Commander's Handbook for Joint Time-Sensitive Targeting

United States Joint Forces Command
Joint Warfighting Center

Office of the Secretary of Defense
Joint Warfighters Joint Test and Evaluation

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MESSAGE FROM THE COMMANDER

This Handbook is designed for joint force commanders and their staffs to assist them in rapid target engagement. It is meant to be a resource tool for the joint force commander, joint force headquarters, and the joint force components. Though consistent with joint and Service doctrine, it is not a doctrinal publication. Joint Publication 3-60, *Joint Doctrine for Targeting*, 17 January 2002, is the authoritative publication and has an appendix for time-sensitive targeting considerations.

As we learned from experiences in such locales as Iraq, Kosovo, and Afghanistan, our ability to engage time-sensitive targets in a timely, efficient, and effective manner is a requisite for successful military operations. US forces are faced with an ever-increasing threat from adversaries that pose (or could pose) a direct danger and demand an immediate response. The complexities of engaging time-sensitive targets require joint force commanders and their staffs to fully appreciate the coordination and integration that are required to minimize the chance of fratricide and other collateral effects. This Handbook provides examples from combatant commands and joint task forces to assist in the prosecution of time-sensitive targets.

Corrections or suggestions for improvement of this Handbook are welcome. They should be sent to Commander, Joint Warfighting Center (USJFCOM/ JW 100), 116 Lake View Parkway, Suffolk, Virginia, 23435-2697.

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Brigadier General, U.S. Marine Corps
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PREFACE

The United States Joint Forces Command Joint Warfighting Center and the Office of the Secretary of Defense Joint Warfighters Joint Test and Evaluation have developed this *Commander's Handbook for Joint Time-Sensitive Targeting*, to facilitate rapid target engagement by a joint force commander (JFC) within an operational area. **This handbook is not intended to be authoritative, but is offered as a supplement to extant joint targeting doctrine.**

Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms*, defines time-sensitive targets (TST) as, "Those targets requiring immediate response because they pose (or will soon pose) danger to friendly forces or are highly lucrative, fleeting targets of opportunity."

For the purposes of this handbook, a "**joint**" TST refers to a TST that requires cooperation and/or coordination by two or more Services or components to successfully engage. Examples of joint TSTs include those cases when one component fires into or through another component's area of operations (AO), or when the effects of attacking a TST could cause fratricide or other collateral effects that may impact another component's mission.

The focus of this handbook is on the processes required to engage joint TSTs in a timely, efficient, and effective manner. Only joint TSTs are addressed to highlight the coordination required between the joint force components to successfully engage these targets. Additionally, only targets on the Earth's surface, whether on land or sea, are discussed since joint doctrinal procedures are well established within the air and maritime components that effectively address engagement of time-sensitive air and subsurface targets, and therefore will not be discussed in this handbook.

This handbook has been developed expressly for:

- JFCs—who develop and recommend rules of engagement, issue commander's guidance, establish risk parameters, and designate TSTs.
- The joint force headquarters—those who prioritize targets, establish boundaries and control measures within an operational area, and coordinate and deconflict joint TST attack options among the joint force components.
- The joint force component forces—those who ultimately employ the weaponry to engage joint TSTs.

Considerable emphasis has been given to the significance of the JFC guidance in the joint TST process. (Note: Throughout this handbook, maroon print has been used for additional emphasis or clarification.) As will be seen, not only is the JFC joint TST guidance an indispensable force-protection measure, it could be, depending upon the threat, one of the most critical decisions of the entire joint operation.

This handbook explores the concept of joint TSTs and discusses the TST decision cycle. The importance of joint TST command and control is highlighted, along with a specific sample of a possible JFC joint TST guidance statement.

Lastly, useful collaborative tools, successful examples from combatant commands and joint task forces, and checklists have been included to facilitate the prosecution of joint TSTs within an operational area.

