cause the most damage to the network. The ultimate success is to remove sufficient critical nodes simultaneously——or nearly so——such that the network cannot automatically reroute linkages, but suffers catastrophic failure.

INPUTS

B-16. Inputs to the find step:
- Commander's guidance and priorities.
- IPB, to include identified NAI, TAI, and cross cueing of intelligence disciplines to identify potential target sites or operational environments.
- Life pattern analysis.
- Collection plans based on the IPB.

OUTPUTS

B-17. Outputs of the find step:
- Potential HVI detected and nominated for further development.
- Targeting folders.
- HVI network identified and analyzed.

FIX

B-18. The continued collection effort paints a picture of the HVI. The intelligence staff officer can draw broad behavior patterns that will focus the specific collection requirements from analysis of the intelligence. The information harvested from the focused and persistent collection reveals the life patterns of the HVI including overnight locations, daily routes, visitations, and trustworthy associates. National and unit intelligence assets then corroborate the life patterns. As the details are filled in, it becomes possible to anticipate where the HVI is most likely to spend time or visit.

B-19. Maintaining persistent, continuous intelligence support is particularly hard at lower echelons of command and small units where intelligence assets are less available than at the brigade and higher echelons. At lower-echelon units, it is important for the command to establish intelligence support teams with personnel who know the targets and are trained in the unit SOPs for sensor preparation and briefings, patrol debriefings, data collection, and able to fuse this information with the unit's operational plan to finish the target.

B-20. As the probable location of the HVI target is narrowed to a few sites, the unit is able to identify feasible courses of action and begin refining the planned actions of the finish force. At some point the information leads the unit to determine a HVI target is likely to be a specific location (Fix) at a specific time or within a specific time frame. Depending on the accuracy and reliability of the information, the unit may chose to verify the information through other means. Once the unit is satisfied that the Fix is valid, they may chose to launch the finish force.

INPUTS

B-21. Inputs to the fix step:
- Probable HVI.
- Information on the target and the target's network.

OUTPUTS

B-22. Outputs of the fix step:
- Target identification and confirmation.
- Target location accuracy refined to the level required for target engagement.
- Determination or estimation of target time characteristics.

FINISH

B-23. The window of opportunity to engage the target requires a well-trained and rehearsed finish force and a well-developed SOP. The force will normally not have the time to create elaborate plans. Instead, the

force will be required to adapt a known drill to the existing conditions and rapidly execute the required actions, such as a raid, ambush or cordon and search. The force must also be prepared to conduct follow on operations based on information found during exploitation on the objective.

INPUTS

B-24. Inputs to the finish step:
- HVI location within a given time frame.

OUTPUTS

B-25. Outputs of the finish step:
- Target isolated and engaged.
- Target location secured.
- Exploitation force on site.

EXPLOIT

B-26. F3EAD differs from other targeting models because of its emphasis on the exploit and analyze steps as the main effort. This recognizes the importance of information in fighting the low contrast threat and aggressively supplying multisource start points for new information collection. More than the other steps, this feeds the intelligence operations cycle in which intelligence leads to operations that yield more intelligence leading to more operations. The emphasis on raids is essential to gather intelligence on the enemy network; simply killing the enemy will not lead to greater effectiveness against their networks. In fact, capturing the enemy for purposes of interrogating is normally the preferred option.

B-27. Once secured, the target site must be exploited. *Site Exploitation* is as a series of activities to recognize, collect, process, preserve, and analyze information, personnel, and materiel found during the conduct of operations (JP 3-31). Effective site exploitation requires prior planning to include SOP, search plans, prepared site exploitation kits, and tactical questioning plans. Units must make these preparations in advance of the finish step in order to enable effective actions on the objective. See Army, Tactics, Techniques, and Procedures manual 3-90.15 for a more detailed discussion of site exploitation activities and enablers.

B-28. The site exploitation team may have a variety of enablers in direct support, or it may come solely from the unit. In any case, they must have clear instructions on what to look for in the specific site and training in how to conduct the search and collection. Some units use smart cards with target specific information and predetermined questions. Such aids have been useful in preparing and guiding the exploitation teams. Some organizations prefer designated assault or exploitation units. Continual preparation for these type missions allows the development and refinement of SOP.

B-29. Target exploitation and document exploitation are important operations and intelligence activities critical to F3EAD. Documents and pocket litter, as well as information found on computers and cell phones, can provide clues that analysts need to evaluate enemy organizations, capabilities, and intentions. The threat's network becomes known a little more clearly by reading his email, financial records, media, and servers. Target and document exploitation help build the picture of the threat as a system of systems.

B-30. The tactical questioning of detainees is crucial to revealing the threat's network. The ability to talk to insurgent leaders, facilitators, and financiers about how the organization functions offers significant insight on how to take that organization apart. Intelligence from detainees drives operations, yielding more detainees for additional exploitation and intelligence.

INPUTS

B-31. Inputs to the exploit step:
- Secured target location.
- Targeted questions.

● Site exploitation preparation and SOP.

OUTPUTS

B-32. Outputs of the exploit step:
● Documented information.
● Detailed reports.
● Follow on targets for immediate execution.

ANALYZE

B-33. The bottom line of the analyze step is to examine and evaluate information and rapidly turn it into actionable intelligence that can be applied to defeat the threat's network. Some information may be immediately actionable, such as information providing the location of another HVI. Other information may need further analysis and corroboration.

B-34. The information requires the staff to streamline operations to allow for this data to be stored, analyzed, recalled, and disseminated as necessary. New or additional players must be included in the collection and assessment process. National and theater level technical assets will also be critical and mechanisms to facilitate their integration must be developed. All of this will require modifications of existing planning mechanisms and procedures, and learning how to incorporate new sources.

B-35. The objective is to make intelligence, not information. To do this you have to invest resources, and focus on preparation. The level of dedicated resources (mainly personnel) will have a direct correlation to the quality and quantity of developed intelligence. Too few resources result in an extrication of raw information effort, instead of an analytical and understanding effort. The right balance of personnel and resources creates a greater return; under or over resourced teams risk diminished returns.

INPUTS

B-36. Inputs to the analyze step:
● Document information.
● Detailed reports.

OUTPUTS

B-37. Outputs of the analyze step:
● Actionable intelligence.
● Correlated information.
● Intelligence assessments.

DISSEMINATE

B-38. The Disseminate step is simple but time consuming. The goal is to make sure everyone else knows what you know. Even information that appears to be irrelevant may hold the key to unlocking a network for someone else. Fortunately, the various computer programs and networks greatly aid the dissemination process.

B-39. Prioritizing the dissemination effort is essential. Some information will answer a PIR and should be forwarded to the requesting agency immediately. Other information may be important based on the operational environment. Still other information will be routine and can be handled routinely.

INPUTS

B-40. Inputs to the disseminate step:
● Relevant and correlated information.
● Actionable intelligence.

● Intelligence assessments.

OUTPUTS

B-41. Outputs of the disseminate step:
● Databases, matrices, and assessments are updated.
● Intelligence and information is pushed to higher, lower, and adjacent units.
● Information is made available to everyone with a need to know.

MEASURING SUCCESS

B-42. Measuring success when conducting F3EAD requires analysis conducted in two stages. The first stage occurs immediately after the finish step and should answer questions associated directly to the target and its network. Examples of first stage metrics include:
● Killed or captured insurgents.
● Changes in insurgent patterns.
● Captured equipment and documents.

B-43. The second stage of analysis takes the longer view. These metrics provide the yardstick for the JFC to examine progress made toward meeting objectives established in the joint campaign plan to include:
● Changes in local attitudes towards United States and Host Nation Forces to include public perceptions.
● Changes in the quality or quantity of information provided by individuals or groups.
● Changes in the economic or political situation of an area.

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Target Value Analysis Tool

CARVER is an acronym that stands for criticality, accessibility, recuperability, vulnerability, effect and recognizability and is a tool used to identify and rank (prioritize) specific targets so that attack resources can be efficiently used. CARVER is a target selection and risk or vulnerability assessment used by calculating the value of a given potential target and the ease with which such a target could be affected. CARVER helps to identify targets that are vulnerable to attack and for defensive purposes. The CARVER matrix can indicate high risk targets that require additional security assets allotted to them to prevent the degradation of these assets via enemy assault or terrorist action.

CARVER TOOL

CRITICALITY

C-1.   Criticality means target value. This is the primary consideration in targeting. A target is critical when its destruction or damage has a significant impact on military, political, or economic operations. Targets within a system must be considered in relation to other elements of the target system. The value of a target will change as the situation develops, requiring the use of the time-sensitive methods which respond to changing situations. For example, when one has few locomotives, railroad bridges may be less critical as targets; however, safeguarding bridges may be critical to maneuvering conventional forces which require use of such bridges.

