Space Doctrine Publication 3-101

TARGETING

DOCTRINE FOR SPACE FORCES



UNITED STATES

SPACE FORCE

Space Doctrine Publication (SDP) 3-101, *Targeting*
Space Training and Readiness Command (STARCOM)
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FOREWORD

United States Space Force (USSF) doctrine guides the proper use of military spacepower in support of the Service's cornerstone responsibilities. It establishes a common frame of reference on the best way to plan and employ Space Force forces as part of a broader joint force. This doctrine provides official advice to execute and leverage spacepower. It is not directive—rather, it provides Guardians an informed starting point for decision making and strategy development.

Space Doctrine Publication (SDP) 3-101, *Targeting*, as operational doctrine for the United States Space Force (USSF), describes the official advice and best practices for targeting to gain and exploit a position of advantage in the space domain, and in support of joint operations.

Regardless of the area of responsibility, or the combatant commander, targeting in today's operational environment is inherently multi-domain in nature. The joint force cannot conduct targeting without space. Guardians at the component field commands (C-FLDCOMs), command and control centers, Deltas, and squadrons contribute to targeting for operations in all domains. Simultaneously, Guardians leverage multi-domain targeting to protect our freedom to operate in space.

Conducting space operations over many years gives our service experience and allows our doctrine to speak from a position of authority. I encourage you to study and learn from the best practices of our Services compiled in this volume. Semper Supra!



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Space Force Doctrine

Space Force doctrine guides the proper use of spacepower and space forces in support of the service's cornerstone responsibilities. It establishes a common framework for employing Guardians as part of a broader joint force. Doctrine provides fundamental principles and authoritative guidance as an informed starting point for decision-making and strategy development. Since it is impossible to predict the timing, location, and conditions of the next fight, commanders should be flexible in the implementation of this guidance as circumstances or mission dictate.

The Space Force doctrine hierarchy includes four levels of doctrine and a glossary. Each level builds on the one above it, reflecting the role of Guardians in every specialty area. A set of six keystone doctrine publications follows the Space Capstone Publication, *Spacepower*. Below the keystone level, the Space Force is developing multiple operational-level doctrine publications, each expanding on a specific area. Tactical doctrine provides details at the level of specific systems and tactics, techniques, and procedures. As the mission evolves, the Space Force will add to the doctrine hierarchy.

Space Doctrine Publication (SDP) 3-101, *Targeting*, introduces the purpose and processes related to targeting in, from, and to all domains in support of joint operations. Guardians at the component field commands (C-FLDCOMs), command and control centers, Deltas, and squadrons contribute to targeting for operations in all domains, while leveraging targeting in other domains to support space operations.

- Chapter 1 introduces targeting, addressing fundamental concepts and terms related to targeting, targeting support to space operations, targeting principles, deliberate and dynamic targeting, and types of targets.
- Chapter 2 addresses the Joint Targeting Cycle for the development and prosecution of targets in all domains.
- Chapter 3 highlights key considerations centered around laws, treaties, policies, rules of engagement, and authorities that planners, analysts, and targeteers consider throughout the joint targeting cycle.
- Chapter 4 discusses the Space Force organizations involved in the targeting process. It includes the roles of both retained and presented forces, and integration with agencies, organizations, allies, and partners in the planning and conduct of targeting across all phases of the competition continuum.

Chapter 1 - Introduction to Targeting

Targeting is the process of selecting and prioritizing targets and matching the appropriate response to them, considering operational requirements and capabilities. – Joint Publication 3-0, *Joint Campaigns and Operations*

Targeting is a continuous process requiring intelligence support, skilled analysis, and multi-domain planning to integrate and synchronize fires across all domains in support of joint operations. The Space Force supports targeting as part of operations in all domains. Targeting in, from, or to any domain can produce reversible or non-reversible effects in the same or another domain, depending on the commander's objectives and the operational environment. While targeting is not a part of every fires action in combat, it can support offensive and defensive objectives. Targeting in today's operational environment is inherently multi-domain regardless of the area of responsibility or the assigned joint force commander. The joint force should not conduct targeting without consideration and inclusion of all relevant Services, Federal agencies, and our allies and partners.

Targeting Terminology

target - An entity or object that performs a function for the threat considered for possible engagement or other action. (Joint Publication 3-60, *Joint Targeting*)

targeteer - An individual who has completed requisite training and guides the joint targeting cycle in their current duties. (Joint Publication 3-60, *Joint Targeting*)

targeting - The process of selecting and prioritizing targets and matching the appropriate response to them, considering operational requirements and capabilities. (Joint Publication 3-0, *Joint Campaigns and Operations*)

Key Definitions – Targeting

Targeting Fundamentals

Targeting is the conduct of specific actions to support the joint force commander's objectives in the context of an operation or campaign during any phase of the competition continuum. Targeting is effects-based, interdisciplinary, systematic, and continuous, requiring integration with other processes to be successful. Planning translates the commander's objectives into actions against adversary targets to produce desired effects. Within the Space Force, Guardians who have specialized training in analyzing targets and developing solutions perform the role of targeteer.

Targeting is more than the selection of targets for physical destruction. Physical destruction of a target is only one effect within a spectrum of viable options available to the joint force

commander. One premise of an effects-based approach to targeting is that it is possible to direct capabilities against targets in ways that create effects across the range of denial, disruption, degradation, or destruction. Deception is also a possible effect generated through targeting. The intent of any effect is to influence the adversary's political, military, economic, social, infrastructure, and information systems, physical environment, and time considerations. Every target nominated should contribute to attaining the joint force commander's objectives. Targeteers should consider all means to achieve the desired effects, drawing from all available forces. Target selection also includes consideration of second- and third-order effects that may either positively or negatively contribute to campaign success.

Targeting requires the expertise of personnel from many functional disciplines. For example, strategists and planners bring knowledge of the context and integrated plans; operators bring experience gained from combat execution; intelligence personnel provide analysis of adversary capabilities, strengths, and vulnerabilities; and judge advocates provide vital expertise in the application of the law of war and interpretation of the rules of engagement.

As figure 1 reflects, targeting sits at the juncture of operations, planning, and intelligence.

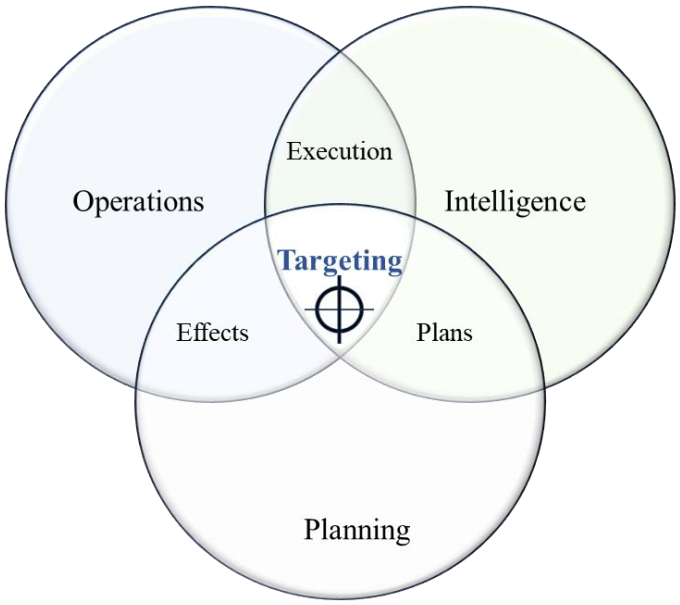


Figure 1. Targeting – Operations, Planning, and Intelligence

a. **Intelligence and Targeting.** Targeting is inherently estimative and anticipatory, requiring a solid intelligence foundation before execution. Matching actions and effects to targets requires estimating and anticipating future outcomes. In some cases, the outcome is straightforward, such as anticipating the effects on a spacecraft due to the disabling of a ground station. However, second- and third-order effects may be more challenging to estimate. Developing that anticipatory intelligence estimate to support targeting requires a wide range of information from the Intelligence Community. This includes insight into adversary intentions, capabilities, and concept of operations.