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CHAPTER I
THE CONCEPT OF JOINT TIME-SENSITIVE TARGETING

1. Introduction

a. In an operational area, surface time-sensitive targets (TSTs) located and identified within a joint force component area of operations (AO) may be engaged by the component commander using inside-the-AO coordination and organic assets. Similarly, joint force air defense and subsurface forces have established doctrinal procedures for engaging adversary air and submarine TSTs. However, a large proportion of TSTs within an AO involve cross-boundary and/or multi-component joint force assets for detection, analysis, identification, decision, and execution. These **joint TSTs** are prioritized, categorized, coordinated, deconflicted, and directed for engagement by the joint force.

b. To ensure a common understanding of the concept of joint TST, this chapter provides a targeting overview based upon Joint Publication (JP) 3-60, *Joint Doctrine for Targeting*, JP 3-09, *Doctrine for Joint Fire Support*, and Air/Land/Sea Application Center Multi-Service Tactics, Techniques, and Procedures Publication, *Targeting*.

c. JP 1-02, *Department of Defense Dictionary of Military and Associated Terms*, defines TSTs as, "Those targets requiring immediate response because they pose (or will soon pose) danger to friendly forces or are highly lucrative, fleeting targets of opportunity." **For the purposes of this handbook, the following terms are used for ease of understanding**:

- A TST is defined as stated above.

- A **joint** TST refers to a TST that requires cooperation and/or coordination by two or more Services or components to successfully engage. Examples of joint TSTs include those cases when one component fires into or through another component's AO, or when the effects of attacking a TST could cause fratricide or other collateral effects that may impact another component's mission.

d. Succeeding chapters will review joint force TST decision cycles and joint TST command and control with emphasis on the significant role of the joint force commander (JFC), and offer detailed guidance and recommendations for engaging joint TSTs.

2. Targets

a. JP 1-02, *Department of Defense Dictionary of Military and Associated Terms*, defines a target as: "1. An area, complex, installation, force, equipment, capability, function, or behavior identified for possible action to support the commander's objectives, guidance, and intent. Targets fall into two general categories: planned and immediate. 2. In intelligence usage, a country, area, installation, agency, or person against which intelligence operations are directed. 3. An area designated and numbered for future firing. 4. In gunfire support usage, an impact burst that hits the target." This handbook discusses the first definition only.

b. Figure I-1 depicts the general target categories and subcategories.

- **Planned targets** are targets that are known to exist in an operational area, and against which effects are scheduled in advance or are on-call. Examples range from targets on joint target lists in the applicable campaign plan, to targets detected in sufficient time to list in the air tasking order, mission-type orders, or fire support plans. Planned targets have two subcategories: **scheduled** or **on-call**.

