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ABSTRACT (MAXIMUM 200 WORDS) The conflicts that the United States military face are and will continue to be increasingly complex, requiring a more integrated approach to targeting. The future operating environment includes non-state adversaries, maritime targets, complicated fights in the urban littorals, and multi-effect military weapons and equipment. In recent conflicts, each of the United States armed services targeted using different procedures and systems; fraught with unintended, unnecessary overlaps in capability not conjoined in a systematic, operational approach to targeting. Joint targeting doctrine exists, but no one single document or mechanism establishes universal standards. Therefore, it is imperative that a standard be outlined to train our armed forces members in integrated targeting, necessary for achieving the effects required by future security environments. To improve the effectiveness and increase the lethality of fires and effects in complex future operating environments, the United States military must progress targeting in the joint task force by standardizing an integrated doctrine and utilizing interoperable, joint targeting systems.			
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MASTER OF MILITARY STUDIES

*Integrated Targeting in the Joint Task Force: The Span of Simultaneous, Complex,
and Interconnected Operations*

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Preface

My initial interest in this subject matter came because of my attendance at the Marine Corps 2025 Operational Planning Team in March of 2016. During the OPT, I started thinking about the implications of a future near peer or peer adversary and how we would effectively target the enemy in a complex operational scenario. Everyone's best guess is that the future battlefield would be complex fighting in the urban littorals making effective and efficient targeting a wicked problem.

Although I have known for some time that the United States military is particularly bad at closing the loop on lessons learned and implementing and enforcing lasting procedural changes, I knew at the heels of the OPT that it was time that I do my part to try and influence change going forward via research and recommendations.

Alarming, when I began my literature review and started writing, I found that we have been repeating the same targeting mistakes in every conflict we have been involved in since the second World War. Often, including most recently in Iraq and Afghanistan, these errors came at the cost of service member and allied lives, and often resulted in collateral damage to our strategic efforts in theater. I sincerely hope that the people who need to read this essay do, and our senior leaders take note and implement changes immediately.

Many thanks to my advisors on this project, including most notably LtCol Micheal Russ and Dr. Edward Erickson. And as always, the support of my wife Leslee and daughter Brynn were invaluable during the long days and nights of research and writing.

Introduction

Prior to World War II, targeting was much more simple. Limitations on technology and lower speeds of information flow contributed, by-and-large, to inaccurate effects on the enemy.¹ The advent of modern weapons and targeting information coupled with the impact of instantaneous media coverage of today, one misplaced round of ammunition can have very serious and unintended consequences. The conflicts that the United States military faces today will continue to be increasingly complex, requiring a more integrated approach to targeting.

The future operating environment includes non-state adversaries, maritime targets, complicated fights in the urban littorals, and multi-effect military weapons and equipment. An official document, the Joint Operating Environment 2035 explicitly notes, “The evolving mission set demands new operational approaches and capabilities. The Joint Force will almost certainly operate within and across multiple contexts at any given time. Looking across the contexts strongly suggests the United States will engage in multiple, simultaneous, and usually trans-regional conflicts involving a broad range of actors.”² Moreover, “The Joint Force will require a close linkage between ongoing information operations against adversary networks and the discrete application of lethal strikes and protective, defensive efforts to reinforce broader national counter-narratives designed to protect, strengthen, and promote free and open societies.”³ In recent conflicts, each of the United States armed services targeted using different procedures and systems; fraught with unintended, unnecessary overlaps in capability not conjoined in a systematic, operational approach to targeting.⁴ Joint targeting doctrine exists, but no one single document or mechanism establishes universal standards. Therefore, it is imperative that

the U.S. Government establish standards to train the armed forces members in integrated targeting, necessary for achieving the effects required by future security environments.

This paper will examine the following: 1) to what extent targeting doctrine delineate universal standards for targeting in the Joint Task Force (JTF) given the evolution of and complexities in future operating environments; 2) the role policy undertake to enforce universal standards; 3) to what extent the joint force annually synchronizes joint targeting; and, 4) the best mechanisms for integrating systems and procedures in the joint targeting process. This paper seeks to answer the question, "How might integrated targeting in the JTF be improved?" This paper advances the idea that to improve the effectiveness and increase the lethality of fires and effects in complex future operating environments, the United States military must progress targeting in the joint task force by standardizing an integrated doctrine and utilizing interoperable, joint targeting systems.

Historical Context

Targeting has existed as a concept throughout the history of warfare⁵, but most prevalent to current targeting efforts are the targeting concepts utilized since World War II. When the war began, the United States military lacked the intelligence gathering capability it needed to plan combat operations and systematically select targets.⁶ At the time, there was no organization in the military that was capable of systematic analysis for selecting the right targets. With the creation and evolution of strategic bombing, it was critical for the United States military to conduct targeting analysis and integrate its efforts in conducting the air campaign.