ACCESSIBILITY

C-2.   A target is accessible when an operational element can reach the target with sufficient personnel and equipment to accomplish its mission. A target can be accessible even if it requires the assistance of knowledgeable insiders. This assessment entails identifying and studying critical paths that the operational element must take to achieve its objectives, and measuring those things that aid or impede access.

RECOUPERABILITY

C-3.   A target's recouperability is measured in time; that is, how long will it take to replace, repair, or bypass the destruction of or damage to the target? Recouperability varies with the sources and type of targeted components and the availability of spare parts availability.

VULNERABILITY

C-4.   A target is vulnerable if the operational element has the means and expertise to successfully attack the target. When determining the vulnerability of a target, the scale of the critical component needs to be compared with the capability of the attacking element to destroy or damage it.

EFFECT

C-5.   The effect of a target attack is a measure of possible military, political, economic, psychological, and sociological impacts at the target and beyond. This is closely related to the measure of target criticality. The type and magnitude of given effects desired will help planners select targets and target components for

attack. Effect in this context addresses all significant effects, whether desired or not, that may result once the selected target component is attacked. Traditionally, this element has addressed the effect on the local population, but now there are broader considerations.

RECOGNIZABILITY

C-6. A target's recognizability is the degree to which it can be recognized by an operational element and intelligence collection and reconnaissance assets under varying conditions. Weather has an obvious and significant impact on visibility. Rain, snow, and ground fog may obscure observation. Road segments with sparse vegetation and adjacent high ground provide excellent conditions for good observation. Distance, light, and season must also be considered. Table C-1 is an example of a CARVER matrix tool.

Table C-1. CARVER matrix tool

VALUE	CRITICALITY	ACCESSABILITY	RECOUPERABILITY	VULNERABILITY	EFFECT	RECOGNIZABILITY
5	Loss Would Be Mission Stopper	Easily Accessible Away From Security	Extremely Difficult To Replace, Long Down Time	Definitely Have The Means And Expertise To Attack	Favorable Impact On Civilians	Easily Recognized By All With No Confusion
4	Loss Would Reduce Mission Performance	Easily Accessible Outside	Difficult To Replace With Long Down Time (<1 Year)	Probably Have The Means And Expertise To Attack	Favorable Impact No Adverse Impact On Civilians	Easily Recognized By Most With Little Confusion
3	Loss Would Reduce Mission Performance	Accessible	Can Be Replaced In Relatively Short Time (Months)	May Have The Means And Expertise To Attack	Favorable Impact, Some Adverse Impact On Civilians	Recognized With Some Training
2	Loss May Reduce Mission Performance	Difficult To Gain Access	Easily Replaced In A Short Time (Weeks)	Little Capability To Attack	No Impact On Forces Adverse Impact On Civilians	Hard To Recognize Confusion Probable
1	Loss Would Reduce Mission Performance	Very Difficult To Gain Access	Easily Replaced In A Short Time (Days)	Very Little Capability To Attack	Unfavorable Impact Assured Adverse Impact On Civilians	Extremely Difficult To Recognize Without Extensive Orientation

C-7. For more information on how to use CARVER as a target value analysis tool see ATP 2-33.4 and ATP 3-05.20.

Appendix D

Example Formats and Target Reports

The targeting products developed during the targeting process are actually tools. The commander, the targeting working group, supporting, and supported units use them. The products allow them to control and synchronize targeting in an effective and efficient way. There are no prescribed formats. Each unit will develop tools that work best for them. Factors to consider in developing formats are as follows:

- Type and level of the command.
- Operating environment.
- Assets available.
- Missions.
- SOPs.

Regardless of the formats used, D3A methodology must be followed. Targeting products can be presented in many forms. These forms may be oral presentations, hard copy publications, or electronic format.

The purpose of this appendix is to provide a menu of formats and a focus on the targeting information and knowledge the commander and staff requires. The formats may be copied or modified by the targeting working group to support requirements of the command.

HIGH-PAYOFF TARGET LIST

D-1. The high-payoff target list (HPTL) in Table D-1 on page D-2 is an example of the basic format described in Chapter 2.

Table D-1 High-payoff target list (example)

Phase of the Operation – 1– Isolate the Enemy Unit		
Priority	Category	High-Payoff Targets
1	Fire Suuport	Artillery
2	Maneuver	Enemy Patrol
3	Command and Control	Enemy Operations Cell
4	Maneuver	Insurgent Team Leader
5	Manuever	IED or VBIED Cell

TARGET SELECTION STANDARDS

D-2. Target selection standards (see the sample format in Table D-2) are usually comprised of the essential elements listed in the target selection standards matrix. Units may develop their own target selection format:

- High-payoff target (HPT). This refers to the designated HPT that the collection manager is tasked to acquire.
- TIMELINESS. Valid targets are reported to weapon systems within the designated timeliness criteria.
- ACCURACY. Valid targets must be reported to the weapon system meeting the required TLE criteria. The criteria are the least restrictive TLE considering the capabilities of available weapons system.

Table D-2 Target selection standards matrix (example)

High-Payoff Target	Timeliness	Accuracy
Combat Outpost	3 hours	200 meters
RISTA	30 minutes	150 meters
Rocket Battery	30 minutes	100 meters
Missile Launcher	30 minutes	100 meters
Air Defense Artillery	15 minutes	100 meters
Command Post	3 hours	200 meters
Ammunition Holding Point	6 hours	200 meters
Enemy Troops	1 hour	150 meters

ATTACK GUIDANCE MATRIX

D-3. The AGM sample in table D-3 on page D-4 provides guidance on what HPT should be attacked and when and how they should be attacked. Units may develop their own AGM format. The AGM includes the following elements—

- High-payoff target. The high-payoff target column is a prioritized list of HPTs by phase of the operation.
- WHEN. The WHEN column indicates the time the target should be engaged. (See the legend below the example.)
- HOW. This column indicates the weapon system that will engage the target.
- EFFECT. The desired effects on the target or target system are stated in this column.
- REMARKS. Remarks concerning whether or not BDA is required, whether coordination must take place, and any restrictions are indicated in this column.

Table D-3. Attack guidance matrix (example)

High-payoff target	When	How	Effect	Remarks
Artillery	A	Field Artillery	Neutralize	Coordinate and ensure CFFZ and CFZ are emplaced and active
Enemy Patrol	A	Maneuver or UAS	Destroy	Maneuver engages target and calls in UAS strikes as necessary.
Enemy Operations Cell	P	Electronic Attack	Neutralize	Jam Communications at H-1
Insurgent Team Leader	I	SOF	Capture	Expedite to rear for interrogation and dissemination of information
IED or VBIED Cell	A	UAS	Destroy	Ensure FSCMs and ACMs are coordinated and in place for immediate engagement of target.

A – as acquired   ACMs – airspace coordinating measures CFFZ – call for fire zone CFZ – critical friendly zone
H – hour   I – immediate and special case IED – improvised explosive device FSCMs – fire support coordination measures
P – planned   SOF – special operations forces   UAS – unmanned aircraft system VBIED – vehicle borne improvised explosive device

TARGET SYNCHRONIZATION MATRIX

D-4. The sample target synchronization matrix table D-4 has been successfully used to synchronize targeting by assigning responsibilities to detect, deliver, and assess attacks on specific HPTs. The HPTs are listed in priority by category under the Decide column. Units and agencies are listed under the Detect, Deliver, and Assess columns across from the specific HPTs for which they are responsible. As responsibilities are fixed, the asset envisioned to be used is also indicated. This provides the targeting working group the checks to ensure all assets are used and that assets or agencies are not overtaxed. This matrix could also be prepared for a specific event or for each phase of the battle. Units may develop their own target synchronization matrix format.

Table D-4. Target synchronization matrix (example)

DECIDE			DETECT		DELIVER		ASSESS	
P	Category	HPTs	Agency	Asset	Agency	Asset	Agency	Asset
1	Fire Support	M46 Astros/ BM-21/ FROG. 2S5	FAB ------------- G-2 ------------- 313 MI	Q-36, Q-50 Q-37, Q-53 ------------- EAD assets ------------- Quickfix -	1-FAB 2-Avn	1-Artillery, MLRS -------------	Avn ------------- G-2 ------------- 313 MI	INFLTREP ------------- Analysis ------------- Quickfix
		------------- D-20, D-30 ------------- Atk Hel	------------- FAB ------------- 3-4 ADA	------------- Q-50, Q-53 ------------- Organic National	------------- FAB ------------- 3-4 ADA FAB	Artillery, MLRS Organic Artillery, MLRS	------------- ------------- 3-4 ADA	------------- ------------- Organic
2	ADA	SA-6, SA-8, SA-11 ZSU-23 S16	G-2	National Imagery And Electronic intelligence	FAB ------------- G-3/EWSO	SEAD Arty, MLRS ------------- EF-111, F4G	G-2	National Imagery And Electronic Intelligence
3	Recon	ARK-1 ---------- Patrols, Ops	Air Force ------------- G-2 ------------- BCT	National Imagery And Electronic Intelligence Organic	FAB ------------- BCT	Artillery, MLRS ---------- Organic Artillery	Air Force ------------- G-2 ------------- BCT	INFLTREP ------------- EAD ELINT ------------- Organic Intelligence Assets

ADA – air defense artillery, Arty – artillery, Atk Hel - attack helicopter, Avn – aviation, BCT – brigade combat team,
EAD – echelons above division, EWSO – electronic warfare support officer, FAB – field artillery brigade,
G-2 – Intelligence staff officer, G-3 operations staff officer, HPTs – high payoff targets, INFLTREP – in flight report,
MI – military intelligence, MLRS – multiple launch rocket system, Ops – operations, P – priority, Recon – reconnaissance,
SEAD – suppression of enemy air defenses

D-5. The following steps are a recommended way of completing the target synchronization matrix while conducting the targeting working group.