The Joint Intelligence Preparation of the Operational Environment (JIPOE) process provides the foundational intelligence necessary for detailed targeting in complex operational environments. The Intelligence Community uses the JIPOE process to analyze all relevant aspects of the operational environment, including the adversary and other actors; the physical domains (air, land, maritime, and space); the information environment (which includes cyberspace); and political, military, economic, social, information, and infrastructure systems and subsystems. Results of the JIPOE process assist targeteers in understanding an adversary's vulnerabilities and exploitable weaknesses, in addition to assessing what effects may achieve the desired results against specific targets. Information provided by the Intelligence Community contributes to prioritization of targets based on how each physical, functional, cognitive, environmental, or temporal target characteristic contributes to an adversary's ability to conduct operations.

b. Planning and Targeting. Successful joint targeting requires a cradle-to-grave mindset that includes considerations for command-and-control relationships, intelligence collection, movement of targeting intelligence, fires execution, combat assessment, forces movement and maneuver, protection, and sustainment. Targeting within the joint planning process affects both current and future operational time horizons to allow the integration, deconfliction, and synchronization of joint fires.

Commanders capture their objectives and guidance in the applicable orders or other directives to establish shared understanding with the staff, supporting intelligence entities, and Service components. The commander's objectives and guidance inform target system and entity-level target planning and development. The commander's objectives provide focus for all stages of planning, execution, and assessment, and give targeting personnel the overarching purpose for the effort. Clear understanding of the commander's objectives and guidance is essential for effective tasking and targeting.

An operation plan or concept of operations can also provide broad supporting guidelines for prioritization of targets. Planners and analysts employ the process within the joint targeting cycle to translate the commander's objectives and guidance into target identification, analysis, development, validation, capabilities pairing, execution, and assessment to enable mission success.

c. Operations and Targeting. Operations is the execution phase of the targeting cycle, where the actions to produce the desired effect, whether lethal, non-lethal, reversible, or non-reversible, occur. While the results of some actions will be immediate and visible, other actions such as targeting in the information operations environment may not produce immediate results. Operations personnel support combat assessment, current intelligence, and future targeting efforts by completing mission reports and providing operational updates and status. Targeteers are responsible for completing battle damage assessments and change assessments for non-lethal effects. The unit executing the operation is responsible for the initial combat assessment, such as a munitions effectiveness assessment, completed within prescribed tactical timelines to meet

command and control requirements. Reporting includes friendly actions and observations of adversary behavior during mission execution. In addition, targeteers, planners and analysts should continuously review the targeting strategy and commander's objectives to determine next steps.

Targeting and Space Operations

Operations conducted by Guardians support targeting in all domains, from planning and analysis to execution and assessment. Guardians are also engaged in the process to identify targets in other domains that may pose a threat to space operations. As part of a joint force's target planning process, the C-FLDCOM commander may recommend fires in a domain other than space to support space operations and the joint force commander's objectives.

It is essential that Guardians identify the first-, second-, and third-order effects of associated fires in the space domain to equip the commander with a comprehensive risk assessment. The risk assessment supports the commander in deciding which targets to prosecute to achieve the identified objectives. For example, damaging or destroying spacecraft has the potential to create debris fields that could negatively impact other spacecraft or contaminate an orbit, preventing any future use for the United States or its allies and partners. As with all types of targeting, when requesting or conducting targeting to support space operations, it is important to consider adversary vulnerabilities and potential collateral effects in all domains when assessing weaponeering options to achieve the commander's objectives. For space operations this assessment includes consideration of potential collateral effects for three segments of a space system (orbital, terrestrial, and link). Guardians as part of the joint force planning and targeting processes should identify the risk and implications to the overall mission, and present alternative targets that could achieve the commander's objectives.

Space System Segments

Space forces consist of orbital and terrestrial systems, equipment, personnel, and the support necessary to directly or indirectly impact joint operations. Space systems include three interdependent segments: orbital, link, and terrestrial.

Orbital Segment. The orbital segment consists of spacecraft beyond Earth's atmosphere.

Link Segment. The link segment consists of signals connecting the other segments using the electromagnetic spectrum. Links include ground-to-space (uplink), space-to-ground (downlink), and space-to space (crosslink).

Terrestrial Segment. The terrestrial segment consists of personnel, facilities, and equipment that exist in the other physical domains (air, land, and maritime) that affect or are affected by the orbital or link segments.

Joint Publication 3-14, *Joint Space Operations*

Key Definitions – Space System Segments

Principles of Targeting

Targeting proceeds from the commander's objectives to an assessment of the results achieved by the executed course of action. Guardians participating in the targeting process could find themselves in different theaters and working with other Services, allies, and partners. Guardians employed in place may simultaneously support targeting for multiple theaters and commanders with the same set of capabilities. This requires Guardians to adapt and balance competing objectives with respect to planning and targeting. There are four essential principles of targeting. Every contributor to the targeting process should adhere to these principles to achieve the desired effects while reducing the risk-to-force, risk-to-mission, or adverse collateral effects.

a. **Focused.** 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, rules for the use of force, the law of war, and other guidance given by the commander. Every target nominated for operational action should contribute to attaining the commander's objectives.

b. **Effects-Based.** Targeting seeks to create specific reversible and nonreversible effects through lethal or nonlethal actions. Target analysis includes identifying all means to create the 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.

c. **Interdisciplinary.** Successful targeting requires the participation of many disciplines. This may include elements of the Intelligence Community, unit staff, Service components, other organizations, and allies and partners in planning, preparation, execution, and assessment of targeting tasks. Additionally, those contributing to the process require the ability to address the capabilities each Service, ally, partner, or organization brings to the operation, and any vulnerabilities associated with those capabilities.

d. **Systematic.** A targeting methodology is a rational and iterative process to analyze, prioritize, and assign assets against targets systematically to create the effects that will contribute to achieving the commander's objectives. During operations, planners and intelligence analysts systematically analyze and prioritize targets. The commander assigns available forces with the required capabilities to achieve the desired effects. If the operations against the approved targets do not achieve the desired effects, or as operational conditions change, targets may be reanalyzed, and reprioritized, and different assets assigned.