World War II

Two major challenges with integrated targeting in World War II were differing service doctrines and targeting priorities⁷. The parochial disagreements eventually led to friction in the targeting process and forced the Commander of the joint force to spend a lot of his time resolving prioritization issues concerning targeting. Eventually, the U.S. military formed a joint forum to synchronize targeting efforts⁸. However, despite multiple group targeting efforts, no one single organization retained the authority and responsibility to integrate the targeting of the different services. In 1944, the Joint Chiefs of Staff established the Joint Targeting Group (JTG), charged with the coordination and analysis of targeting efforts between the services.⁹ Because the JTG was an advisory group, it also retained no authority to issue directives concerning targeting, merely recommendations to General MacArthur, who oversaw the Pacific theater, who chose whether to use the information. Ultimately, the World War II ended before the JTG could offer recommended target sets that supported the Pacific campaigns.

Korean War

Despite the many lessons observed from World War II, the outbreak of hostilities on the Korean peninsula found the United States repeating its targeting mistakes.¹⁰ Because of the personnel drawdown post World War II, sufficient personnel trained in systematic targeting did not exist in the armed forces and critical databases that supported systematic targeting were not created in the post-war period. As before, the joint staff established a targeting group, this time named the General Headquarters Target Group (GHTG).¹¹ The GHTG had two major problems that contributed to its ineffectiveness. First, it failed to synchronize targeting efforts and nominated targets that did not exist, were unsuitable for attack by a certain platform of aircraft, or lacked imagery to

determine the most suitable method of attack. Second, the group failed to collect the correct targeting data and intelligence as input to a targeting system. This failure was largely due to a lack of sufficiently trained personnel that were capable of adequately analyzing the right weapons characteristics and achieving weapon-to-target match for desired effects. The GHTG failed to meet the original requirements to provide daily situation reports on the application of airpower, prioritized target selections, coordination measures, and effective analysis of target selection priority.¹²

Vietnam War

The issues concerning mission priorities and targeting continued into the Vietnam War.¹³ The target selection process was cumbersome, due to centralized control of the process by the national command authority. In addition, targeting philosophies between the services varied greatly, often creating missed opportunities for target matching and unnecessary duplication. Again, a targeting group was established, in this case because of the importance of the massive air campaign. Joint targeting teams focused on creating target lists that best supported the air campaign's goals. The same challenges faced by the targeting team arose just like what had happened 30+ years before: no distinct authority, multiple levels of approval, and excessive processing time. These factors prevented time sensitive targeting and emerging target opportunities as the situation on the ground continually developed.

In some cases, such as B-52 employment, separate control authority existed¹⁴. This created a problem for integrating targeting and fires, resulting in duplication of target engagement while other high payoff targets went unaddressed. Additionally, service command and control differences resulted in different targeting priorities, whereby service commanders were unwilling to let their assets be utilized by an alternate

service authority. As was the case in Korea, the problems plaguing the integration and efficiency of targeting remained unresolved after the war, dooming the targeting process to a repeated cycle of mistakes and inefficiencies.

Persian Gulf War: Operation DESERT STORM

At the outset of Operation DESERT STORM, no doctrine or procedures existed for joint targeting and operational planning, creating coordination problems between commanders during the execution of both the air and ground campaigns.¹⁵ Leading up to the war, no one had put efforts toward developing joint targeting concepts at the operational level, nor integrating the specifics of a joint targeting process¹⁶. A Joint Targeting Coordination Board (JTCCB) was created with oversight from the Joint Staff, but control of the strategic targeting process remained with the Joint Force Air Component Commander (JFACC), who rarely received any input from the JTCCB¹⁷. The board had only met once before the campaign began, and thus its impact on the joint targeting plan was insignificant. Commander, U.S. Central Command, responsible for the execution of the ground campaign, exercised no control or coordination within the targeting process. Thus, the JFACC retained control of air operations in theater with little to no coordination of target attack with the ground commanders. To this end, the effectiveness of high value target strike suffered as coordination with the ground element largely remained a secondary responsibility of the JFACC with little or no involvement or supervision by Commander, U.S. Central Command.

The disjointed targeting process of DESERT STORM never resolved operational targeting to anyone's satisfaction.¹⁸ The fact that the entire operation was as short and had relatively straightforward objectives placed joint targeting low on importance, something different than what would be required for operations in complex combat scenarios. This

also meant that efforts to fix the joint targeting process would not get the attention they deserved post conflict. Therefore, heading into future conflicts, the joint force would still not be prepared for the complex targeting pictures experienced in more recent conflicts.

Global War on Terror: Operations ENDURING FREEDOM AND IRAQI FREEDOM

In Operation ENDURING FREEDOM, the military services' ability to collect and share targeting intelligence information was seriously lacking. For example, Major General Michael Ennis (USMC) states, "We have bombed things we shouldn't have bombed. And information was there that just wasn't in the database that we were using for our targeting purposes. It was in somebody else's. That shouldn't happen."¹⁹ What Ennis meant was the intelligence collection needed to effectively target was occurring, but the synchronization of intelligence information with targeting entities across the services was not. Additionally, there existed a fundamental lack of understanding of what information sharing entailed. The theories, ideas, and solutions, therefore, varied. Some believed more analysts were required, while others believed more information on websites was needed. Neither one of these were a panacea, but distinct parts of the right solution.²⁰

In the fight for Afghanistan, joint targeting errors result from a lack of a central coordination element to manage information and prevent overlap. For example, as recently as 2015, target identification errors not managed by a central element contributed to the deaths of forty two civilians in an Afghan hospital.²¹ However, a Joint Fires Element (JFE) existed to manage the theater-wide, joint fires environment.²² The JFE was staffed by personnel from all the services and of differing military occupational specialties (aviation planners, ground fire support officers, and intelligence experts) who reported directly to the Combined Task Force (CTF) Commander. The JFE was a

separate entity within the operations staff that managed the complex joint-fires environment for the CTF Commander and provide targeting recommendations based on an evolving operational picture.