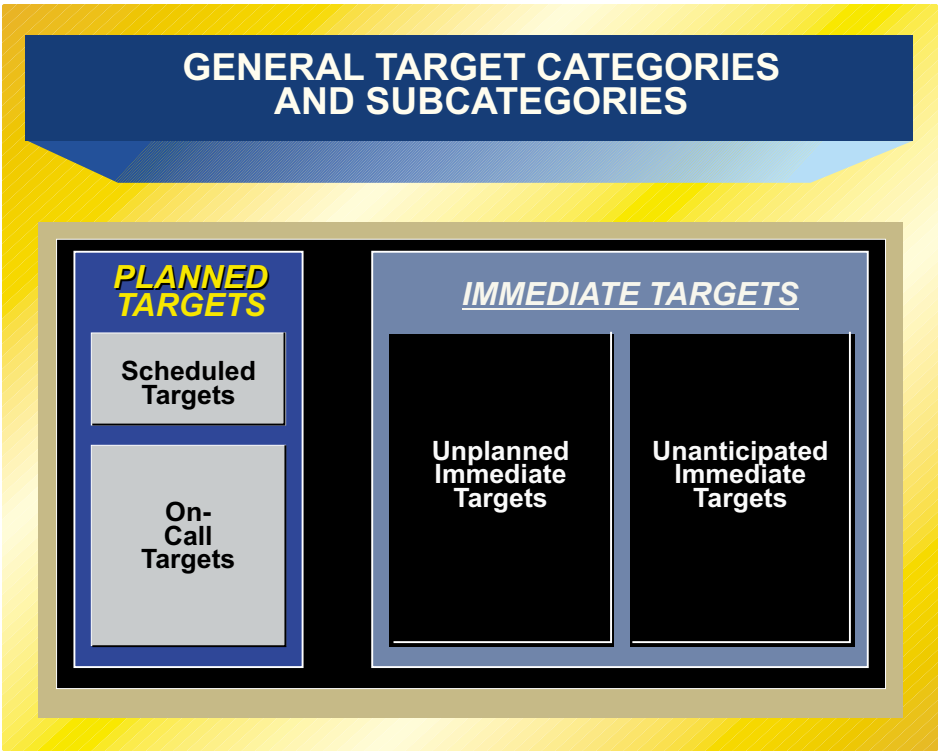

Figure I-1. General Target Categories and Subcategories

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

•• **On-call targets** are planned targets that are known to exist in an operational area and are located in sufficient time for **deliberate** planning to meet **emerging situations specific to campaign objectives**.

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

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

•• **Unanticipated immediate targets** are those immediate targets that are unknown or not expected to exist in an operational area.

3. Targeting

a. Targeting is defined as: "the process of selecting and prioritizing targets and matching the appropriate response to them, taking account of operational requirements and capabilities."

b. Target selection at the joint force and component-level seeks targets that meet military objectives, determines desired effects, and selects or tasks the means to achieve those effects.

c. Targeting occurs at all levels of command within a joint force and is performed at all levels by forces capable of delivering fires or attacking targets with both lethal and nonlethal disruptive and destructive means. Targeting is a function shared by both operations and intelligence. However, the requirement to deconflict duplicative efforts of different echelons within the same force, and to synchronize the attack of these targets with other components of the joint force, complicates the targeting cycle. Therefore, an effective and efficient joint targeting cycle is essential for the JFC and components to plan and execute joint operations.

4. Joint Targeting

a. Joint targeting may be described as: "The process of selecting targets within a JFC's operational area and matching the appropriate component responses to them, considering operational requirements and capabilities." Joint targeting is characterized by the integration and coordination of land, sea, air, space, and special operations assets in the target detection and engagement cycle.

b. The purpose of the joint targeting cycle is to provide the JFC with a target list to support the joint force campaign objectives or a subordinate component commander's supporting objectives. Consequently, components must understand the joint targeting cycle to achieve the effects necessary to accomplish JFC objectives. For further details concerning the joint targeting cycle, refer to Chapter II, Joint Time-Sensitive Targeting Decision Cycles and Component Considerations.

c. The focus of the joint targeting cycle can range from the restricted time and space constraints of the immediate tactical environment to the broadest extent of the geopolitical sphere in the strategic environment. However, its primary concern is always to enable the commander to most effectively employ military capabilities to achieve the joint force objectives.

d. The joint targeting cycle supports the commander's campaign plan, objectives, scheme of maneuver, and employment of military force to achieve a desired military endstate. It integrates capabilities of national assets, geographic combatant commands, subordinate joint forces, multinational forces, and component commands, all of which possess varying capabilities and requirements. The joint targeting cycle is described as a "cyclical process" with sequential *phases*. However, the joint targeting cycle is really a continuously operating series of closely related, interacting, and interdependent *functions*. The six functions/cycles are—commander's objectives, guidance, and intent; target development, validation, nomination, and prioritization; capabilities analysis; commander's decision and force assignment; mission planning and force execution; and combat assessment (CA). The joint targeting cycle is not a static, inflexible process but rather a dynamic one that must be fluidly applied. (See Figure II-1 on page II-1.)