D-6. **Step One.** Select, or update the HPTL. These targets are derived from the S-2's list of HVTs.

D-7. **Step Two.** Determine and prioritize collection assets responsible for detecting, confirming, or denying the location of each suspected target or HPT. This information should then be entered into the "detect" portion of the targeting synchronization matrix. See figure D-6. Be specific, state what unit or asset must detect or confirm or deny the location of each specific target. Clear and concise tasking must be given to acquisition assets and resources. Mobile HPT targets must be detected and tracked to maintain current target location. Assets and resources should be placed in the best position according to estimates of when and where the enemy targets will be. Consider assigning a NAI to the target and enter the number on the targeting synchronization matrix.

D-8. **Step Three**. Determine which attack asset or resource will be used to attack each target once detected or confirmed by using the list of delivery assets and resources available. Enter this information into the "deliver" portion of the target synchronization matrix. The lethal and nonlethal effects and applicable aspects of electronic warfare and information related capabilities are considered depending on the commander's targeting guidance and desired effects. Consider redundant means to attack each target. When determining an attack asset or resource for each target, the attack guidance is also determined and entered. Determine for each delivery means when to attack the target (immediately, as acquired, or planned) and the effects to be achieved by attacking the target. For example the effects of Army indirect fires, joint fires, and electronic warfare, including nonlethal effects can be to deceive, degrade, delay, deny, destroy, disrupt, divert, exploit, interdict, neutralize, or suppress the target.

D-9. **Step Four**. Determine and prioritize which assets will assess how well the attack was executed and whether desired effects were achieved on targets. Enter this information into the "assess" portion of the target synchronization matrix

D-10. Both nonlethal and lethal assets may be included in the same matrix. Tables D-5 and D-6 provide an example of a combined lethal and nonlethal target synchronization matrix.

Table D-5. Lethal and nonlethal target synchronization matrix (example)

JFC Objective: US/ allied nationals, facilities and interests in region protected.

JFC Desired Effect: Country X unable to affect our ability to generate combat power (4th order effect).

Division Desired Effect: Enemy X unable to regain control of airfield (3rd order effect).

BCT Task: Prior to H-4:00 1st BCT *disrupts* 91st Battalion indirect fire system (81-mm mortar) in Area of Operations HOG that can place indirect fires against GERONIMO forward landing site and RTE GOLD low water crossings from H-03:00 to H+36.

Purpose: To enable 2d BCT to seize lodgment, build combat power unimpeded, and transition to offensive operations (2nd order effect).

BCT Desired Effect (End State): No effective enemy fires into the GERONIMO forward landing strip and Route GOLD low water crossings from H-03:00 to H+36, when the enemy is expected to infiltrate additional systems from adjacent areas of operation.

Decide					*Detect*		*Deliver*		*Assess*			
BCT Commander's Desired Effects:	*Target*	*CAT*	*Named Area of Interest/Target Area of Interest (grid)*	*Time Trigger*	*Agency*	*Means*	*Agency*	*Means*	*Agency*	*Asset*	*MOP*	*MOE*
Mortar crews/forward observers unable to function effectively	91st Bn mortar crews and forward observers	FS	TAI 156 and 157	H-36	BCT Military Intelligence Company	Shadow unmanned aircraft system detects mortar positions	Supporting Division/ Corps Aviation Battalion	UH-60 *influences* mortar crews and forward observers to abandon mortars by dropping Leaflet IP J123 & 124	BCT Military Intelligence Company	Shadow unmanned aircraft system and HUMINT	Leaflets dropped effectively; 30% of mortar positions unmanned	91st Bn unable to communicate or deliver effective fires — thus: 91st Bn fires into GERONIMO forward landing site and Route GOLD low water crossing disrupted from H-03:00 to H+36, when the enemy is expected to infiltrate additional systems from adjacent areas of operation. — thus: 2d BCT able to seize lodgment, build combat power un-impeded, and transition to offensive operations
Local leaders and populace willing and able to supply timely and accurate intelligence	Village leaders and populace	HUMINT	Villages in the vicinity of TAI 156 and 157	H-36 & H-24	BCT Combined Arms Battalion; BCT Military Intelligence Company	Patrols conduct recon and post handbills	Tactical Humint Team	Supporting Division/Corp s Civil Affairs Teams deliver handbill to *influence* local leaders and populace IP J110	BCT Military Intelligence Company and Civil Affairs Teams (DS)	HUMINT; Patrols	Local leaders and populace report mortar locations and number of deserters that may be mortar crews or forward observers.	
Fire support command and control rendered ineffective.	91st Bn C2	FS	Area of Operation HOG	H-8 to H-Hour	BCT Military Intelligence Company	PROPHET detects locates and monitors 91st Bn comms	BCT Military Intelligence; Supporting Joint Force capabilities	Commando Solo Net *disrupts* 91st Bn comms by intrusions on 91st Bn frequency modulation CFF & C2 net w/message IJ 3210	BCT Military Intelligence Company	PROPHET	No comms from 91st Bn detected; fire support C2 effectively disrupted	
Mortars systems unable to function (destroyed).	91st Bn mortars	FS	TAI 156 and 157	H-12:00 to H-4:00	BCT Organic FA Battalion (155-mm)	Friendly WLR detect firing by 91st Bn mortars and locate mortar positions	BCT Organic FA Battalion; Naval gunfire USS Winston Churchill CAS H-8 to H-4 (Alt)	Btry 3 variable time fuze; 6 Salvo CVT; A-10w/ Cluster Bomb Unit MK84 *destroys* 91 AFF mortars	BCT Military Intelligence Company Aerial Recon Plt	Shadow unmanned aircraft	50% of 91st Bn mortars destroyed	

ALT – alternate, BCT – brigade combat team , Bn– battalion , Btry – battery , C2 – command and control , CAS – close air support , CAT- category, comms – communications , CFF – call for fire .DS – direct support , FA – field artillery , FS – fire support , H – hour, HHB – headquarters & headquarters battery , HUMINT – human intelligence JFC – joint force commander MOE - measure of effectiveness MOP – measure of performance plt – platoon PID – plan identification number recon – reconnaissance , RTE – route, TAI – target area of interest , w – with WLR – weapons locating radar

Table D-6. Alternative target synchronization matrix format (example)

Decide				Detect				Deliver					Assess	
Target Status	Location	Target	Target No.	Detect Unit	Asset	Detection window		Deliver Unit	Asset	When	Method (How)	Effects Remarks	MOP	MOE
Active	QU573773	120-mm Mortars (FS)	AF5045	2-11 FA	Weapons Locating Radar	1100	1400	HHB 2-11FA	Arty 155-mm	A	PLT 2 Rounds	Mortar(s) Systems Destroyed	Radar assets scanning and detecting	FOB receives no 120-mm mortar fire within a five day period
Active	Frafleville	John Doe	AF5050	2-11 FA	Leader Engagement	0900	1800	B 2-11 FA	B Btry Cdr	P	Enforce Info Themes	Insurgency disrupted	Meeting Conducted with village leader	Violence decreases by 50% in next 2 months
Active	Frafleville	John Doe	AF5105	2-11 FA	Tactical High Terminal Leader Engagement Joint Patrols	0700	1600	B 2-11 FA	B Btry Cdr	A	Develop HUMINT	HUMINT Gained and Insurgency disrupted	HUMINT teams conduct operations in Frafleville	Actionable Intel and IED/VBIED activity decreases 50% in next 2 months
Active	Main supply route alternate supply route lateral routes	VBIED (line of comm)	AF5055	2-11 FA	CAS Rotor wing Raven Tactical High Terminal combat patrols	0700	1900	Start CAS Rotor wing 155-mm moving combat patrols	All	A	JTAC JFO	VBIED destroyed	Assets conduct surveillance of routes	Actionable Intel and IED/VBIED Activity decreases 50% in next 2 months

A – as acquired, Arty – artillery, B – bravo, Btry – battery, comm – communication, FA – field artillery, FOB – forward operating base, FS – fire support, HUMINT – human intelligence, IED – improvised explosive device Intel – intelligence, JFO – joint fires observer, JTAC – joint tactical air controller, mm – millimeter, PLT – platoon, No. – number
P – planned, VBIED – vehicle borne improvised explosive device

DELIVERY STANDARDS MATRIX

D-11. The sample delivery standards matrix provides criteria for the attack of HPTs in each phase of the battle. Units may develop their own delivery standards matrix format. It also facilitates objective decision-making for attacking targets at the lowest level possible. Key personnel, such as the FAIO, fires cell targeting officer, and the battalion fire direction officer, all refer to the matrix. When HPTs are identified they are automatically engaged if they meet the criteria established by the matrix. See table D-7 on page D-8. The matrix provides the following descriptions for each HPT by category for each phase of the operations:

- TLE.
- Size of the target.
- Target activity.
- Time of acquisition.