In Operation IRAQI FREEDOM (OIF), the United States relearned the evolving joint targeting process.²³ While strategic intent was initially clear, to remove Saddam Hussein and his Baathist Loyalists, how to effectively synchronize targeting was unclear. The initial kinetic targeting process was somewhat effective, but the U.S. military failed to properly plan for transition to stability operations, inclusive of a new joint targeting priority, insurgent networks. The shift in targeting priorities initially centered on isolating insurgent networks from the civilian population, instead of kinetically targeting the enemy.

The need to balance kinetic and non-kinetic effects in OIF was incredibly important for stability operations that required a fundamental shift in the concept of joint targeting. This required intellect and fusion. Getting the balance wrong literally came at the cost of lives and eroded support for military efforts from the local non-combatants and the interim government of Iraq. For example, on 23 March 2003 in southern Iraq, American A-10's attacked a column of Marine vehicles and personnel due to targeting information errors given by controllers and improper visual identification by the pilots.²⁴ The historical examples of problems with the integration of targeting efforts connect with evolving, contemporary methods of targeting doctrine. Therefore, the next section discusses current service targeting doctrine and procedures, and the current joint doctrine's use and application in the joint force.

Current Analysis

The U.S. Army

The U.S. Army utilizes FM 6-20-20, *Tactics, Techniques, and Procedures for Fire Support*, as the primary source document for targeting.²⁵ The manual acknowledges that all of army operations will be conducted in the joint environment and references the current joint targeting doctrine. The army targeting doctrine follows the “decide, detect, deliver, and assess (D3A)” method for targeting, a common model which most services use for targeting and effects assessment. The army doctrine further sub-divides targeting from the corps level to battalion, largely focused on terminology and procedures supporting ground maneuver. The publication subsequently addresses considerations for coordinating targeting with each of the other U.S. armed services. In application, the army doctrine focuses on the ground mission. The publication lacks any discussion regarding strategic targeting or non-kinetic fires, devoid of even a reference to another separate publication. Therefore, apart from addressing Close Air Support (air delivered fires supporting the ground scheme of maneuver), the terminology used in the publication centers on surface-to-surface delivered fires.

U.S. Marine Corps

Marine Corps Warfighting Publication 3-43.3, “*Marine Air-Ground Task Force Fires*”, governs Marine Corps targeting.²⁶ It follows the D3A targeting process and references joint targeting doctrine, specifically discussing the necessity of Joint Targeting Steering Groups and Joint Targeting Coordination Boards. It outlines most importantly the significance of fires and targeting integration with the other services as well as the required command relationships with joint force commanders and authorities therein. Marine Corps doctrine devotes a full section defining what targeting relationships could

look like between the air and naval components. Again, much like army doctrine, the focus of the publication and much of the content involves the targeting process in support of the ground scheme of maneuver.

U.S. Navy

The U.S. Navy possesses no standalone publication regarding targeting exclusively, but is included as a chapter of the Naval Tactical Training Publication 3-02.2M, "*Supporting Arms Coordination in Amphibious Operations*".²⁷ Chapter 5 of this publication discusses naval targeting, first by defining purpose and terminology, then discussing the specifics of the process, including types of targeting such as deliberate, dynamic, and time-sensitive targeting in depth. Moreover, it details the targeting cycle and component methodologies and the joint targeting cycle, and outlines the amphibious force targeting working groups and targeting board's role in the process. Unfortunately, and as good as this sounds, naval doctrine is wanting and devoid of the necessary considerations for targeting as a part of a joint force.

U.S. Air Force

Air Force Doctrine Document 2-1.9, "*Targeting*", details Air Force targeting.²⁸ The doctrine explicitly states, "Targeting is integral to the air and space component's wartime battle rhythm and should always be thought of as part of a larger effects-based construct of planning, execution, and assessment."²⁹ It specifically addresses tying effects to means as a way of synchronizing targeting efforts, and as expected of an air-centric document, it specifically mentions in detail the joint air estimate process, tasking cycle, and air tasking order. However, it references two types of targeting, deliberate and dynamic, spelling out in detail what each of these types mean relating to air force targeting and explains the new air force assessment construct, containing four assessment

levels: tactical, operational, campaign, and national. This expands the air force position on targeting assessment, which, prior to this document, focused almost exclusively on traditional battle damage assessment. In the entire 129-page publication, targeting in support of ground forces is mentioned only once, stating, “the need for minimization of CD, puts added stress on the entire dynamic targeting ‘kill chain.’” This requires airtight command and control for both the air and ground components, especially in situations where the bulk of force application occurs in small numbers of ground force troops-in-contact situations.”³⁰