e. Joint targeting integrates intelligence on the threat, target system, and target characteristics with operations data on force posture, capabilities, weapons effects, objectives, rules of engagement (ROE), and doctrine. Joint targeting matches objectives and guidance with inputs from intelligence, operations, and other functional areas, such as logistics and communications, to identify the forces necessary to achieve the objectives. Joint targeting examines all lethal and nonlethal applications of force and spans not only nuclear and conventional force applications, but also electronic warfare, space, and special operations. **To be effective, joint targeting must identify the best weapon for the intended target with appropriate timing to meet the objectives established by the JFC.**

5. Joint Time-Sensitive Targeting

a. Other adjectives commonly used to describe a joint TST are *emerging, perishable, high payoff, short dwell, or critical-mobile*. This handbook deals exclusively with *surface* (land or sea) joint TSTs. Most surface TSTs typically move rapidly and hide throughout the battlespace, limiting their exposure time, however, depending upon the operational situation, fixed targets may also be designated as joint TSTs.

b. In terms of the joint targeting cycle, the JFC and component commanders specifically designate surface joint TSTs as priorities within the commander's objectives and guidance phase. Target development dedicates sensors for detection and identification, and weaponeering assessment provides the JFC options for attack. Force application assigns attack assets, after which the execution planning/force execution phase employs force.

c. Examples of mobile surface joint TSTs include:

- Mobile rocket launchers (MRLs)
- Mobile high threat surface-to-air missiles (SAMs)
- Mobile radar sites, or mobile command and control (C2) vehicles and facilities
- Naval vessels, military or civilian, in the act of laying mines
- Loaded transporter, erector, launchers (TEL)
- Deployed weapons of mass destruction (WMD)
- Deployed theater ballistic missiles (TBM)
- Armored concentrations marshaled to strike
- Troops in contact situations
- TSTs designated by the JFC in the operation order (OPORD) and revised in subsequent fragmentary orders (FRAGorders)

d. Fixed surface joint TSTs may include operational-level command centers that, once their location is determined, could be destroyed quickly to enhance friendly force actions. Other fixed-surface joint TSTs could include surface-to-surface missile sites or bridges. For example, a previously untargeted

Joint TSTs may include armored concentrations.

bridge that is about to be crossed by an adversary armored counterattack force rapidly becomes time-sensitive to thwart the adversary counterattack.

e. Surface joint TSTs are classified as either planned or immediate (Figure I-2).

- **Planned** surface joint TSTs are ordinarily fixed targets, known to exist in an operational area, that have been upgraded to time-sensitive status due to JFC/ component commander priorities. This is normally the result of a newly acquired "short dwell" status that presents an exceptional operational or tactical opportunity. Fires and attacks are placed on-call against planned surface joint TSTs. Generally, surface joint TSTs (as planned targets) are limited in number.

- **Immediate** surface joint TSTs are mobile TSTs against which fire or attacks have not been scheduled. Some fixed joint TSTs also may be immediate. Immediate surface joint TSTs have two subcategories—unplanned and unanticipated.

•• **Unplanned immediate** surface joint TSTs are those known to exist in the operational area but have no fire or attacks scheduled. They are generally the largest category of surface joint TSTs. They require established procedures for proactive, timely acquisition by sensors and immediate response once acquired. The JFC directs component commanders to assign adequate attack assets to respond to all unplanned immediate surface joint TSTs in an operational area. In situations where a JFC or component commander does not have sufficient attack assets, prioritization must occur.