Targeting Categories

There are two categories of targeting: deliberate and dynamic (figure 3). Each category is associated with a different grouping of targets, planned targets or targets of opportunity, respectively. Timing is the primary factor that determines whether deliberate or dynamic targeting will support the joint force commander’s targeting requirements.

a. Deliberate Targeting. Deliberate targeting produces planned targets that intelligence and information collection capabilities detected, identified, and developed in sufficient time to schedule actions against them within a standard tasking cycle. These planned targets are known to exist in the area of operations and have actions scheduled against them. Properly vetted targets on the joint target list (JTL) or restricted target list (RTL), support execution planning (e.g., fire support plan) or orders.

Under deliberate targeting there are two types of planned targets: scheduled and on-call. The commander approves scheduled targets for engagement at a specific time. On-call targets have actions planned, but not for a specific delivery time. The commander expects to locate these on-call targets in sufficient time to direct execution of the planned actions.

Deliberate targeting is the preferred targeting methodology during steady-state operations across any phase of the competition continuum. Deliberate targets that have maneuvered or changed location but have not changed key characteristics are still deliberate targets. These changes do not necessitate application of dynamic targeting methodologies to these targets.

b. Dynamic Targeting. Dynamic targeting is the prosecution of targets of opportunity. These include unscheduled targets and unanticipated targets. Unscheduled targets would have met the criteria to achieve joint force objectives, but the commander did not select them for action during the current tasking cycle. Unanticipated targets are either unknown or not expected to be present in the current operational environment. Dynamic targeting complements deliberate targeting to achieve the commander's objectives. Dynamic targeting provides the immediate targeting responsiveness to current operations in the active environment. However, because it occurs on a compressed timeline it may require different authorities, rules of engagement, and other legal considerations based on location, capability, or target type.

Dynamic targeting requires a condensed execution phase, unconstrained by the type of target being engaged. Operations against dynamic targets (vice deliberate) may occur outside of the normal tasking order execution cycle using the condensed process of find, fix, track, target, engage, and assess (F2T2EA). Dynamic targeting processes and methodologies can vary between combatant commands and Services (see the Air Land Sea and Space Application Center *Multi-Service Tactics, Techniques, and Procedures for Dynamic Targeting*). C-FLDCOM commanders work within the methodology of their assigned combatant command to facilitate space support for targeting. The sensitivity or criticality of dynamic targets can require commanders to make quick decisions on when and how to engage them. Without timely and effective command and control down to the execution, the joint targeting process would not be feasible.

c. Deliberate and Dynamic Target Categories. Across the spectrum of deliberate and dynamic targeting, whether scheduled, on-call, unscheduled, or unanticipated, there are three special categories of targets that may require special consideration and caution.

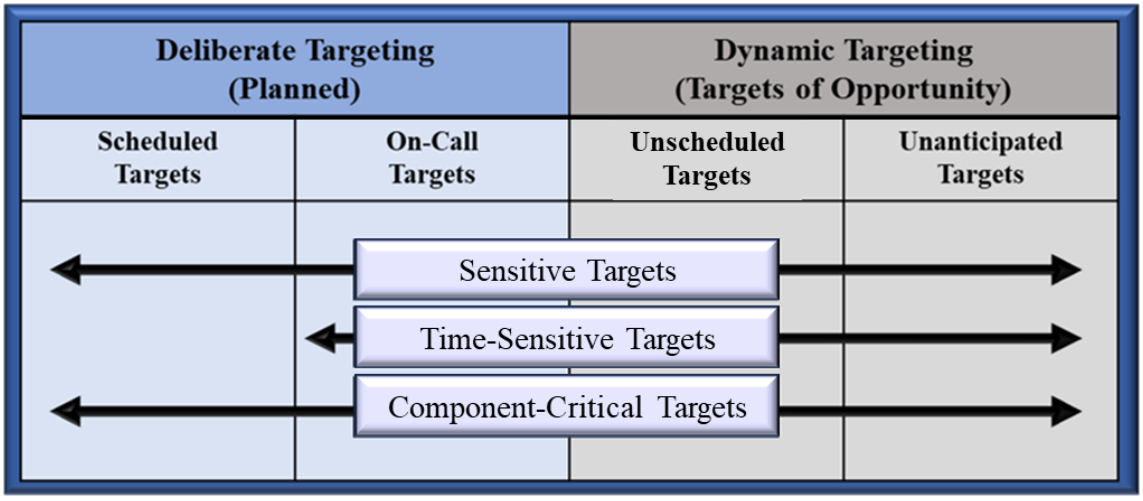


Figure 2. Targeting Categories

1) **Sensitive Targets.** Certain targets require special care or caution because actions can lead to significant adverse consequences such as potential political and/or diplomatic repercussions and high risk of collateral damage. These targets require Presidential or Secretary of Defense review and approval prior to engagement.

2) **Time-Sensitive Targets.** A time-sensitive target is a joint force commander-validated target or set of targets, typically a subset of high-value targets or high-payoff targets, which requires immediate response because it is a highly lucrative, fleeting target of opportunity or it poses (or will soon pose) a danger to friendly forces.

3) **Component-Critical Targets.** Space Force C-FLDCOM Commander may designate high-payoff targets that present significant risks to, or opportunities for component forces and missions. This class of targets may still require dynamic execution with cross-component coordination and assistance in an expedited manner. The Service component commanders should clearly designate these targets prior to execution of military operations.

Chapter 2 - The Joint Targeting Cycle

The Joint Targeting Cycle (JTC) provides an iterative, logical methodology for the development, planning, execution, and assessment of targets, weapons, and capability effectiveness. It provides planners executing the joint and space planning processes with detailed information on approved targets, supported by the analysis that links targets with a joint force commander's desired objectives and effects. The overarching purpose of the JTC process is to select and prioritize targets and match them with engagement options within the context of operational requirements and available capabilities. The JTC supports the joint and space planning processes and the tasking cycles of combatant commands for deliberate and dynamic targets. As forces presented, Guardians from the C-FLDCOMs, Deltas, and squadrons participate in the JTC process, or a tailored version of the process as prescribed by the supported joint force commander, for targeting in, from, and to space.