The Joint Force

Joint doctrine provided for Joint Force Commanders and their targeting staffs is Joint Publication 3-60, “*Joint Targeting*”.³¹ The executive summary provides an understanding of targets and targeting, explains the joint targeting cycle, and addresses joint force targeting responsibilities and duties. The key takeaway from this summary is that joint targeting is a fundamental task that requires participation from all joint force staff elements and components. Additionally, it states that “The primary purpose of joint targeting is to integrate and synchronize all weapon systems and capabilities.”³² The publication mentions targeting in support of the ground scheme of maneuver as it relates to friendly fire prevention, as part of the four-phase targeting process in support of ground and maritime forces, and evaluation of targeting systems relevant to planning efforts.³³

Joint Publication 3-60, *Joint Targeting*, contains three chapters, all of which contain conceptual and specific guidance on the joint targeting process. The first chapter outlines the understanding of targets and targeting, describing first the physical, functional, cognitive, environmental, and temporal characteristics of targets. The chapter

further explains the purpose and prioritization of targeting, special considerations, and targeting in joint operations planning. Chapter Two explains the steps in the targeting cycle by phase of the joint operation, and considerations for each phase. Chapter Three covers joint force targeting duties and responsibilities, perhaps the most specific guidance of the publication, outlining joint targeting integration and oversight, specific joint force targeting responsibilities, and federated targeting support. The appendices of the publication cover items such as legal considerations, targeting automation, component targeting processes, the targeting assessment process, and a references section.

Joint Publication 3-60, *Joint Targeting*, is designed to be referenced in conjunction with other joint and service publications and is relatively short compared to other joint publications. The publication attempts to detail and/or reference U.S. armed service and joint force targeting systems and databases, including intelligence databases and command and control systems, as well as procedures on how to employ them. Though there currently exists a joint system that links the different sets of targeting software and targeting efforts, the Joint Targeting Toolbox (JTT)³⁴, it is underutilized by the services even during joint operations.³⁵ Therefore, it is evident that connections in integrated targeting are merely paper deep as each of the services targeting systems and databases are largely employed in a service capacity and seldom share targeting information.

It is now crucial to define and decide what could be the way forward as the joint force and joint force commanders are being asked to integrate across the warfighting functions of their forces, now and into the future. Discussing and understanding the future operating environment is a crucial first step in defining integrated targeting doctrine and future systems. Since there is no way to know with absolute certainty what future

conflicts the United States will be involved in, an explanation of likely scenarios is essential to understand and outline how integrated targeting is inherent to future success.

Context for the Way Forward

Joint Force Scenarios

General James Mattis (USMC) states, “It is impossible to predict precisely how challenges will emerge and what form they might take. Nevertheless, it is vital to try to frame the strategic and operational contexts of the future to glimpse the possible environments.”³⁶ At the broadest level, there are generally three types of operations that are most likely for the joint task force to face in the future³⁷. The first is a major combat operation that is a part of a larger campaign waged against a peer or near peer adversary. The joint task force in this regard would most likely be utilized as an enabler for meeting international, national, and/or regional strategic objectives. The joint task force would need to integrate its targeting processes within the larger targeting picture that likely includes input from international, national, and regional entities; the complexities for effective deliberate and dynamic targeting.

Second, the joint task force would execute a crisis response mission. This environment requires a flexible approach to targeting as kinetic and non-kinetic fires are woven and the situation changes more rapidly, affecting targeting priorities at intervals shorter than in conventional operations.

Third, the joint task force will likely be asked to conduct humanitarian and disaster relief missions. In these scenarios, targeting is largely non-kinetic and takes on a different character. As information and cyber operations targeting efforts increase in relevance, targeting synchronization requires all elements to have access to the same information, real-time, to ensure the targeting is correct, integrated, and complementary.

Challenges to Targeting

Eighty percent of the world's population lives on or near the littorals. Targeting in these areas is inclusive of maritime targets and the complications associated with the urban areas and population congestion. This presents a complex targeting picture as combatants mix with non-combatants, protected targets are enmeshed with military targets, and collateral damage estimates skyrocket. Dynamic targeting now becomes a dangerously complex endeavor.³⁸

Anti-access / area denial is a concern in the future operating environment given the likelihood that most crises will occur in the littorals and many of our operating concepts merge in these areas. A recent example of how anti-access / area denial is resident in the case of piracy along the Somali coastline. In complex, future fights, maritime interdiction, or shore-to-sea area denial further complicates joint targeting both in terms of responsiveness and effectiveness.