•• **Unanticipated immediate** surface joint TSTs are those surface joint TSTs not expected or *unknown* to exist in an operational area. This category of surface joint TST is often highly perishable as

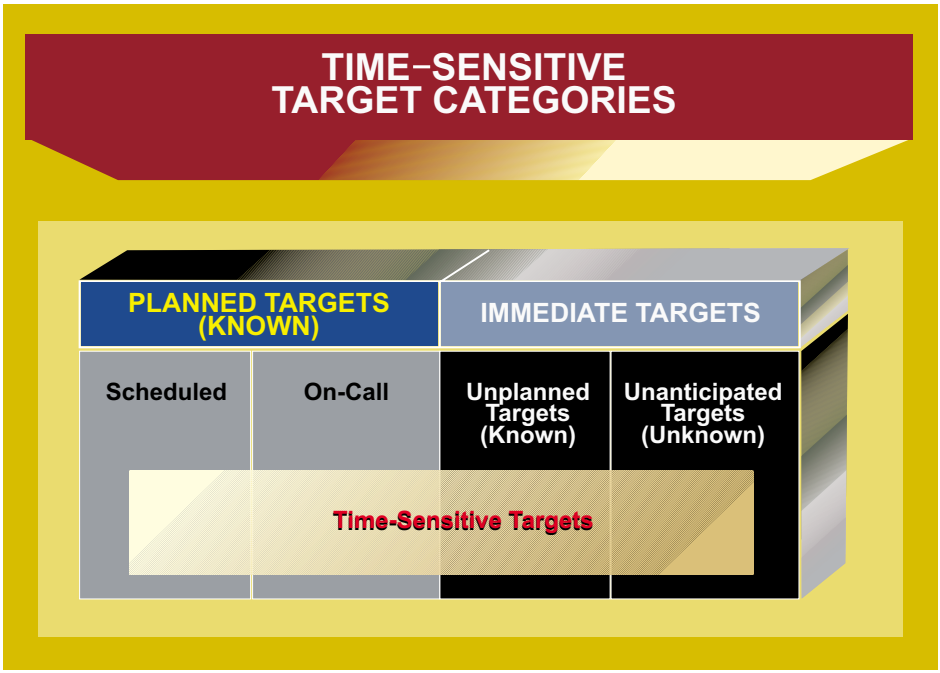

Figure I-2. Time-Sensitive Target Categories

response is extremely reactive due to the element of surprise. Established procedures for proactive, timely acquisition and immediate response are still required. JFC/component commanders can minimize the effect of this element of surprise by ensuring procedures are flexible to responses against this type of target.

6. Joint Time-Sensitive Targeting in a Major Theater of War

a. The joint TST cycle is essentially the same in major theaters of war (MTW) and small-scale contingencies (SSC). However, in a MTW, the geographic combatant commander normally establishes broad targeting guidance during theater campaigns and major operations. This guidance may impact on the JFC designation of joint TSTs within the operational area.

b. In some cases, strike approval may be required from the combatant commander and/or Secretary of Defense, depending on political considerations.

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

d. Targets are prioritized based on the JFC objectives and guidance and the differing requirements of joint force components as they strive to achieve the joint force objectives. The joint targeting cycle integrates military force to achieve the JFC's objectives, guidance, and intent. JFCs establish broad planning and targeting guidance for attack of adversary strategic and operational centers of gravity and interdiction of adversaries as an integral part of joint planning during MTW operations. With the advice of subordinate commanders, JFCs set priorities, provide targeting guidance, and determine the weight of effort to be provided to various operations. The JFC identifies and clearly promulgates joint TSTs for acquisition and engagement. Subordinate commanders recommend to the JFC how to use their combat power most effectively to achieve the objectives.

e. The joint intelligence sections (J-2) support joint TST development with resources of the theater Joint Intelligence Center (JIC) at the geographic combatant command level, or the joint intelligence support element (JISE), at the subordinate joint task force (JTF) level. Component intelligence assets and intelligence organizations, along with augmentation from national intelligence agencies, also contribute. The theater JIC provides the coordination of intelligence resources, reporting, and services to support the tactical commanders.

f. The theater JIC is located at combatant command level and integrates all national and Department of Defense supporting capabilities to develop a current intelligence picture. The National Military Joint Intelligence Center (NMJIC) supports these efforts. The theater JIC is the center of intelligence activities supporting the JTF, J-2, and components and provides the all-source analysis and target materials to support the targeting and CA process.

g. At the JTF, a JISE assists in coordinating JIC operations. However, current JTF C2 systems do not allow unified, real-time coordination and deconfliction of all components. Likewise, national and in-theater sensors do not necessarily provide all components with a "common picture" of the

battlespace. Similarly, the All Source Analysis System (ASAS) cannot transmit the land/amphibious components' view of the battlespace to the air component's Theater Integrated Situation Display (TISD). As a result, components view the battlespace from their unique perspective.