Table D-7. Delivery standards matrix (example)

Category	HPTs	Target Location Error			Size of Unit			Stationary/Moving			Time (Last Verification)		
		FAB FA Bn	CAS/AI	Atk Hel	CAS/AI	FAB FA Bn	Atk Hel	FAB FA Bn	CAS/AI	Atk Hel	FAB FA Bn	CAS/AI	Atk Hel
Recon	OPS	100 m – 200 m	200 m	500 m	Section	Section	Section	Stat	Stat	Stat	72 hrs	72 hrs	48 hrs
	Patrols	100 m – 200 m	200 m	1 km	Section	Section	Section	Stat	Stat	Stat/ Moving	2 hrs	1 hr	1 hr
	ARK-1	100 m – 200 m	200 m	1 km	Section	Sec	Section	Stat	Stat	Stat/ Moving	12 hrs	6 hrs	6 hrs
ADA	SA-6, -8, -13	100 m – 200 m	200 m		Section	Section		Stat	Stat		2 hrs	1 hr	
	S60	100 m – 200 m	200m		Section	Section		Stat	Stat		2 hrs	1 hr	
	ZSU-23	100 m – 200 m	200 m		Section	Section		Stat	Stat		2 hrs	1 hr	
Fire Support	SCUD	100 m – 200 m	200 m	500 m	Btry	Bn	Bn	Stat	Stat	Stat	1 hr	2 hrs	2 hrs
	BM-21	100 m – 200 m	200 m	1 km	Btry	Bn	Bn	Stat	Stat	Stat/ Moving	1 hr	2 hrs	2 hrs
	2S5, M46	100 m – 200 m	200 m	1 km	Btry	Bn	Bn	Stat	Stat	Stat/ Moving	1 hr	2 hrs	2 hrs

ADA – air defense artillery, AI – air interdiction, ARK-1 Enemy Radar, Atk – attack, BM-21 Enemy Multiple Rocket Launcher, Bn – battalion,
Btry – battery, CAS – close air support, FA – field artillery, FAB – field artillery brigade, Hel – helicopter, hr – hour, hrs – hours, m – meters, M46-towed gun
OPS – operations, Recon – reconnaissance, SA – 6 Enemy ADA system, SA-8 Enemy ADA system, SA-13 Enemy ADA system,
SCUD – enemy rocket, Stat – stationary, S60 – Enemy ADA system, ZSU-23 – Enemy Air Defense system, 2S5 – enemy self –propelled gun

TARGET REPORT

D-12. When targeting information is passed from one agency to another, all essential information must be included to allow for proper analysis and attack. The sample format below will give the targeting working group enough information to properly formulate the best attack response. See table D-8.

Table D-8. Target report (example)

```
Line number

1. Report agency:     forward observer

2. Type of sensor:     human

3. Report DTG: 190044ZAug14

4. Acquisition DTG¹:  190042ZAug14

5. Distribution:     Unknown

6. Posture²:    In the open

7. Activity³; Stationary uploading ammunition and IED materials

8. Size⁴: 5 small white pick-up trucks

9. Location⁵:   1000010000

10. Target Location Error⁶:   10 meters



Notes:

 ¹DTG - Date time group is Zulu time or Greenwich Mean Time.

 ²Dug-in, in the open, in built up areas.

 ³Moving (direction) or stationary.

 ⁴Unit Size, diameter.

 ⁵Grid coordinates.

 ⁶+/- meters.
```

AIR TASKING ORDERS

D-13. The ATO is a method used to task and disseminate to components, subordinate units, and other agencies the projected sorties, capabilities, and forces to targets and specific missions. Normally provides specific instructions to include call signs, targets, controlling agencies, weapons loads, as well as special instructions. JP 3-30). The joint air tasking cycle is used to develop the ATO that specifies the taskings for all joint air operations for a specific execution timeframe, normally 24 hours.

D-14. The air operations center normally establishes a 72-96 hour air tasking planning cycle. The battle rhythm or daily operations cycle (schedule of events) lists the suspense for targeting, air support requests, airspace control means requests, and the air battle plan. See JP 3-30 for more information and its format.

TARGET INFORMATION FOLDER

D-15. Target information folders have proven to be an efficient and effective way of tracking information related to high-value individuals (HVI). The target information folders normally include a baseball card, which is a summary of the key information on the HVI. The baseball card normally includes:
- Map of HVI area.
- Picture of HVI.
- Personal history of HVI.
- Patterns of life for HVI includes the where, when, who, what, and the how.
- Cell phone number for HVI.
- Vehicle identification.

D-16. The target information folder will also contain additional information as it becomes available:
- Human intelligence reports on the HVI.
- Signal intelligence reports that reference the HVI.

- Imagery and floor plans of likely areas.
- Link diagrams (social and communications networking), both from human intelligence and signal intelligence sources.
- Previous concept of operations targeting the HVI.
- Patrol debriefs.
- Significant activities regarding the HVI.
- Biometrics.

D-17. Figures D-1 through D-6 on pages D-10 through D-14 are samples of the information that may be contained in a target information folder.

Figure D-1. Baseball card (front side)(sample)

TARGET: JOHN DOE		UNCLASSIFIED (EXAMPLE)	4-1 ID

NUMBER: UN4522	AREA: FRAFLEVILLE	MAIN: 810	STREET:	HOUSE:

Targeted By: 4 -1 ID	Area of Operations:	TF 2 -2	Trigger:	HUMINT

Tactical Questioning	Assessment
1. Who are his subordinate? Where are they? 2. Do you have any caches? Where are they?	No assessment of activity.

Other Information	Operations
	Known Associations

Figure D-2. Baseball card (backside) (sample)

Figure D-3. Picture of HVI residence (sample)

TARGET: JOHN DOE		UNCLASSIFIED (EXAMPLE)	4-1 ID
NUMBER: UN4522	AREA: FRAFLEVILLE	MAIN: 810	STREET:	HOUSE:
Targeted By: 4-1 ID	Area of Operations:	TF 2-2	Trigger:	HUMINT

Link Diagram

Frafleville Cell

Crocker Sky

Village of Frafleville

JOHN DOE — Possibly the same person — Ducker Means

AJ7006 Possibly moved with Cornvillians from Chickenville

LEADERSHIP

AJ4706

Village of Frafleville

Recruiter — Blue Jet

Financier — UNK

Weapon Supplier — UNK

Specialist — UNK

FACILITATORS

Village Elder Ocean Water

Village Mayor Red Brick

OPERATORS

Figure D-4. HVI link diagram (sample)

TARGET: JOHN DOE			UNCLASSIFIED (EXAMPLE)	4-1 ID
NUMBER: UN4522	AREA: FRAFLEVILLE	MAIN: 810	STREET:	HOUSE:
Targeted By: 4 -1 ID	Area of Operations:	TF 2-2	Trigger:	HUMINT

Reporting			
Report Summary	Report Number	Source	DOI
(U/REL EXAMPLE) on 1 Aug 2014 John Doe met with an associate in Kansas City.	SPOT-41D-12-123-12-1234	UNKNOWN	1 Aug 14
(U/REL EXAMPLE) John Doe met with Don Roday 4 Aug 2014 to discuss IED operations in Lansing.	DIR -4ID-12-123-1234	OTS -123-1234-56	4 Aug 14

Figure D-5. HVI reports (sample)

TARGET: JOHN DOE			UNCLASSIFIED (EXAMPLE)	4-1 ID
NUMBER: UN4522	AREA: FRAFLEVILLE	MAIN: 810	STREET:	HOUSE:
Targeted By: 41 ID	Area of Operations:	TF 2-2	Trigger:	HUMINT

Summary Assessment
- John Doe was responsible for the attacks against people on 10 Aug 2014.
- Responsible for 12 August 2014 holdup of National bank.