Future competitive behavior between state and non-state actors will also be overt, ambiguous, and violent,³⁹ further exacerbating joint targeting depth and complexity. Normal patterns of conflict will give way to persistent disorder and require deeper integration of the joint force to effectively target a nonlinear adversary. The JOE 2035 states,

In 2035, the Joint Force will confront Violent Ideological Competition focused on the subversion or overthrow of established governments. Threatened U.S. Territory and Sovereignty will become increasingly prevalent as enemies attempt to coerce the United States and its citizens. Antagonistic Geopolitical Balancing by capable adversaries will challenge the United States over the long term and place difficult demands on the Joint Force over wide areas of the globe. Intimidation, destabilization, and the use of force by state and non-state actors alike will result in Disrupted Global Commons and A Contest for Cyberspace. Internal political fractures, environmental stressors, or deliberate external interference will lead to Shattered and Reordered Regions.⁴⁰

These predictions, if realized, require complete integration of joint force targeting and intelligence sharing across the force to effectively design well developed solutions that address the future threats and root causes well.

Challenges to Joint Force Operations

At the core of the issue are joint force operations as envisioned in the current and future operating environments, both in general operational terms and specifically with regards to targeting. First, the joint force will be asked to hone cross-service and cross-domain synergy and integration.⁴¹ This implies that integration must occur during all deliberate operations, to transition from one phase of the operation to the next. Further, the uncertainties, rapidity of change, complexities, and persistent disorder that characterize future battlefields will force the joint force to adapt at a rate faster than the assessed rate of change to win.

There are significant challenges to integrating and synchronizing a joint force that operates seamlessly across the warfighting functions and phases of an operation. The joint force must use the integrated joint systems to plan for and conduct operations with a joint force. The underutilization of these systems hides the fact that systems, when used to their full capacity, are force enablers. Concerning general guidance for the joint force, unity of command and effort in all operations demands that the force must operate jointly, possessing the doctrine and systems that achieve real efficiency and effectiveness in all operations.

The requirement that the joint force maximize operational performance and continually assess its operations is necessary for measuring joint force effectiveness.⁴² Employing joint warfighting functions in an integrated approach is applicable to providing synergy in operations, resulting from integration and synchronization of service

capabilities commanded and controlled under a single Joint Force Commander. This assessment is not exclusive to joint forces in operations, but also pertains to integrated planning across the entire Department of Defense ensuring that integration and synchronization are resident in all areas of this vast military. It is that all other specific processes and procedures are detailed in joint operations and planning.

Challenges to Targeting in Joint Force Operations

Specific to targeting, the joint force will be asked to systematically analyze and prioritize targets and achieve a weapons-to-target match to achieve the Joint Force Commander's desired effects.⁴³ Joint targeting is expected to adhere to four principles: focused, effects-based, interdisciplinary, and systematic. JP 3-60, *Joint Targeting*, states,

The JFC's primary targeting responsibility lies in establishing the objectives that component commanders will achieve throughout the operational environment with their forces (assigned, attached, and supporting). With the advice of subordinate component commanders, JFCs set priorities, provide clear targeting guidance, and determine the weight of effort to be provided to various operations. Joint force and component commanders identify HVTs and HPTs for acquisition, collection, and attack or influence, employing their forces in accordance with the JFC's guidance.⁴⁴

This requirement clearly defines joint targeting integration and oversight, and explains how crucial it is that service assets be leveraged by the JFC to accomplish mission objectives. In addition to the guidance to the joint force concerning targeting, it is easy to conclude that the highest priority for joint targeting is to operate jointly and maximize the effectiveness of service assets to achieve targeting efficiency. Therefore, the joint force will need to establish Joint Operations and Joint Intelligence Operations Centers and procedures that effectively coordinate and enable the joint targeting process and thwart the eight recurring challenges usually associated with joint targeting.

Analysis: The Eight Recurring Challenges with Joint Targeting

There exist eight recurring challenges with joint targeting, that, if corrected, enable an effective and synergistic joint targeting cycle. These eight recurring challenges are the most important issues concerning joint targeting as identified by an expert “Targeteer”. Targeteers are broadly defined as a person who possesses the requisite targeting training, experience, and education required to effectively manage the targeting process and provide sound recommendations to commanders. In this case, Commander John Patch, U.S. Navy, considered an expert Targeteer and author of many targeting articles to DOD publications, identified the eight recurring challenges, as researched through many primary and secondary resources.⁴⁵ Based on his experience as a Targeteer, the following challenges represent the most significant threat to integrated targeting. Ironically, the same challenges were identified as the most significant problems, spanning different periods in time and different operations.

First, doctrinal issues denote that joint and service targeting doctrine exists, but no one document establishes universal standards. Though a joint targeting publication exists, it is seldom utilized or referenced outside of JTF exercises, causing many Targeteers to be unaware of its existence and affluence. Joint doctrine that focuses almost exclusively on air delivered munitions is not enough. Integrated doctrine that talks targeting over the span of joint operations in a collective ground scheme of maneuver is integral to doctrinal effectiveness.

Second, minimal joint tactics, techniques, and procedures, and differing service targeting systems and databases do not assist joint interoperability or integration in training. There appears to be little oversight above the service level concerning

enforcement of joint targeting procedures, leading to the services training in different procedures and using different systems.⁴⁶

Third, joint task force staff expansion has gone on devoid of the requisite training required to conduct full-spectrum targeting. Very few personnel in a joint targeting cell have attended the basic targeting course at the Joint Targeting School, and fewer others possess the operational targeting experience to conduct joint targeting effectively.