7. Joint Time-Sensitive Targeting in Small-Scale Contingencies

a. As was previously mentioned, during a limited contingency operation, the desire to minimize collateral damage may require more detailed and time-consuming targeting coordination than in a MTW.

b. All military operations are driven by political considerations. However, SSCs, such as military operations other than war (MOOTW), are more sensitive to such considerations due to the overriding goal to prevent, preempt, or limit potential hostilities. In MOOTW, political considerations permeate all levels and the military may not be the primary player. As a result, these operations normally have more restrictive targeting ROE than in a MTW.

c. As in a MTW, the goal in a SSC is to achieve national objectives as quickly as possible and conclude military operations on terms favorable to the United States and its allies/coalition partners. However, the purposes of conducting a SSC may be multiple, with the relative importance or hierarchy of such purposes changing or unclear; for example, to deter potential aggressors, protect national interests, support the United Nations (UN) or regional organizations, satisfy treaty obligations, support civil authorities, or provide foreign humanitarian assistance (FHA). The specific goal of a SSC may be peaceful settlement, assistance rendered to civil authorities, or providing security for FHA.

d. Joint TST and associated fire support are planned and employed during SSCs. SSC operations may include combatting terrorism, counterdrug operations, enforcement of sanctions, nation assistance, noncombatant evacuation operations, peace operations, or strikes and raids. Joint TST during SSCs requires special emphasis on the ROE and the need to limit collateral damage. This SSC emphasis on limiting collateral damage may dictate an increased employment of precision engagement kinetic weapons or non-kinetic/nonlethal JTF assets.

e. ROE in SSCs are generally more restrictive, detailed, and sensitive to political concerns than in MTW, consistent always with the right of self-defense. ROE during SSCs are balanced between the need for security and restraint. Restraint is best achieved when targeting ROE issued at the beginning of an operation address most anticipated situations that may arise. ROE should be consistently reviewed and revised as necessary.

f. During SSCs, joint force joint TSTs and associated fire support capabilities may be more limited, with fewer national intelligence assets available, than in a MTW. Generally, components establish a force list (personnel, equipment, and supplies) and associated movement requirements to support a specific joint force operation. The geographical combatant commander, in coordination with other commanders, then determines the military forces and other national means required to accomplish the mission, allocates or requests the military forces, and determines the command relationships for the joint force. Because the joint force force list is directly related to the joint force mission, joint TST component engagement capabilities generally will reflect the current joint force mission and normally will be significantly less than those allocated during a MTW.

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CHAPTER II
JOINT TIME-SENSITIVE TARGETING DECISION CYCLES AND COMPONENT CONSIDERATIONS

1. Introduction

The surface and air targeting processes are well documented in JP 3-60, *Joint Doctrine for Targeting*, Appendix C. Accordingly, this chapter focuses on the joint targeting cycle, TST processes, and Service-specific and space force enhancement TST considerations.

2. The Joint Targeting Cycle

a. The joint targeting cycle establishes the distinct qualities of each targeting function in its corresponding phase within the cycle. The joint targeting cycle has six phases: commander's objectives, guidance, and intent; target development, validation, nomination, and prioritization; capabilities analysis; commander's decision and force assignment; mission planning and force execution; and CA. (See Figure II-1)

- **Phase 1 - Commander's Objectives, Guidance, and Intent.** The JFCs objectives support the Secretary of Defense's desired endstate for the conduct of military actions, while the guidance provided with the objectives stipulates