Intelligence Groups
- Where is he getting his weapons from?
- Who is under his leadership?
- Where is he bedding now?
- Where are his caches

Work Pending

Figure D-6. HVI summary assessment (sample)

Appendix E
Targeting Checklist

DECIDE

_____The commander's planning guidance and intent contain enough detail to enable the targeting working group to determine—
- HVTs to nominate as HPTs.
- Desired effects on each HPT.
- When to attack each HPT.
- How to attack each HPT.
- Any restrictions or constraints.
- Which HPT requires BDA.

_____What targeting assets (organic, attached, and supporting) are available to detect and attack HPTs?

_____What detect, deliver, and assess support is needed from higher headquarters?

_____When must requests to higher headquarters be submitted to obtain the support required?

_____Have target tracking responsibilities been established?

_____Are systems in place to pass the detected targets to assets that are capable of tracking them?

_____What detect, deliver, and assess support is required from subordinate units, and when is it required?

_____What detect, deliver, and assess support requests have been received from subordinate units, and what has been done with them?

_____Has the target synchronization matrix been synchronized with the decision support template and the maneuver and fire support plans?

_____Are all commands using a common datum for locations? If not, are procedures in place to correct differences in datum?

_____Are all commands on a common time zone standard?

DETECT

_____Does the collection plan focus on PIRs and finding the necessary HPTs?

_____What accuracy, timeliness, and validity standards target selection standards are in effect for detection and delivery systems?

_____Are all target acquisition assets fully employed?

_____Have alternate target acquisition systems been identified for HPTs?

_____Have responsibilities been assigned to the appropriate unit agency for detection of each HPT?

_____Are HPTs being tracked?

_____Have verification procedures using alternate systems been established where necessary?

_____Are target acquisition and BDA requirements distributed properly among systems that can accomplish both?

DELIVER

_____Have responsibilities been assigned to the appropriate unit or agency for engagement of each HPT?

_____Has an alternate engagement asset been identified for each HPT? (The primary system may not be available at the time the HPT is verified.)

_____Have applicable FSCMs, airspace coordinating measures and clearance procedures, and the AGM been established to facilitate target engagement?

_____Have on-order FSCMs and airspace coordinating measures and AGM been established to facilitate future and transition operations?

_____Have potential fratricide situations been identified, and have procedures been established to positively control each situation?

_____Have responsibilities been assigned to the appropriate unit or agency for tracking specified HPT and providing BDA on specified HPTs?

_____What are the procedures to update the HPTL and synchronize the AGM and decision support template if it becomes necessary to change the scheme of maneuver and fire support as the situation changes?

ASSESS

_____Are the collection assets, linked to specific HPTs, still available?

_____Has the collection manager been notified of the engagement of a target requiring assessment?

_____Have the assessment asset managers been updated as to the actual target location?

_____Has all coordination been accomplished for the assessment mission, particularly airborne assets?

_____What is the status of BDA collection?

_____Has the information from the mission been delivered to the appropriate agency for evaluation?

_____Has the targeting working group reviewed the BDA to determine if requests for restrike are required?

_____Has the target intelligence gathered from the assessment been incorporated into the overall threat situational development?

Appendix F

Sample Targeting Working Group Standard Operating Procedures

This appendix provides guidelines for developing a standard operating procedure (SOP) for targeting working groups. Each unit must develop an SOP that is based on the unique mission, organization, equipment, personnel, and philosophy of the commander.

TARGETING WORKING GROUP SOP

F-1.   The following example of a targeting working group SOP covers most of the functional areas needing standardization in corps and division targeting working groups. The SOP may be adjusted to serve as a model for brigade and lower echelons.

PURPOSE

F-2.   The SOP provides guidelines, routine functions, and delineates responsibilities for operations in the targeting working group.

ORGANIZATION

F-3.   The FSCOORD or DFSCOORD leads the targeting working group. In their absence, the operations officer will be the alternate. Membership of the targeting working group routinely consists of representatives from the following staff sections and major subordinate commands. The composition of the targeting working group is a command decision and may vary based on the operation. See Table F-1 on page F-2 for an example of the representatives that may form the division targeting working group.

Table F-1 Division targeting working group (example)

Assistant Chief of Staff	Fire Support Coordinator	Deputy Fire Support Coordinator	Information Operations Officer
Intelligence Officer	Intelligence Plans Officer	Aviation Liaison Officer	Staff Weather Officer
Operations Officer	Intelligence	Public Affairs Officer	Air Naval Gunfire Liaison Company
Signal Officer	Targeting Officer	Military Information Support Operations	Cyber Electromagnetic Officer
Civil Affairs Officer	Plans	Chemical, Biological, Radiological, and Nuclear Officer	Deception Staff Officer
Targeting Officer	Operations	Special Operations Forces Liaison	Field Artillery Intelligence Officer
Staff Judge Advocate	Collection Manager	Psychological Operations Officer	Engineer
Air and Missile Defense	Electronic Warfare Officer	Fires Cell	Chaplain

CONDUCT

F-4.   The targeting working group agenda is divided and briefed during current and future operations. (See Table F-2.) The FSCOORD or DFSCOORD directs the process and keeps the members focused on the unit mission, commander's intent, targeting guidance, and targeting priorities. The targeting agenda is included in routine staff meetings or drills. Meeting times should be established to allow timely coordination of the parallel targeting effort of senior and subordinate headquarters.

Table F-2 Targeting working group agenda (Example)

What	Who	Why
Current situation report and commander's critical information requirements	Operations officer or representative	Situation Update
Current enemy situation	All source production section	Provide planning baseline
Special staff considerations	As directed	As requested
Air Status Army Aviation Status	Air liaison officer Army aviation representative	Update Allocations Review Status And Mission
Collection plan	Air and missile defense	Projected 72-Hour Focus
Electronic warfare status	Electronic warfare representative	Review Baseline Priorities
24, 48, 72, and 96 Hour Forecast 24, 48, 72, and 96- hours correspond to the Air Tasking Order cycle.	Plans All source production section Targeting officer	Projected Division Operations
Approve Nominations: Long-Range Target Focus	Chief of Staff	Decision
Review Attack Guidance and high-payoff target list	Deputy Fire Support Coordinator	Validate; recommended change
Final Guidance	Chief of Staff	Execution

F-5. The staff weather officer begins the session by providing current and predicted weather and its effects on combat operations for the next 72 to 96 hours. Next, the team examines the current situation (present out to 96 hours). The intelligence officer and operations officer brief the enemy and friendly situation with emphasis on anticipated actions during the period of the targeting cycle. The intelligence collection manager briefs battle damage collection currently in effect and possible HPT nominations for immediate reengagement.

F-6. The current operations agenda involves enemy and friendly situation updates from the intelligence and operations officers that impact on the HPTL and the AGM. They confirm the joint air missions for the following day, nominated targets, or changes to targets. A significant change in the situation would warrant redirecting allocated joint air capabilities. If there are no significant changes, planning continues for the use

of aircraft to support ground operations. The operations plans officer briefs a review of operations planning for the next targeting cycle. The operations officer briefs the concept of operations against the targets assigned. The intelligence collection manager briefs the collection plan to validate targets and pursue BDA based on the target guidance and target priorities. The executors of planed operations brief their respective execution matrixes and conduct any remaining staff coordination needed.

F-7. The future operations agenda involves the intelligence officer and operations officer briefing the anticipated enemy and friendly situations. A review of the war gaming session for this time period is discussed. Recommended target guidance, target priorities, and objectives are provided to the commander for approval at the targeting board. Targets nominated to support corps and division objectives and priorities are approved and forwarded through channels to the battlefield coordination detachment. The operations officer briefs shaping operations and attacks for corps or division assets.