Fourth, service legacies, nuances and priorities influence joint targeting. In any joint operation where joint targeting occurs, it is critical that all fires be integrated. When services are allowed the freedom to acquire and field non-joint programs for targeting, they continue to exacerbate the incompatibilities that accentuate an unfamiliarity with other service capabilities and integrated targeting.

Fifth, there are few qualified "Targeteers": someone with the requisite formal training and experience to understand and effectively manage the joint targeting process. Very little emphasis by the individual services is given to making use of the formal targeting training available to them. Seldom is targeting highlighted for career progression in the fires, intelligence, or maneuver military occupational specialties. This results in poorly drafted procedures and execution that leads to unnecessary mistakes.

Sixth, joint targeting is over reliant on technologies that ignore a Targeteer's sound judgement, based on experience, to make assessments for effective targeting and provide common sense recommendations to the joint force commander. The overreliance on systems to do the work for persons leads to complacency in the targeting process and ultimately to inefficient operations.

Seventh, there is a tendency in joint staff planning to segregate the operations and intelligence functions, where integration is the key to understanding. Targeteers,

therefore, are often excluded from both camps; their input, which is usually invaluable to targeting decisions, is highly disregarded.

Finally, the joint targeting process does not connect with the interagency in a cooperative fashion. The divide and lack of communication between other governmental agencies and the joint task force delinks the military from being able to best achieve the effects the communities that the U.S. military are serving require. It has been demonstrated by the Joint Interagency Task Force-South that, if done correctly, success in joint-interagency targeting can occur.⁴⁷ In this case, successful interagency coordination led to effective operational procedures, models and concepts that could be adapted and utilized by other joint task forces.

Recommendations and Implications for the Future

Addressing the major problems with joint task force integrated targeting in an integrated concept can lead to solving the inefficiencies associated with current planning and execution. The following five recommendations outline a comprehensive approach to solving the eight major recurring problems with integrated targeting in the joint force, as some of the recommendations mitigate more than one issue. The recommendations are a necessary first step in what should be a long-term investment in the future of integrated targeting in the joint task force. Additionally, these recommendations should be codified and enforced in joint force operations, to ensure the U.S. military is prepared for future conflicts.

The five recommendations are sequenced in order of appropriate priority lines of effort. This same sequencing has been proven historically as an effective means to achieve a desired end state and enduring procedural changes. Additionally, it follows a

logical order in terms of difficulty to implement, and a phased approach to lasting change.

Doctrine

The DOD should combine service and joint targeting doctrine and publications into one coherent document, incorporating all important aspects of joint and service targeting procedures. This incentivizes services to consider joint targeting procedures, and could potentially limit service parochialism in targeting and the joint targeting cycle. The creation of this publication should be a joint endeavor, with senior targeting representation from across the services.

Education

Combining service targeting courses under the Joint Targeting School is overall a great first step forward. The consolidation of the service schools under a joint domicile would ensure not only standardization, but also engender service integration and joint education regarding service capabilities. Additionally, joint targeting procedures could be codified and learned by the services and integrated into targeting course curricula. The added benefit of the sharing service targeting procedures and priorities would subsequently be filtered back to service specific operations, thereby enhancing joint interoperability.

Second, creating a demand for targeting qualifications for personnel with oversight from the Joint Staff assists in mandating targeting standards across combatant commands and services.⁴⁸ The differing qualification standards that exist across the services create a divide between levels of proficiency. With proper oversight from an appropriate higher headquarters codified in policy will facilitate service collaboration

when creating targeting qualified personnel who regularly practice standardized, joint targeting procedures.

Third, the U.S. military should establish a career track for a military operational specialty for targeting, inclusive of promotion potential to senior levels of command and staff. Creating a targeting career track and reward system for expertise in targeting could incentivize retention of talented personnel who become and retain skills required of a targeting expert, ultimately improving the targeting process. Although the army and Marine Corps have career specialties for targeting, such as the Army's 131A Field Artillery Targeting Technician and the USMC Target Information Officer, both are currently focused almost entirely on surface delivered fires, and not joint targeting in a holistic sense.⁴⁹

Fourth, the DOD should establish a senior level targeting and fires curriculum for integration into the operational portions of the senior PME and CAPSTONE courses. The importance of joint and service targeting better prepares commanders for the unique challenges associated with effective and efficient targeting. Given the time consuming and analytical nature of the targeting process, senior service members and commanders would be at an advantage with education about understanding targeting at the joint force level prior to commanding joint forces forward.⁵⁰

Coordination

The DOD should also establish a National Targeting and Fires Command under the direction of the Joint Staff. This command should have the authority to enforce joint targeting tactics, techniques, and procedures, and include representation from all staff across the warfighting functions from each of the services and interagency personnel. The establishment of the Joint Forces Command Joint Fires Integration and Interoperability

Team, now the Joint Deployable Analysis Team under the cognizance of the Joint Staff J6, does not currently, and did not ever possess enforcement authority, nor include all aspects of joint targeting in its efforts.⁵¹ The establishment of an authority like the National Targeting and Fires Command could monitor pre-deployment joint targeting measures of effectiveness to ensure future joint targeting staffs are prepared to conduct targeting in a dynamic, joint environment.