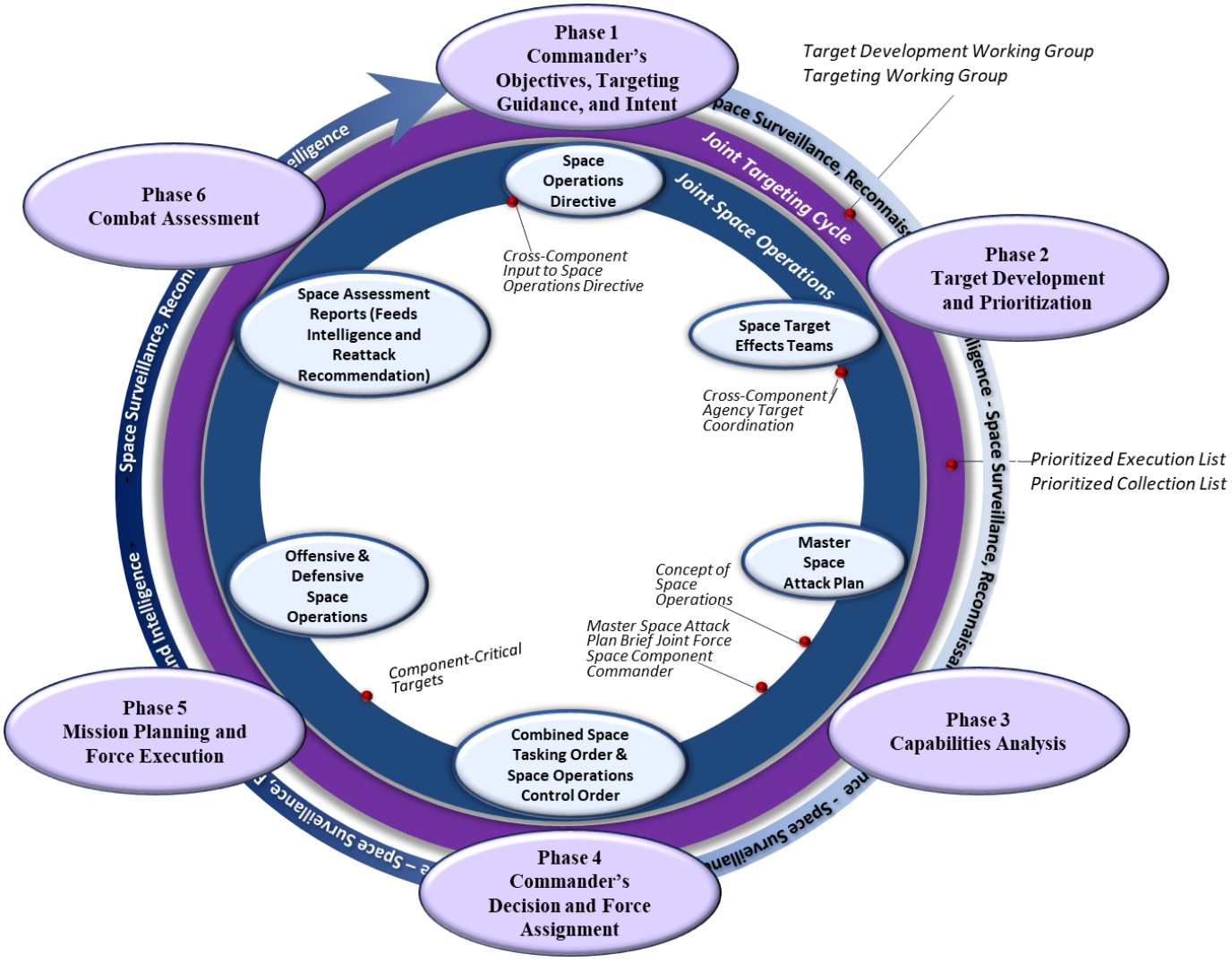


Figure 3. Space Operations and the Joint Targeting Cycle

The JTC comprises six interrelated phases that are adaptable to meet the needs of the commander and the operational environment. Planners and targeteers may accomplish the phases in any order, concurrently, or repeat phases before completing other phases. Guardians are engaged in every phase of the JTC, contributing to planning, supporting intelligence analysis, issuing orders, developing tailored plans and concepts of operations, and conducting applicable actions in, from, and to space.

Phase 1 - Commander's Objectives, Guidance, and Intent

The first phase of the joint targeting process is understanding the joint force commander's guidance, intent, operational approach, and concept of operations. These should provide a clear and concise expression of the operation's purpose and the commander's desired military end state. The C-FLDCOM staff should assist with formulating and refining the joint force commander's guidance. During this phase, the joint force commander may also issue guidance relevant to targeting priorities, specified key tasks, and criteria for time-sensitive or critical targets, target acquisition and identification criteria, authorized actions against targets, and any delegated responsibilities for target validation and Joint Integrated Prioritized Target List (JIPTL) approval.

Understanding the joint force commander's desired effects and objectives sets the course for subsequent actions in the targeting process. The C-FLDCOM Commander or Combined Joint Force Space Component Commander influences the prioritization of targets through the Target Development Working Group and Targeting Working Group. The C-FLDCOM commander may issue refined targeting guidance to Space Force units in support of the joint force commander's concept of operations. Within this phase, the C-FLDCOM commander may direct the formation, composition, and responsibilities of a targeting board. The C-FLDCOM commander chairs the targeting board for the theater space component or appoints a delegated authority. The commander ensures the integration of targeting efforts throughout the operations process. The commander also provides targeting guidance and priorities for shaping all space component operations within the space domain.

The ability to generate the type and extent of effects necessary to achieve the commander's objectives is essential for effective targeting. Developing clear, achievable measures and indicators, such as measures of effectiveness and measures of performance, is crucial for assessing whether space capabilities have met the assigned objectives and effects. These tools are essential for guiding the joint targeting process and enabling effective assessment. Coordination

among operations, plans, and intelligence is necessary for the successful application of these or any other approved measures.

Measures
measure of effectiveness (MOE) - An indicator used to measure a current system state, with change indicated by comparing multiple observations over time. (Joint Publication 5-0, *Joint Planning*)
measure of performance (MOP) - An indicator used to measure a friendly action that is tied to measuring task accomplishment. (Joint Publication 5-0, *Joint Planning*)

Key Definitions – Measures

Phase 2 - Target Development and Prioritization

This phase includes execution of three processes: target system analysis, entity-level target development, and target list management.

a. **Target System Analysis**. Target system analysis is the systematic examination of a potential target, its components, and potentially individual elements to determine the type and duration of action required to create an effect that is consistent with commanders objectives. This process also includes consideration for the potential impacts to US, allied, and partner forces of any action or inaction relative to a target. The JIPOE process helps target developers assess an adversary's target systems based on how each contributes to the adversary's ability to conduct operations. Understanding the relationship between an adversary's critical capabilities, requirements, vulnerabilities, and centers of gravity helps the commander identify advantages that may contribute to achieving their objectives.

b. **Target Development and Prioritization.** Target development and prioritization includes examining candidate targets with a systems approach, using a targeting taxonomy, which hierarchically orders the adversary, its capabilities, and the targets that enable those capabilities into a clarifying framework.

   Target development and prioritization includes establishing a target's priority relative to all other targets and highlighting any high-value or high-payoff targets. The joint force commander's objectives help to prioritize targets in relation to the adversary center of gravity. During planning, Guardians evaluate the commander's objectives and intent in relation to the eligible targets. Staffs assist the joint force commander and their respective component commanders with determining recommended prioritization of targets and collections required to support further development of these targets; these processes may vary by echelon and theater. Each target should align to targeting objectives and the approved assessment measures developed during Phase 1 of the targeting cycle. In doing so, the joint force commander and component commanders are best able to assign limited resources against the highest-priority targets and target systems.

c. Entity-level Target Development. Entity-level target development includes validating an entity as a target in accordance with joint force commander objectives and guidance, the laws of war, and any applicable rules of engagement. Entity-level target development conceptually occurs in three stages: basic, intermediate, and advanced. Each stage includes a minimum set of essential data required to progress a target from initial identification and functional characterization to execution-level detail.

1) **Basic Target Development (BTD).** Basic target development characterizes a target's function, its location, or other unique characteristics, and assigns a unique identifier to that target. Electronic target folders store entity-level target intelligence, operational planning, and legal information in a single location to ensure targeteers are working off a source of shared understanding. Each entity has a unique identification alphanumeric character set in the applicable national databases.