F-8. Scheduled meetings between corps and division provide an interactive process for planning and coordinating the allocation of available joint air capabilities during the execution of the joint air tasking cycle (see figure F-1). These meetings synchronize corps and division current and future operations with usually at least five joint ATOs at any given time for future actions, today's plan, tomorrow's plan, and the day after tomorrow's plan to include the plan in strategy development. The continuous assessment conducted during these meetings allows for the targeting working group to focus on lessons learned, deliberate targeting, and TST in the detect and deliver functions during the decide, detect, deliver , and assess D3A methodology.
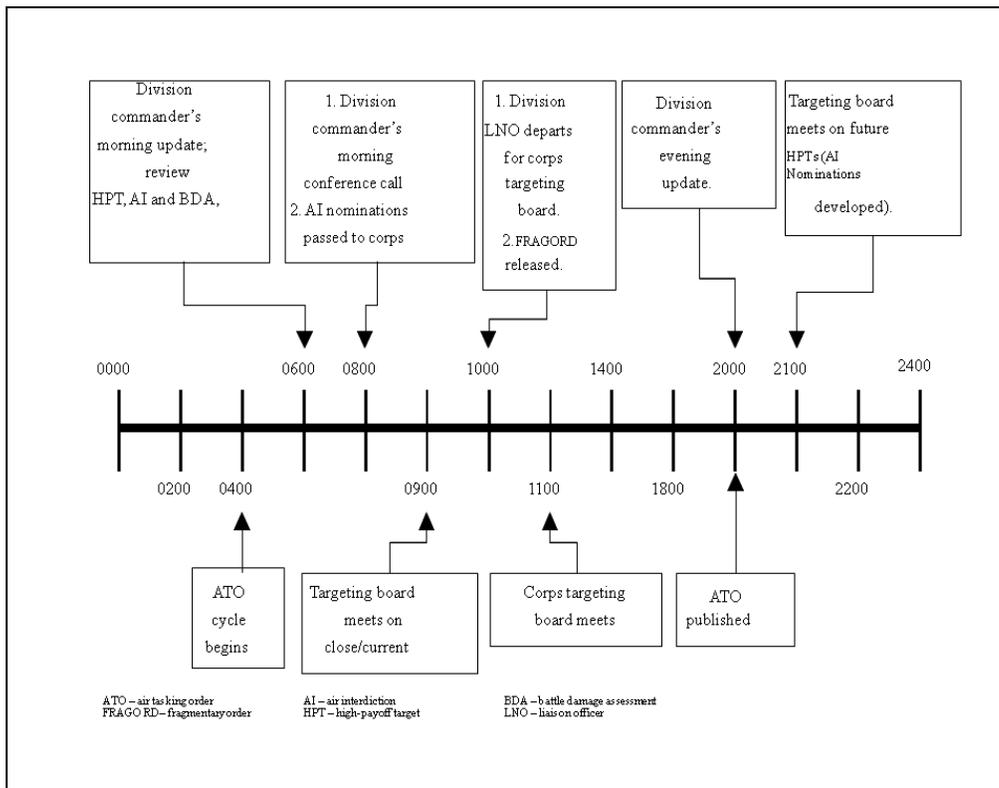
Figure F-1. Meeting times interface between corps and division (example)

PERSONNEL RESPONSIBILITIES AND CURRENT OPERATIONS AGENDA

F-9. The following paragraphs discuss the responsibilities of individual staff officers and sections for the current operations agenda.

Staff weather officer

F-10. The staff weather officer briefs the weather forecast to include light and weather data for the next 96 hours. The light and weather data impacts friendly air operations for fixed-wing and rotary-wing aircraft.

Operations

F-11. Briefs recently completed or ongoing attacks and their effects on the current battle. Current operations briefs the:

- Changes to task organization.
- Current FSCMs.
- Relative combat power of all friendly maneuver brigade size units.
- Friendly maneuver unit locations.
- Friendly operations (last 24 hours).
- Friendly scheme of maneuver (next 48 – 96 hours).

F-12. Representatives of the executing agencies of each shaping operations (corps or division aviation, special operations forces, and others as needed) brief their execution matrix. They may request input or additional guidance from the chief of staff.

Targeting officer

F-13. The targeting officer presents BDA obtained from division, corps, and echelons above corps intelligence gathering assets on critical HPT attacked by division, corps, supporting, and subordinate units. Specificity and timeliness are essential. The targeting officer must be proactive in receiving BDA because the degradation of specific targets may be a trigger mechanism for future operations. The corps intelligence officer and aviation combat element help the targeting officer review and formulate BDA. Target nominations for immediate reattack of HPTs are made at this time.

Plans

F-14. The intelligence plans officer briefs the disposition of important enemy units and associated systems impact on the unit mission. The intelligence officer also briefs the most likely enemy COA in the next 48 to 96 hours.

F-15. The operations plans officer reviews the plans for the next 48 to 96 hours that have been handed off to subordinate units for execution. The operations officer briefs the current concept of operations.

Fires Cell

F-16. The FSCOORD or DFSCOORD discusses the approved targeting guidance, HPTL, AGM, and target selection standards with the team in light of the intelligence and operations situation briefings. The team determines if changes are required.

Collection Manager

F-17. The collection manager reviews the intelligence collection plan for all division, corps, and echelons above corps systems that will assist in targeting. The collection management officer highlights those HPT that cannot be covered with available assets. The guidance is received from the operations officer on specific or additional requirements.

Air Liaison Officer

F-18. The air liaison officer (ALO) works closely with the land operations planners to estimate the most likely outcome resulting from employing joint air assets to achieve a specific effect. The following is presented for each target:

- Description.
- Location.

- Type and amount of aircraft to attack (package).
- Ordnance.
- Time on target.
- Any significant changes based on the friendly or enemy situation can direct a force package to operate in a different part of the area of operations. It must be approved by the chief of staff because of their knowledge of the complete operational picture.

Information Operations Officer

F-19. The information operations officer briefs the:
- Command operational picture for information related capabilities.
- Requirements for combat camera and operations security.
- Running estimate for information related capabilities.
- Deconfliction methods for internal and external actions.
- Coordination with outside agencies, higher headquarters, and augmenting forces.

Civil Affairs Officer

F-20. The civil affairs officer briefs the current civilian situation which covers the effect of civilian population on an operation, plans for civilian interference in the area of operations, and the civil affairs mission. Advises the commander on the employment of military units and assets that can support civil affairs operations.

RESPONSIBILITIES FUTURE OPERATIONS AGENDA

F-21. The following paragraphs discuss the responsibilities of individual staff officers and sections for the future operations agenda. There are three primary briefers for the future operations agenda; they are the intelligence, operations plans officers, and the fires cell representative (usually the DFSCOORD or fire support officer [FSO]). Others who might brief during the future operations agenda (depending on the affect targeting has on their mission areas) include the:
- Aviation liaison officers.
- Fires cell targeting officer.
- Engineer.
- Information operations officer.
- Deception officer.
- Electronic warfare (EW) officer.
- Special operations forces liaison (if provided).
- Staff judge advocate representative.
- Air and missile defense element representative.
- Army aviation section representative.
- Liaison officers.
- Civil affairs representative.
- Chemical, biological, radiological, and nuclear officer.
- Military information support operations representative.
- Signal support officer.

Plans Officer

F-22. The intelligence plans officer briefs the disposition of important enemy units and associated systems impacting on the unit mission. He also briefs the most likely enemy COA. This briefing includes enemy follow on forces anticipated to be committed in the unit sector and other forces that will affect future operations. The briefing includes potential HPT that if nominated for attack, meet the commander's intent and if not attacked will significantly impact the future OPLAN.

Plans Officer

F-23. The operations plans officer will brief any operations planned during this time period, and briefs any branches or sequels to the current OPLAN.

Fires Cell

F-24. The DFSCOORD presents a proposed decision briefing to the working group for the targeting board on proposed targeting guidance and priorities. This includes:

- Recommended target guidance, objectives, and priorities.
- Recommended HPTL, AGM, and target selection standards.
- Proposed prioritized target list to be forwarded to higher headquarters for execution and targeting tasking for subordinate units.

Aviation Liaison Officer

F-25. The Aviation liaison officer answers any questions that the team may have on the capabilities of Army aviation assets. The liaison officer takes the lead in planning attacks on all viable targets with aviation assets.

Information Operations Officer

F-26. The information operations officer answers questions during the operations process to include:

- Synchronizing appropriate information related capabilities with the fires, maneuver, and other warfighting functions.
- Assessing enemy vulnerabilities, friendly capabilities, and friendly missions.
- Nominating targets for engagement.
- Providing operation security measures.

Targeting Officer

F-27. The targeting officer prepares information briefings for the deputy fire support coordinator to include—

- Targeting guidance and priorities.
- The targeting working group meeting agenda.
- HPTL, AGM, and target selection standards.

F-28. The HPTL include HPT nominations submitted by the subordinate units to the unit fires cell. The targets are prioritized based on approved targeting guidance and priorities. The targeting officer also updates the situation map and provides the team with all current and proposed FSCMs. The targeting officer is also responsible for consolidating, coordinating, providing to the team for approval and disseminating the restricted target list, and no-strike list. The list includes historical, religious, educational, civic, and humanitarian sites within the unit boundaries.

Engineer Officer

F-29. The unit engineer officer provides expertise on enemy capabilities for bridging, breaching, and infrastructure construction. The engineer officer helps the targeting working group determine target feasibility of enemy engineer equipment. Specifically, the engineer officer or his representative must be prepared to discuss:

- The width of a gap that the enemy can bridge.
- The depth of any minefields the enemy can breach and location of breach sites.
- The ability of the enemy to repair bridges, roads, airfields, and ports.
- The obstacles plan is included in target planning.

Deception Officer

F-30. The deception officer advises the team on conflicts between targeting and deception plans.