Oversight and Accountability

Finally, the Joint Staff should be given oversight and accountability for a targeting assessment program and require mandatory quotas for the program from all the services. The primary benefit here is that it forces the services to think more about weapon systems that achieve the effects on targets as delineated by joint force commanders and places the emphasis on the joint targeting process by extension. The Joint Staff possesses many assessment program portfolios, including those such as budgeting assessment. Creating a targeting assessment program is possible and could be established under the J3 with minimal impact.⁵²

Targeting Systems

All service legacy targeting systems and databases should also be consolidated under one joint service targeting collective. Targeting information databases and execution systems would incorporate service weapon systems capabilities and mesh service targeting priorities while providing collective situational awareness of targeting efforts. This also provides service and joint targeting experts improved assessment capability, whereby they analyze other services targeting effects to achieve weapon-to-target match more effectively when archiving the desired effects as espoused by joint force commanders.

Conclusions

A history of inefficient and error-laden joint targeting guides the improvement of the targeting process for the future joint force. Given the repeated challenges associated with targeting in conflicts from World War II until the present, coupled with the fact that future joint force operations will be increasingly complex and dynamic, there is potential for serious impacts to the joint force and its ability to address targets at all levels of command. Unnecessary duplication of effects as well as missed opportunities to engage strategically important targets should be outdated. Moving forward and creating a holistic, joint venture to integrated targeting will thwart challenges posed by lack of integration when targeting and sharing intelligence that ultimately support achieving the effects of the commander and the operational ground scheme of maneuver. These challenges are avoidable in the future should the joint force pursue an integrated approach to targeting.

Most concerning about integrated targeting in the joint force is that there isn't an abundance of literature on the subject, very few contemporary articles, and even less open discussions or emphasis in joint force exercises. In review of the Joint Targeting School, the lack of throughput in targeting courses offered there highlights that there is a lack of emphasis on improving joint targeting by way of education of personnel. Increasing the number of personnel attending courses there would be a necessary first step, but more importantly is long term buy in from commanders and staff of its importance to effectiveness and efficiency in targeting. If this happens, the U.S. armed forces would begin to realize efficiencies that did not exist before, as well as cut costs associated with weapons systems and ammunition.

Integrated targeting in the joint force is going to become more important given the predictions of what the future security environment will look like. A battlefield characterized by simultaneous, complex, and interconnected operations will require integrated targeting efforts to accomplish the mission and defeat an adversary or conduct security and stability operations. To this end, greater effort needs to be directed to joint targeting beginning now and enduring into the future.

¹ John Patch, Cdr, U.S. Navy. 2007. "Obstacles to Effective Joint Targeting." *Joint Force Quarterly: JFQ*, no. 45: 74-77.

² U.S. Joint Chiefs of Staff. *Joint Operating Environment 2035. The Joint Force in a Contested and Disordered World*. Washington, DC: U.S. Joint Chiefs of Staff, July 14, 2016. Commas typically separate author from title in an endnote. This looks more like the bibliography format.

³ *Ibid*, 42.

⁴ Grace Jean. 2006. "Information Miscues Lead To Bad Targeting Decisions." *National Defense* 91, no. 633: 24-25. Military & Government Collection, EBSCOhost (accessed December 20, 2016). The placement of the year 2006 is incorrect—see Ch 9 in our MCU Style Guide, and let me know if you have any questions! See also my earlier comment on comma use versus periods.

⁵ Amos Guiora. "Legitimate Target: A Criteria-Based Approach to Targeted Killing." Oxford University Press, Mar 6, 2013.

⁶ Anonymous. "The evolution of Air Force targeting." *Airpower Journal* 8, no. 3: 14. 1994. Military & Government Collection, EBSCOhost (accessed December 18, 2016).

⁷ Michael E. Moeller. "The Relationship Between the Joint Targeting Coordination Board and the Joint Force Commander" School of Advanced Airpower Studies. 1994.

⁸ Memorandum, JCS 1020, subject: Joint Target Group, 24 August 1944, USAFHRA No K142.6601-1, 4.

⁹ *Ibid*, 8.

¹⁰ MAJ Michael Ripley. "Joint Targeting. Achieving Effects in an Uncertain Environment." Army Command and General Staff College. 2007.

¹¹ *Ibid*, 9.

¹² Moeller, 11.

¹³ *Ibid*, 14.

¹⁴ *Ibid*, 16.

¹⁵ John W. Schmidt and Clinton L. Williams. 1992. "Disjointed Or Joint Targeting?" *Marine Corps Gazette (Pre-1994)* 76 (9): 66-71.

<http://search.proquest.com/lomc.idm.oclc.org/docview/206366692?accountid=14746>.

¹⁶ *Ibid*, 68.

¹⁷ Moeller, 18.