2) **Intermediate Target Development (ITD).** Intermediate target development further characterizes a target's function to enable target vetting, validation, and addition to a target list. This includes identification of critical target elements that if engaged could decisively affect the target's function.

3) **Advanced Target Development (ATD).** Advanced target development completes the target characterization process and defines minimum intelligence necessary to plan for effective target engagement. This includes weaponeering, establishing aimpoints, completing the collateral damage estimate, and initiating the planning process for target engagement.

d. Target List Management. Part of developing and prioritizing targets is the management of those targets as they move through the process. A series of target lists supports this process. Managing those lists, and allocation of targets to those lists, begins when the commander nominates a target for development and ends with the creation of the prioritized target list. Target list maintenance includes target listing, vetting, validation, nomination, and prioritization.

1) **Target Lists.** Standard target lists allow the joint force commander to track target development as planners and intelligence analysts prioritize collections to ensure the accuracy of target intelligence and validity of deliberate targeting in relation to guidance and the law of war. The joint targeting community has established the following standard target lists: target development nomination (TDN) list, candidate target list (CTL), joint target list (JTL), restricted target list (RTL), target nomination list (TNL), joint integrated prioritized target list (JIPTL), and the global integrated target list (GITL). Additionally, a commander may move a target determined not to be a valid military target to a no-strike list (NSL).

2) **Target Vetting.** Target vetting is an optional process initiated by the joint force commander to mitigate strategic and operational risk associated with engaging a target. Target vetting leverages Intelligence Community expertise to properly characterize the functions a target performs for the adversary and highlight considerations for its engagement by the joint force. Vetting is not a requirement for

all targets. Intelligence Community capacity is a consideration for ensuring sufficient resources for analysis of high-priority targets. The response from the Intelligence Community concerning a specific target does not restrict a commander's authority to engage that target. However, it is meant to clarify both the risk and uncertainty associated with a given target.

3) **Target Validation.** Unlike target vetting, all candidate targets go through validation. Validation ensures candidate targets meet the objectives and criteria outlined in the commander's guidance and ensures compliance with the law of war and applicable rules of engagement. Candidate targets go through a target validation board or similar body led by the target validation authority before addition to the joint target list or restricted target list. Target validation authority and target engagement authority are separate authorities vested in the joint force commander. The joint force commander may delegate either authority. It is important to understand that the authority to validate targets does not imply authority to engage targets.

4) **Target Nomination.** In a joint environment the combatant command staff, components, subordinates, and task forces compile target nomination lists from the joint target list and restricted target list to nominate targets for engagement.

5) **Prioritization.** The joint force commander sets the priorities for planning and execution of all joint and component targets based on the relative priorities of the objectives outlined in the commander's intent.

Targeting Process Lists

target development nomination (TDN) list - A list of nominated entities that meet basic target development criteria but require intermediate target development before submitting as candidate targets. (Joint Publication 3-60, *Joint Targeting*)

candidate target list (CTL) - A list of entities submitted by component commanders, appropriate agencies, or the joint force commander's staff for further development and inclusion on the joint target list, restricted target list, or the no-strike list. (Joint Publication 3-60, *Joint Targeting)*

joint target list (JTL) - A consolidated list of validated targets of military significance without restrictions within a joint force commander's operational area. (Joint Publication 3-60, *Joint Targeting*)

restricted target list (RTL) - A list of restricted targets nominated by elements of the joint force and approved by the joint force commander or directed by higher authorities. (Joint Publication 3-60, *Joint Targeting*)

target nomination list (TNL) - A prioritized list of targets drawn from the joint target list, or restricted target list, and nominated by component commanders, appropriate agencies, or the joint force commander's staff for inclusion on the joint integrated prioritized target list. (Joint Publication 3-60, *Joint Targeting*)

joint integrated prioritized target list (JIPTL) - A prioritized list of targets approved by the joint force commander for that area of responsibility. (Joint Publication 3-60, *Joint Targeting*)

no-strike list (NSL) - A list of objects or entities characterized as protected from the effect of military operations under international law or the rules of engagement. (Joint Publication 3-60, *Joint Targeting*)

global integrated target list (GITL) - An overarching joint or restricted list in support of global campaigns and operations that refers to supported command targets validated by supported joint force commanders.

Key Definitions – Targeting Process Lists

Phase 3 - Capabilities Analysis

This phase includes completion of advanced target development and characterization of the minimum intelligence necessary to plan for effective target engagement. Included in this process is evaluating target vulnerabilities, weaponeering, and assessing the risk or extent of potential collateral damage or effect. Each analysis is situation-specific based on the pairing of target, capabilities, and domain(s) from which the effect needs to originate to have the desired result. Target quality space domain awareness data is a critical contributor to this process.

Aimpoint designation integrated into this analysis may include joint desired point of impact (JDPI) or non-lethal reference point (NLRP). A joint desired point of impact is a unique, alpha-numeric code associated with a target to achieve an explicit objective and identified by a three-dimensional (latitude, longitude, and elevation) coordinate. A non-lethal reference point is a point that designates the intended target for creating nonlethal effects, which may not be a precise physical location. There may be instances where a non-lethal reference point is not a good fit for designating the target for a nonlethal effect, Guardians may need to employ other methods.

Weaponeering focuses on determining how to leverage available capabilities against a target's vulnerabilities. Available capabilities could include those from any Service, from allies or partners, and from any domain. Weaponeering includes assessing the specific type of reversible or non-reversible effects necessary to produce the desired effect on a target at the aimpoint as applicable, and which of the available capabilities can deliver those effects in the current operational environment. Guardians will support the joint community in understanding what capabilities space can bring to bear to address targets in space, and in other domains. They will also provide recommendations when taking action in another domain can achieve the desired result for space operations more efficiently, or with less collateral damage.

Developing a collateral damage estimate (CDE) or collateral effects estimate (CEE) according to the standards established by the Chairman of the Joint Chiefs of Staff Instruction 3160.01D, *No Strike and the Collateral Damage Estimation Methodology*, and the target engagement authority is also part of the capabilities analysis. These products characterize the risk and extent of damage or effects to objects or entities other than the target. Each target interaction should have first-, second-, and higher-order effects identified. This part of the process is essential for the commander to have a complete picture before deciding to execute targeting operations in any domain. The C-FLDCOM commander will ensure the joint force commander understands the complex nature of the space domain, and the strategic and long-term effects that any action in space may produce.

Phase 4 - Commander's Decision and Force Assignment

The force assignment process combines updated intelligence data with the capabilities analysis across all classifications and programs to align targets with available forces within the designated acceptable level of risk for the operation. This phase links planning to actual operations, tasking components such as the C-FLDCOMs with engaging their assigned targets.

For space operations this happens through the formal construction and publishing of the Combined Space Tasking Order and Space Operation Control Order. The Master Space Attack Plan drives prioritization, tasking, and scheduling of capabilities in the Combined Space Tasking Order, while the Space Operation Control Order provides coordination and de-confliction of operations in the space domain.

Phase 5 - Mission Planning and Force Execution

In the final stages before execution, tasked units complete any remaining detailed planning, reviewing the detailed target data for the execution of assigned operations. Once execution begins, planners are continuously assessing available data, including space domain awareness data, to determine if those targets remain valid for the commander's objectives, and how planned actions could affect the operations of the United States, and its allies and partners, in the present area of operation, in other areas of operation, and in other domains.