Electronic Warfare Officer

F-31. The EW officer advises the working group members on the capability and availability of all EW assets.

Special Operations Forces Liaison

F-32. The special operations forces liaison or liaison element (when provided) advises the working group on special operations forces missions in the area of operations and their capabilities as they relate to targeting. The special operations element also helps formulate FSCMs established to protect special operations forces.

Staff Judge Advocate Representative

F-33. The staff judge advocate's representative on the targeting working group will provide analysis and advice throughout the planning process to ensure compliance with the rules of engagement and all applicable laws.

Air and Missile Defense Officer

F-34. The air and missile defense officer is responsible for deconflicting airspace management and coordination.

Liaison Officer

F-35. The division or brigade liaison officer addresses the concerns of their commanders pertaining to targeting and future operations. They are prepared to discuss their commander's targeting priorities, future plans, and air interdiction target nominations. The discussion prepares the unit staff to support and anticipate the targeting needs of subordinate units. The liaison officer is prepared to discuss updates to FSCMs.

Civil Affairs Representative

F-36. The civil affairs representative verifies the no-strike and restricted target lists and helps the working group answer questions on collateral damage issues. Civil affairs conduct detailed assessments of the local population and the area of operations. The assessments are used to provide information on which targets might have positive or negative effects on morale or infrastructure and logistics systems of the enemy. The civil affairs representative also advises on the expected number and direction of flow of dislocated civilians and how they may interfere with military operations.

Chemical Biological Radiological and Nuclear Officer

F-37. The unit chemical, biological, radiological, and nuclear officer provides technical expertise on threats and hazards and possible effects these can have on friendly forces if employed by the enemy. The officer helps the targeting working group determine target feasibility of these threats and hazards. The officer also provides guidance on the employment of obscurants and their impact on weapon systems and sensors.

Psychological Operations Officer

F-38. The psychological operations officer analyzes potential targets based on their significance and ability to achieve a specific objective. The officer selects targets that are susceptible to military information support operations and participates in the target nomination process to include coordinating available assets to engage the targets.

Signal Support Officer

F-39. The signal officer provides expertise on the employment of friendly information systems to include advice on the integration of the five signal support functions. The functions are:

- Communications.
- Automation.
- Visual Information.
- Printing and Publications.
- Records Management.

F-40. The five functions provide a fully functional, synchronized information system. The signal officer coordinates with the operations officer, and other targeting working group members as required.

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Appendix G

Common Datum

For joint agencies to coordinate targeting functions properly, they must be able to exchange information by using a common frame of reference regarding the operational area. A small detail that has tremendous implications supporting this common reference, especially if overlooked, is ensuring planners and operators use the correct datum.

During the first days of Operation Desert Storm, the Air Force reported that the B-52 raids consistently fell short of the target. The weapon systems locating targets were on a different datum from the Boeing B-52 navigation system. The B-52 bomber missions were successful after the datum issues were identified and corrected. In some cases, forward observers, fire direction centers, and weapon systems were using issued maps with different datums. Location variances exceeded 700 meters. In other Operation Desert Storm examples, a global positioning system receiver position was compared to a paper map position and in many cases the positions varied by hundreds of meters. In another example, troops deploying to Somalia found the maps available were a mix of Russian maps found in Gauss Kruger and World Geodetic System 72.

All joint operations utilize the World Geodetic Systems 84 datum for references coordinates according to the CJCSI 3900.01C.

DATUM AND PROJECTION AWARENESS

G-1. Personnel working in any organization that exchanges information regarding position locations must be aware of the need for using a common datum. In the past, this was not viewed as critical because weapons technology and employment doctrine did not require highly accurate positions. The possibility of deployment to many new foreign locations, where the only maps are on local datum and foreign projections, make precise coordinates vital to mission success. The problem is even more critical with the advent of growing technology (for example, global positioning system, tactical land attack missile system, and so forth). Ignoring the map datum could result in fratricide or gross target location errors.

G-2. A datum is the mathematical model of the earth used to calculate position coordinates on any map, chart, or survey system. Many countries use their own datum(s) when they make their maps and survey. The local datums may produce coordinates that vary greatly from datums used by United States forces. Different datums are used even within the United States Department of Defense.

G-3. Presently there are more than 1,000 datums in use. The National Geospatial Agency (NGA) is concerned with only 200 of these, which are found on paper maps, digital mapping products, and other products provided to the user. As NGA datums are shifted to a common grid, the change in the location of a unit may be more than 1,000 meters. There are different datums for both horizontal and vertical reference. Most vertical datums use mean sea level for elevation, but they may use any of over a hundred different horizontal position datums. The agency is reducing the number of datums used for their products. As map products are updated, they will be updated with standard datums and ellipsoids. Do not mix old and new products. The NGA decided to use world geodetic system 84 in most of the world. During transition, some paper products will not match digital products.

G-4. There can be several error possibilities in air ground operations if multiple datums are used. A few are listed:

- Friendly position location errors.
- Enemy target location errors.
- Combat search and rescue location errors.
- Navigation aid use.
- Aircraft vectoring errors.
- Airspace control measure errors.
- Air defense errors.

DATUM USE

G-5. The JFC must identify which datum information is to be used within the joint force for exchange of position information. Subordinate personnel must know which datum to use and ensure that operational datum target coordinates, position coordinates, fire control systems, and current operational maps are all on the same datum.

CHECKING DATUM AND CONVERTING COORDINATES

G-6. Datums can be checked. All maps and products that the NGA distributes have the datum printed somewhere in the margin. Figure G-1 is an example of typical datum information provided in the margin of a map. Any element who converts coordinates from latitude and longitude to Universal Transverse Mercator or military grid reference system, and the reverse requires NGA-Mapping Datum Transformation software to perform conversions. It can also transform coordinates between world geodetic system 84 and over a hundred other datums. The mapping datum transformation software comes with instructions.

```
ELLIPSOID.................................................................WORLD GEODETIC SYSTEM 1984
GRID.................................................................................1,000 METERS UTM ZONE 51
PROJECTION....................................................................TRANSVERSE MERCATOR
VERTICLE DATUM.....................................................................MEAN SEA LEVEL
HORIZONTAL DATUM.......................................................WORLD GEOTIC SYSTEM 1984
HYDROGRAPHIC DATUM...................................APPROXIMATE LEVEL OF LOWEST

                                         LOW WATER

PRINTED BY..............................................................................DMAHTC 4-94

                          COODINATE CONVERSIOT WGS 84 TO TOKYO
                             GRID: Add 156m.E; Subtract 712m.N.
                          Geographic: Add 7.0"Long.; Subtract 8.5"Lat.
```
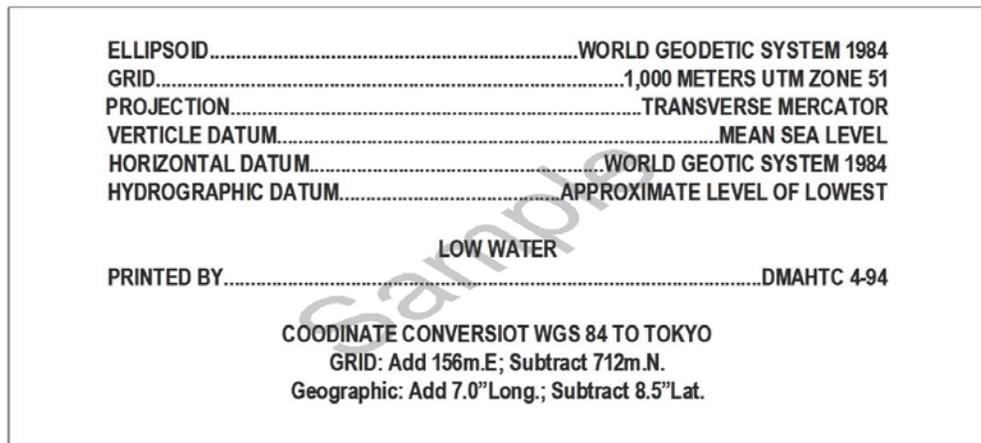
Figure G-1. Map margin datum (example)

Appendix H

Target Numbering

H-1. Target numbering is a system for expressing lethal and nonlethal actions against an entity or object considered for possible engagement or other actions. This numbering system identifies a wide array of mobile and stationary forces, equipment, capabilities, and functions that an enemy commander can use to conduct operations. The Army identifies targets using alphanumeric characters when selecting and prioritizing targets. The Army assigns target numbers that adheres to the provisions of standardized agreement 2934.

H-2. The targeting alphanumeric system represents the following—
- Organizations.
- Elements.
- Cell, sections, or teams within a brigade size element.
- Cell, sections, or teams within a battalion size element.
- Block of numbers.