¹⁸ *Ibid*, 70.

¹⁹ Jean, 25.

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- ²⁰ Jean, 24.
- ²¹ Mathew Rosenburg. "Pentagon Details Chain of Errors in Strike on Afghan Hospital." NY Times, April 29, 2016.
- ²² Robert B. Green. 2005. "Joint Fires Support, the Joint Fires Element and the CGRS: Keys to Success for CJSOTF-West." *Special Warfare* 17 (4): 12-17.
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- ²³ Shane Finn. "Sunzi And OIF: The Targeting Process Relearned." *Infantry* 100, no. 1 (January 2011): 16-18. Military & Government Collection, EBSCOhost (accessed December 11, 2016).
- ²⁴ Joseph W. Caddell, Jr. 2010. "Targeting-Error Fratricide in Modern Airpower: A Causal Examination." Order No. 1483750, Georgetown University.
<http://search.proquest.com.lomc.idm.oclc.org/docview/839792652?accountid=14746>.
- ²⁵ United States. 1998. *Tactics, Techniques, and Procedures for the Targeting Process*. FM, 6-20-10; MCRP, 3-1.6.14; United States, no. 6-20-10; MCRP, 3-1.6.14. Washington, DC: Headquarters, Dept. of the Army.
- ²⁶ United States. 2016. *Marine Air-Ground Task Force Fires*. MCWP 3-43.3. Washington, DC: Headquarters, United States Marine Corps.
- ²⁷ United States. 2016. *Supporting Arms Coordination in Amphibious Operations*. NTTP 3-02.2M. Washington, DC: Headquarters, Department of the Navy.
- ²⁸ J. P. Hunerwadel. 2006. "New USAF Doctrine Publication: Air Force Doctrine Document 2-1.9, Targeting." *Air & Space Power Journal* 20 (3): 53-54.
<http://search.proquest.com.lomc.idm.oclc.org/docview/217771958?accountid=14746>.
- ²⁹ Secretary of the Air Force. Targeting. Air force doctrine document 2-1.9. 8 June 2006. P. vii.
- ³⁰ *Ibid*, 16.
- ³¹ U.S. Joint Chiefs of Staff. *Joint Targeting*. Joint Publication 3-60. Washington, DC: U.S. Joint Chiefs of Staff, January 31, 2013.
- ³² JP 3-60, vii.
- ³³ *Ibid*, II-8, D-10.
- ³⁴ The Joint Targeting Toolbox is the DOD's targeting system of record. It is made up of a suite of software applications that field through the GCCS. For a more detailed explanation, reference the Joint Targeting School Student Handbook.
- ³⁵ Joint Targeting School. *Joint Fires and Targeting Student Guide*. 5 March 2014. C-7.
- ³⁶ Jeffrey Becker. 2014. "Contexts of Future Conflict and War." *JFQ: Joint Force Quarterly* no. 74: 15-21. Military & Government Collection, EBSCOhost (accessed December 23, 2016).
- ³⁷ *Joint Operating Environment 2035*, 49
- ³⁸ Headquarters, U.S. Marine Corps. *Marine Corps Operating Concept: How an Expeditionary Force Operates in the 21st Century*. September, 2016. P.5.
- ³⁹ *Ibid*, i.
- ⁴⁰ *Ibid*, iii.
- ⁴¹ U.S. Joint Chiefs of Staff. *Doctrine for the Armed Forces of the United States*. Joint Publication 1. Washington, DC: U.S. Joint Chiefs of Staff, March 25, 2013.
- ⁴² U.S. Joint Chiefs of Staff. *Joint Operations*. Joint Publication 3-0. Washington, DC: U.S. Joint Chiefs of Staff, August 11, 2011.
- ⁴³ *Joint Targeting*, vii.

⁴⁴ JP 3-60, xiii.

⁴⁵ Patch, 76.

⁴⁶ David Germakian and Derek Jaskowiak. Model of the US CENTCOM Joint Targeting Architecture: Develop Targets. Naval Postgraduate School, June 2004.

⁴⁷ Evan Munsing, Christopher J. Lamb, and National Defense University. 2011. Joint Interagency Task Force-South: The Best Known, Least Understood Interagency Success. Strategic perspectives, 5; Strategic perspectives (National Defense University. Institute for National Strategic Studies), 5. Washington, D.C.: National Defense University Press.

⁴⁸ Patch, 77.

⁴⁹ Donald F. Cooper. 1999. "New career path for FA targeting technician 131A." FA Journal 4, no. 3: 30. Military & Government Collection, EBSCOhost (accessed December 29, 2016).

⁵⁰ Steven Kournianos. 2013. "Partnered ANSF Targeting in a Joint Environment." Fires: 64-65.

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⁵¹ K. D. Jones, Donald W. Perry, Dale S. Ringler, Mark L. Jenner, and Dennis L. Wise. 2005. "JFIIT-Joint Fires Integration & Interoperability Team." FA Journal 10 (4): 36-37.

⁵² Anthony S.C. Yanero, U.S.N. 2013. "Joint Staff Impact on the Budget Process."

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