Operations become increasingly fluid as the joint force moves from competition into armed conflict. During the execution of targeting the operational environment changes more frequently due to actions by the joint force, the adversary, and other actors. Continuous monitoring of these changes allows commanders to decisively employ forces to seize and maintain the initiative. The dynamic environment and evolving operations require particular attention to the identification and validation of targets for engagement and reengagement approval. Employing space domain awareness, positive identification, combat identification, and target validation processes contributes to maintaining shared awareness and enabling engagement approval. The joint force commander may establish intent and desired end state through orders or other directives and allows the force to execute dynamically within the rules of engagement.

Target Identification and Validation

combat identification (CID) - The process of attaining an accurate characterization of detected objects in the operational environment sufficient to support an engagement decision. (Joint Publication 3-09, *Joint Fire Support)*

positive identification (PID) - An identification derived from observation and analysis of target characteristics, including visual recognition; electronic support systems; non-cooperative target recognition techniques; identification, friend or foe systems; or other physics-based identification techniques. (Joint Publication 3-01, *Countering Air and Missile Threats)*

target validation - Target validation ensures all vetted entities meet the objectives and criteria outlined in the commander's guidance. Additionally, target validation reviews the target's compliance within the laws of war and rules of engagement to ensure it is not otherwise restricted. (Joint Publication 3-60, *Joint Targeting*)

Key Definitions – Target Identification and Validation

During this phase components may request an update to the restriction on any target or its removal from the restricted target list. However, rules of engagement may prohibit any actions that exceed specified restrictions pending approval. Attacking restricted targets without due regard to the specified restrictions may interfere with projected friendly operations. For targets restricted from lethal effects, commanders may consider non-lethal reversible or non-reversible capabilities to achieve or support the commander's objectives.

Phase 6 - Combat Assessment

The combat assessment process is an assessment to determine the overall effectiveness of force employment during military operations. During the combat assessment phase, commanders, operators, planners, and intelligence analysts examine results of the operation to recommend or direct action for improvement. For Guardians, this analysis occurs across all three segments (orbital, terrestrial, and link) where Space Force capabilities, including space domain awareness, may contribute to effects in other domains or where action in or from other domains may affect space operations. Using the measures of effectiveness and measures of performance developed in phase 1, planners and analysts also look at the results of all previous phases of the process to

determine whether they were effective in meeting the commander's objectives. Conducting a combat assessment requires close synchronization and integration between intelligence, operations, and fires personnel.

Combat assessment occurs simultaneously at the strategic, operational, and tactical levels to assess actions resulting from both deliberate and dynamic targeting. Space Forces Space directs operations through the Combined Space Tasking Order and Space Operations Control Order to adjust space operations based on changing variables. In addition to providing an effects assessment, combat assessment products also include recommendations for reattack on applicable targets and evaluate any collateral damage to include second- and third-order effects. The combat assessment process produces products including a battle damage assessment which includes the collateral damage and collateral effects assessments, a munitions effectiveness assessment or a change assessment for non-lethal effects and reattack recommendations. These combined inputs contribute to the commander's decision on the next phase of targeting or other parts of the overall operation.

Combat Assessment Products

battle damage assessment (BDA) - The estimate of damage composed of physical and functional damage assessment, as well as target system assessment, resulting from the application of fires. (Joint Publication 3-0, *Joint Campaigns and Operations*)

munitions effectiveness assessment (MEA) - The assessment of the military force applied in terms of the weapon system and munitions effectiveness to determine and recommend any required changes to the methodology, tactics, weapon system, munitions, fusing, and/or weapon delivery parameters to increase force effectiveness. (Joint Publication 2-0, *Joint Intelligence*)

reattack recommendation (RR) - An assessment, derived from the results of battle damage assessment and munitions effectiveness assessment, providing the commander systematic advice on reattack of a target. (Joint Publication 3-60, *Joint Targeting*)

collateral effects assessment (CEA)

> **collateral effect** - Unintentional or incidental effect to objects that would not be lawful military targets in the circumstances ruling at the time. (Joint Publication 3-60, *Joint Targeting*)

collateral damage assessment (CDA)

> **collateral damage** - A form of collateral effect that causes unintentional or incidental injury or damage to persons or objects that would not be lawful military targets in the circumstances ruling at the time. (Joint Publication 3-60, *Joint Targeting*)

change assessment - The identification and assessment of measurable change to the target resulting from the application of lethal or nonlethal military force. (Chairmen of the Joint Chiefs of Staff Instruction 3162.02A, *A Methodology for Combat Assessment*)

Key Definitions – Combat Assessment Products

Chapter 3 - Targeting Considerations

Throughout every phase of the targeting process, and whether the joint force commander is planning lethal or non-lethal effects, there are factors for consideration. Each of these inform the commander's choices while ensuring the United States complies with laws, treaties, policies, or rules of engagement for the area of operations.

Legal

Laws, treaties, and policy considerations directly affect all phases of targeting. Those involved in targeting should have a thorough understanding of these obligations and be able to apply them during targeting analysis.

Targeting must adhere to the basic principles of the law of war, ensuring actions are of military necessity, do not inflict unnecessary suffering, and are proportional and discriminating. Specific rules of engagement for the operating environment or area of responsibility are also applicable. These vary from domain to domain. Guardians should be prepared to provide more comprehensive support to evaluation of a target's military necessity, proportionality, and distinction for any action in, from, or to the space domain.

The legal review is most comprehensive during the target development phase of the process. Target intelligence production needs to be sufficiently robust to support the operational, planning, and legal requirements necessary to justify and engage a target. The commander can only consider a target "fully developed" when sufficient intelligence exists to support the operational and legal requirements necessary to proceed with military operations against the target.

Rules of Engagement and Restrictions

Rules of engagement or other restrictions are directives issued by competent military authority. These rules and restrictions define the circumstances and limitations under which US forces can initiate or continue specific types of operations. These rules or restrictions may apply at any phase of the competition continuum. However, their importance and specificity will increase as operations move from competition into armed conflict. These rules and restrictions are a means for the President, Secretary of Defense, and combatant commanders to regulate the use of armed force in the context of applicable political and military policy, and domestic and international law.

Rules of engagement provide a framework that integrates national policy goals, mission requirements, and the rule of law in the context of the current operational environment. Supplemental measures enable a commander to obtain or grant those additional authorities necessary to accomplish an assigned mission. The standing rules of engagement establish fundamental policies and procedures for US forces during military operations and contingencies outside the United States and its territories and outside US territorial seas and airspace.

Engagement Authority

The authority and responsibility to engage targets resides with the joint force commander for the operational area unless withheld at a higher level. Under a mission command structure for command and control, the joint force commander may often delegate authority to engage a target to the node that has the best information or situational awareness to execute the mission and has direct communications to the relevant operations centers for weapons system engagement. Delegation of engagement authority, or conditional pre-approval, is at the discretion of the commander with operational or tactical control of the forces in question. Commanders above the joint force commander may hold authorities at a higher level for space operations, and specific types of targets, delegating those authorities only as the situation dictates. For dynamic targeting, engagement may require the operator to be "cleared to engage" from a command-and-control element which holds the engagement authority and ability to establish target identification. At the tactical level, target engagement authority normally resides with the weapon system operator for pre-planned operations. The commander should specify engagement authority and priorities in the relevant order. Operators delegated authority, or approval, for execution should adhere to all orders, exercising disciplined initiative to deviate from those orders only under extreme circumstances.