H-3. The target number is comprised of six characters consisting of two letters and four numbers in the following positions, for example AB1234. The two letters indicate the originator of the target number and the echelon holding the target data. The senior headquarters establishes and publishes the assigned first letter in the operations order. The letter "Z" is the only permanently assigned first letter. The target number prefix "Z" is reserved for technical use by automatic data processing systems among nations when transferring target information from one nation to another. The second letter "E" is allocated for Service components forces in automatic data processing systems in those instances where a "Z" prefix target is generated for example "ZE." Table H-1 is an example of the assignment of first letters for targeting in an operational environment.

Table H-1. Assignment of first letter (example)

Organization	Letter
CENTCOM	C
United States	A
United Kingdom	B
EUROCORPS	E
France	F
Germany	D
MNC	M
NRDC Italy	N
Legend: CENTCOM – Central Command EUROCORPS – European Corps MNC – Multi National Corps NRDC – NATO Rapid Deployable Corps	

H-4. Target numbers serve as an index to all other information regarding a particular target, such as location, description, and size. Normally, a common target numbering system is used at corps and within a major force. Target block numbers are traceable to its originating source to specific users. Corps down to brigade combat team (BCT) level may assign the second letter (A through Z). See table H-2 on page H-2.

H-5. Once a target is assigned a target number that association remains as long as the target exists. The target and target number maintain their association even when passed to an adjacent, higher or lower headquarters.

Table H-2. Assignment of letters (example)

Elements	*Letters*
Corps	AA
Fires Cell	AB
TACP	AC
X Division	AD
1 BCT	AE
2 BCT	AF
3 BCT	AG
4 BCT	AH
Y Division	AJ
1 BCT	AK
2 BCT	AM
3 BCT	AN
4 BCT	AQ
Legend: TACP – tactical air control party BCT – brigade combat team	

H-6.   Table H-3 is an example of standard blocks of numbers assigned within a brigade.

Table H-3. Assignment of blocks of numbers (example)

Numbers	*Brigade elements*
0000-2999	BCT Fires Cell
3000-3999	Fires cell, lowest numbered maneuver battalion or squadron[1]
4000-4999	Fires cell, second lowest numbered maneuver battalion or squadron
5000-5999	Fires cell, third lowest numbered maneuver battalion or squadron
6000-6999	Additional Fires cells or fire support assets
7000-7999	FDC, BCT field artillery battalion
8000-8999	Counterfire targets
9000-9999	Spare
Legend: [1] Lowest regimental number BCT - brigade combat team FDC – fire direction center	

H-7.   Table H-4 is an example of how a battalion size element with a block of numbers may allocate their numbers. Consult the unit SOP for specific unit target numbers. Additional number blocks are requested from the supervising fires cell.

Table H-4. Additional assignment of blocks of numbers (example)

Numbers	*Battalion elements*
X000-X199	Battalion Fires Cell
X200-X299	Fire support team, Company A
X300-X399	Fire support team, Company B
X400-X499	Fire support team, Company C
X500-X599	Fire support team, Company D
X600-X699	Additional fire support team or fire support assets
X700-X799	FDC, battalion or company mortars
X800-X999	Spare
FDC – fire direction center X – numeral assigned by higher headquarters	

Glossary

SECTION I – ACRONYMS AND ABBREVIATIONS

ACE	analysis and control element
ADRP	Army doctrine reference publication
AGM	attack guidance matrix
ALO	air liaison officer
ATO	air tasking order
ATP	Army techniques publication
BCT	brigade combat team
BDA	battle damage assessment
CARVER	criticality, accessibility, recuperability, vulnerability, effect and recognizability
CAS	close air support
COA	course of action
CP	command post
D3A	decide, detect, deliver, and assess
DA	Department of the Army
DFSCOORD	deputy fire support coordinator
EW	electronic warfare
F2T2EA	find, fix, track, target, engage, and assess
F3EAD	find, fix, finish, exploit, analyze and disseminate
FAIO	field artillery intelligence officer
FM	field manual
FSCM	fire support coordination measure
FSCOORD	fire support coordinator
FSO	fire support officer
HPT	high-payoff target
HPTL	high-payoff target list
HVI	high-value individual
HVT	high-value target
IPB	intelligence preparation of the battlefield
JFC	joint force commander
JFLCC	joint force land component commander
JP	joint publication
MDMP	military decisionmaking process
MISO	military information support operations
MOE	measure of effectiveness
MOP	measure of performance
NAI	named area of interest
NGA	national geospatial agency
OPLAN	operation plan
OPORD	operation order

PIR	priority intelligence requirement
SOP	standard operating procedure
TACP	tactical air control party
TAI	target area of interest
TLE	target location error
TST	time-sensitive target

SECTION II – TERMS

*attack guidance matrix

A targeting product approved by the commander, which addresses the how and when targets are engaged and the desired effects.

board

A grouping of predetermined staff representatives with delegated decision authority for a particular purpose or function. (FM 6-0)

defeat

A tactical mission task that occurs when an enemy force has temporarily or permanently lost the physical means or the will to fight. The defeated force's commander is unwilling or unable to pursue that individual's adopted course of action, thereby yielding to the friendly commander's will and can no longer interfere to a significant degree with the actions of friendly forces. Defeat can result from the use of force or the threat of its use. (FM 3-90-1)

denial operations

Actions to hinder or deny the enemy the use of spacew, personnel, supplies, or facilities. (FM 3-90-1)

destroy

A tactical mission task that physically renders an enemy force combat-ineffective until it is reconstituted. Alternatively, to destroy a combat system is to damage it so badly that it cannot perform any function or be restored to a usable condition without being entirely rebuilt. (FM 3-90-1)

destruction

1. In the context of the computed effects of field artillery fires, destruction renders a target out of action permanently or ineffective for a long period of time, producing at least 30-percent casualties or materiel damage. 2. A type of adjustment for destroying a given target. (FM 3-09)

disrupt

1. A tactical mission task in which a commander integrates direct and indirect fires, terrain, and obstacles to upset an enemy's formation or tempo, interrupt the enemy's timetable, or cause enemy forces to commit prematurely or attack in a piecemeal fashion. 2. An obstacle effect that focuses fire planning and obstacle effort to cause the enemy force to break up its formation and tempo, interrupt its timetable, commit breaching assets prematurely, and attack in a piecemeal effort. (FM 3-90-1)

diversion

The act of drawing the attention and forces of an enemy from the point of the prinicipal operation; an attack, alarm, or feint that diverts attention. (JP 3-03)

dynamic targeting

Targeting that prosecutes targets identified too late, or not selectedd for action in time to be included in dleiberate targeting. (JP 3-60)

effect

1. The physical or behavioral state of a system that results from an action, a set of actions, or another effect. 2. The result, outcome, or consequence of an action. 3. A change to a condition, behavior, or degree of freedom. (JP 3-0)

fires warfighting function

The related tasks and systems that provide collective and coordinated use of Army indirect fires, air and missile defense and joint fires through the targeting process. (ADRP 3-0)

high-payoff target

A target whose loss to the enemy will significantly contribute to the success of the friendly course of action. (JP 3-60)

high-payoff target list

A prioritized list of high-payoff targets by phase of the operation. (FM 3-09)

*high-value individual

A person of interest who is identified, surveilled, tracked, influenced, or engaged.

high-value target

A target the enemy commander requires for the successful completion of the mission. (JP 3-60)

site exploitation

A series of activities to recognize, collect, process, preserve, and analyze information, personnel, and/or materiel found during the conduct of operations. (JP 3-31)

synchronization

The arrangement of military actions in time space and purpose to produce maximum relative combat power at a decisive place and time. (JP 2-0)

target

1. An entity or object that performs a function for the adversary considered for possible engagement or other action. 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. (JP 3-60)

target development

The systematic examination of potential target systems⸺and their components, individual targets, and even elements of targets⸺to determine the necessary type and duration of the action that must be exerted on each target to create an effect that is consistent with the commander's specific objectives. (JP 3-60)

targeting

The process of selecting and prioritizing targets and matching the appropriate response to them, considering operational requirements and capabilities. (JP 3-0)

time-sensitive target

A joint force commander validated target or set of targets requiring immediate response because it is a highly lucrative, fleeting target of opportunity or it poses (or will soon pose) a danger to friendly forces. (JP 3-60).

validation

A part of target development that ensures all vetted targets meet the objectives and criteria outlined in the commander's guidance and ensures compliance with the law of war and rules of engagement. (JP 3-60)

vetting

A part of target development that assesses the accuracy of the supporting intelligence to targeting. (JP 3-60)

weaponeering

> The process of determining the quanity of a specific type of lethal or nonlethal means required to create a desired effect on a given target. (JP 3-60)

working group

> (Army) A grouping of predetermined staff representatives who meet to provide analysis, coordinate, and provide recommendations for a particular purpose or function. (FM 6-0)

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Index

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