Civilian Harm Mitigation and Response

Consideration for the potential to harm civilians applies to every military operation. Regardless of an operation's primary objective, protection of civilians is an important legal, military, diplomatic, political, and moral consideration. Analysis to support targeting of adversary assets that lie in or near civilian population centers necessarily includes consideration for collateral damage, and employment of non-lethal capabilities.

Chapter 4 - Organizational Responsibilities

Space Force support to targeting includes targeting requirements and processes both internal and external to the targeting cycle, such as target planning, target materials production, targeting database maintenance, target systems analysis, targeting process automation, and support to weapons acquisition. Retained and presented forces across the Space Force each contribute uniquely to the targeting before and during execution of the JTC. In addition, the Space Force works with a wide range of agencies, organizations, allies, and partners in the planning and conduct of targeting operations across all domains and all phases of the competition continuum.

Service-Retained Organizations

a. Deputy Chief of Space Operations for Intelligence (SF/S2). The SF/S2 is responsible for the establishment, implementation, and oversight of Space Force targeting policy, guidance, and funding advocacy. SF/S2 also provides policy and guidance for the management and fielding of target material production technology, tools, and applications; and related intelligence databases and products required for accuracy and precision in support of targeting.

b. Field Commands.

1) **Space Operations Command.** SpOC is the field command (FLDCOM) that generates, presents, and sustains most of the squadrons and detachments that participate in the targeting process. SpOC is responsible for providing combat-ready forces, capabilities, support, and equipment to the combatant commands via the C-FLDCOMs, and to support the Intelligence Community. On behalf of the Commander, SpOC/S2 serves as lead for SpOC targeting activities and is responsible for:

   i. Managing the Space Force target material production training and certification program, and the advanced target development training and certification program.

   ii. Providing oversight and management of all targeting systems, capabilities requirements and operational employment issues.

   iii. Tracking changes in targeting plans, programs, resources, and support initiatives.

   iv. Coordinating targeting intelligence support for Space Force weapon systems.

   v. Ensuring the Space Force maintains sufficient capability and capacity exists to meet steady-state and surge targeting intelligence reachback production requirements.

2) **Space Training and Readiness Command.** Space Training and Readiness Command (STARCOM) oversees targeting intelligence training and education for the Space

Force. STARCOM is also the lead for Space Force doctrine related to targeting, and coordination of targeting equities in exercises.

3) **Space Systems Command.** Space Systems Command (SSC) leads development, acquisition, deployment, and sustainment of space systems for the Space Force. SSC is responsible for enabling the enterprise to provide weaponeering and weapons effectiveness assessments, and the capabilities needed to engage in the targeting process.

c. Deltas. The Space Force Service-retained Deltas' support targeting and enhance space operations efforts and tactical-level execution.

1) **Delta 7.** Delta 7 executes global intelligence, surveillance, and reconnaissance operations to gain and maintain information dominance in the space domain. Additionally, Delta 7 provides critical, time sensitive and actionable intelligence to allow for the detection, characterization and targeting of adversary space capabilities.

2) **Delta 18.** Delta 18 (National Space Intelligence Center [NSIC]) delivers technical expertise and intelligence to the joint force in support of target development, execution, and assessment.

Forces Presented

a. Component Field Commands and Space Liaisons. Space Force C-FLDCOMs are in place for several commandant commands and other key organizations. Pending establishment of the additional C-FLDCOMs, Space Liaisons (formerly known as Director of Space Forces [DIRSPACEFOR]) support the remaining combatant commands. The C-FLDCOM commander or Space Liaison represents the capabilities and forces available to the joint force commander, engages with the combatant command staffs for intelligence and fires, and acts as the interface to Space Force forces for tasking to the applicable squadrons to support target development, planning, and execution.

Space components are responsible for participating in the targeting process for the joint force commander and servicing approved targets when requested, regardless of which component nominates them. The joint force commander organizes forces to accomplish the mission based on the commander's vision and concept of operations. The C-FLDCOM commander operates in close coordination with the joint force commander's staff to ensure integration of Space Force capabilities and requirements in the targeting process.

The C-FLDCOM commander (or Space Liaison) and their staff are responsible for:

1) Interpreting targeting guidance, intent, and rules of engagement for targeting processes as they apply to Space Force units and capabilities.

2) Nominating candidate targets on behalf of the space component to the joint force commander for development and inclusion on the applicable targeting list, or as

entities excluded from targeting.

3) Conducting development of targets assigned for space effects through either the deliberate or dynamic target development process.

4) Identifying and approving component-critical targets either in the space domain or for targeting in another domain to support space operations.

5) Providing damage assessment results and reattack recommendations to contribute to the joint force commander's overall assessment and planning.

6) Monitoring targets in the space domain nominated for engagement.

b. Deltas. Delta 5 (Combined Space Operations Center [CSpOC)]) and Delta 15 (National Space Defense Center [NSDC]) under Space Forces Space, provide command and control, target development, and combat assessment, for the capabilities organic to each operations center in support of C-FLDCOM joint targeting responsibilities.

c. Squadrons. Squadrons assigned to Delta 2 (space domain awareness), Delta 3 (space electromagnetic warfare), Delta 4 (missile warning), Delta 6 (cyberspace and space access), Delta 7 (intelligence, surveillance, and reconnaissance), Delta 8 (satellite communications), Delta 9 (orbital warfare), and squadrons assigned to the Mission Delta for positioning, navigation, and timing, and navigation warfare (once established), present forces to contribute to targeting, or where applicable execute assigned targeting actions. These squadrons contribute layered capabilities and effects as part of the joint targeting process from support to targeting in other domains, targeting in the space domain, execution of targeting operations in all domains, and damage assessments. These squadrons are responsible for:

1) Interpreting targeting guidance, intent, and rules of engagement for targeting processes as they apply to their unit and capabilities.

2) Conducting target development activities as assigned.

3) Providing support to force-presented units as needed.

4) Providing damage and change assessment and reattack recommendations to contribute to the joint force commander's overall assessment and planning.

External Entities

Guardians work with a wide range of external entities throughout the targeting cycle, and in the planning, analysis, and assessment that support target development. Guardians conduct targeting in support of the joint force commander in compliance with law, treaties, policies developed by the joint staff, and rules of engagement developed by the combatant commands for their area of responsibility. Combat support agencies from within the DoD, and other Services all contribute to the targeting process. The Space Force engages with these agencies and the Intelligence Community throughout the targeting process and operations that follow. Allies and partners are an essential part of every operation. Space Force entities, primarily through the C-FLDCOM

commander, coordinate and deconflict actions across the combatant command area of responsibility to avoid unintended damage or destruction, or increased risk to operations in another domain or area of responsibility.

Appendix A – Acronyms, Abbreviations, and Initialisms

ATD	advanced target development
BDA	battle damage assessment
BTD	basic target development
CDE	collateral damage estimate
CEE	collateral effects estimate
C-FLDCOM	component field command
CID	combat identification
CTL	candidate target list
CSpOC	Combined Space Operations Center
DIRSPACEFOR	Director of Space Forces
F2T2EA	find, fix, track, target, engage, and assess
FLDCOM	field command
GITL	global integrated target list
HPT	high-payoff target
HVT	high-value target
ITD	intermediate target development
JDPI	joint desired point of impact
JIPOE	Joint Intelligence Preparation of the Operational Environment
JIPTL	joint integrated prioritized target list
JTC	Joint Targeting Cycle
JTL	joint target list

MEA	munitions effectiveness assessment
MOE	measure of effectiveness
MOP	measure of performance
NLRP	non-lethal reference point
NSDC	National Space Defense Center
NSIC	National Space Intelligence Center
NSL	no-strike list
PID	positive identification
RR	reattack recommendation
RTL	restricted target list
SDP	Space Doctrine Publication
SpOC	Space Operations Command
SSC	Space Systems Command
STARCOM	Space Training and Readiness Command
TDN	target development nomination list
TNL	target nomination list
TSA	target system analysis
US	United States
USSF	United States Space Force

Appendix B – Terms and Definitions

battle damage assessment (BDA) – The estimate of damage composed of physical and functional damage assessment, as well as target system assessment, resulting from the application of fires. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 3-0, *Joint Campaigns and Operations*)

candidate target list (CTL) – A list of entities submitted by component commanders, appropriate agencies, or the joint force commander's staff for further development and inclusion on the joint target list, restricted target list, or the no-strike list. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 3-60, *Joint Targeting*)

change assessment – The identification and assessment of measurable change to the target resulting from the application of lethal or nonlethal military force. (Chairmen of the Joint Chiefs of Staff Instruction 3162.02A, *A Methodology for Combat Assessment*)

collateral damage – A form of collateral effect that causes unintentional or incidental injury or damage to persons or objects that would not be lawful military targets in the circumstances ruling at the time. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 3-60, *Joint Targeting*)

collateral effect – Unintentional or incidental effect to objects that would not be lawful military targets in the circumstances ruling at the time. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 3-60, *Joint Targeting*)

combat identification (CID) – The process of attaining an accurate characterization of detected objects in the operational environment sufficient to support an engagement decision. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 3-09, *Joint Fire Support)*

force – An aggregation of military personnel, weapon systems, equipment, capabilities, and necessary support, or combination thereof. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 1 Volume 1, *Joint Warfighting*)

global integrated target list (GITL) – An overarching joint or restricted list in support of global campaigns and operations that refers to supported command targets validated by supported joint force commanders.

high-payoff target (HPT) – A target whose loss to the enemy will significantly contribute to the success of the friendly course of action. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 3-60, *Joint Targeting*)

high-value target (HVT) – A target the enemy commander requires for the successful completion of the mission. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 3-60, *Joint Targeting*)

joint integrated prioritized target list (JIPTL) – A prioritized list of targets approved by the joint force commander. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 3-60, *Joint Targeting*)

joint target list (JTL) – A consolidated list of validated targets of military significance without restrictions within a joint force commander's operational area. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 3-60, *Joint Targeting*)

link segment – The link segment consists of signals connecting other segments using the electromagnetic spectrum. Links include ground-to-space (uplink), space-to-ground (downlink), and space-to-space (crosslink). (Joint Publication 3-14, *Joint Space Operations)*

measure of effectiveness (MOE) – An indicator used to measure a current system state, with change indicated by comparing multiple observations over time. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 5-0, *Joint Planning*)

measure of performance (MOP) – An indicator used to measure a friendly action that is tied to measuring task accomplishment. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 5-0, *Joint Planning*)

munitions effectiveness assessment (MEA) – The assessment of the military force applied in terms of the weapon system and munitions effectiveness to determine and recommend any required changes to the methodology, tactics, weapon system, munitions, fusing, and/or weapon delivery parameters to increase force effectiveness. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 2-0, *Joint Intelligence*)

non-lethal effects assessment - The assessment of the military weapons employed to incapacitate personnel or materiel, while minimizing fatalities, permanent injury to personnel, and undesired damage to property in the target area or environment to determine any required changes to the methodology, tactics, weapon system, and/or weapon delivery parameters to increase force effectiveness.

orbital segment – The orbital segment consists of spacecraft beyond Earth's atmosphere. (Joint Publication 3-14, *Joint Space Operations)*

positive identification (PID) – An identification derived from observation and analysis of target characteristics, including visual recognition; electronic support systems; non-cooperative target recognition techniques; identification, friend, or foe systems; or other physics-based identification techniques. (*Department of Defense Dictionary of Military and Associated Terms* /Joint Publication 3-01, *Countering Air and Missile Threats)*

reattack recommendation (RR) – An assessment, derived from the results of battle damage assessment and munitions effectiveness assessment, providing the commander systematic advice on reattack of a target. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 3-60, *Joint Targeting*)

restricted target list (RTL) – A list of restricted targets nominated by elements of the joint force and approved by the joint force commander or directed by higher authorities. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 3-60, *Joint Targeting*)

space domain awareness – The timely, relevant, and actionable understanding of the operational environment that allows military forces to plan, integrate, execute, and assess space operations. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 3-14, *Joint Space Operations*)

target – An entity or object that performs a function for the threat considered for possible engagement or other action. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 3-60, *Joint Targeting*)

targeteer – An individual who has completed requisite training and guides the joint targeting cycle in their current duties. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 3-60, *Joint Targeting*)

targeting – The process of selecting and prioritizing targets and matching the appropriate response to them, considering operational requirements and capabilities. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 3-0, *Joint Campaigns and Operations*)

target development nomination list (TDN) – A list of nominated entities that meets basic target development criteria but requires intermediate target development before submitting as a candidate target. (Joint Publication 3-60, *Joint Targeting*)

target nomination list (TNL) – A prioritized list of targets drawn from the joint target list, or restricted target list, and nominated by component commanders, appropriate agencies, or the joint force commander's staff for inclusion on the joint integrated prioritized target list. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 3-60, *Joint Targeting*)

target system analysis (TSA) – An all-source examination of potential target systems to determine relevance to stated objectives, military importance, and priority of attack. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 3-60, *Joint Targeting*)

target validation – Target validation ensures all vetted entities meet the objectives and criteria outlined in the commander's guidance. Additionally, target validation reviews the target's compliance with law of war and rules of engagement to ensure it is not otherwise restricted. (Joint Publication 3-60, *Joint Targeting*)

terrestrial segment – The terrestrial segment consists of personnel, facilities, and equipment that exist in the other physical domains (air, land, and maritime) that affect or are affected by the use of either the orbital or link segments. (Joint Publication 3-14, *Joint Space Operations)*

weaponeering – The process of determining the specific means required to create a desired effect on a given target. (*Department of Defense Dictionary of Military and Associated Terms* / Joint Publication 3-60, *Joint Targeting*)

Appendix C – References

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Links to Reference Publications

Joint Electronic Files https://jdeis.js.mil/jdeis/generic.jsp

Air Land Sea Space Application Center https://www.alssa.mil