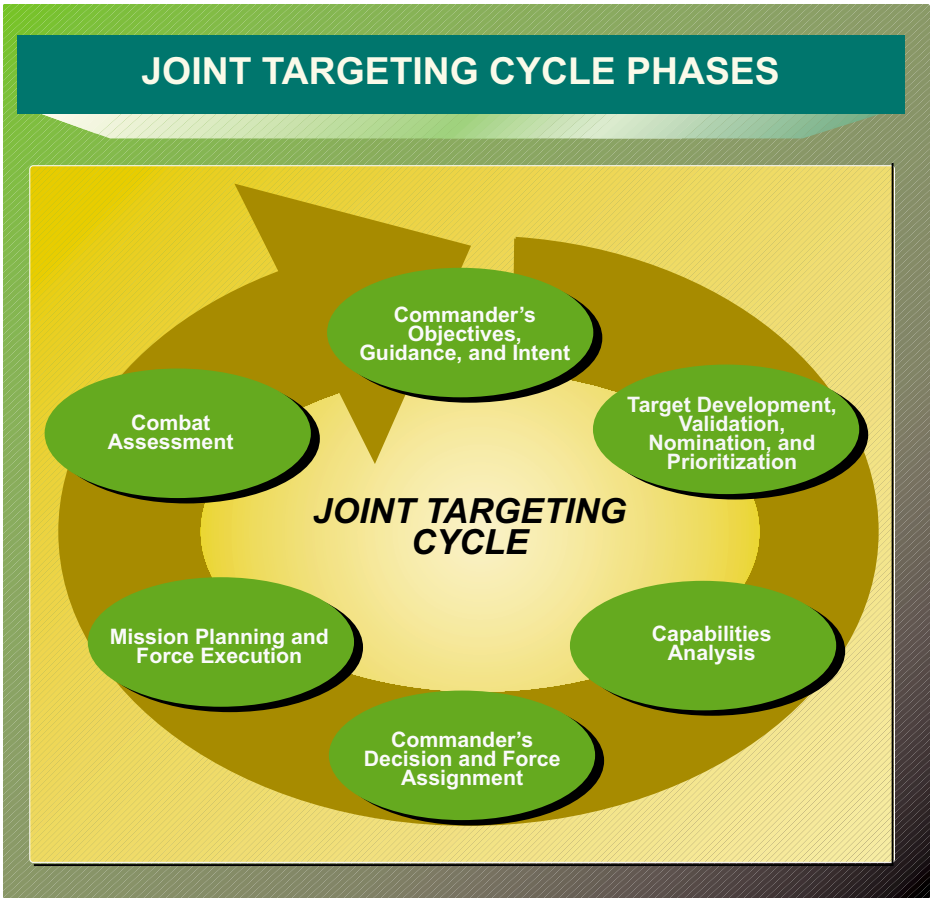

Figure II-1. Joint Targeting Cycle Phases

particular conditions related to the execution of operations (e.g., limitations on collateral damage). The commander's intent summarizes the "bottom-line" to subordinates so that all know the general idea of what must be accomplished in the fight and why. **Understanding the commander's objectives, guidance, and intent is the most important phase in the joint targeting cycle**, because it encapsulates all the higher national-level guidance in a set of outcomes relevant to the present warfighting situation and sets the course for all that follows.

- **Phase 2 - Target Development, Validation, Nomination, and Prioritization.** The JFC's objectives are normally directed against adversary capabilities. These capabilities are themselves enabled by physical and virtual infrastructures. Critical to the success of the targeting cycle is the establishment of intelligence requirements. Targeteers must work closely with collection managers to ensure that target development, and pre-strike and post-strike requirements, are integrated into the collection plan. This intelligence support is vital for the analysis performed in target development, as well as to prepare for future targeting during the execution of operations. Integral to target development is target validation. Target validation determines whether a target remains a viable element of the target system and whether, under the law of armed conflict (LOAC), it is a permissible target. Once potential targets are identified and validated, they are nominated through the proper channels for approval, generally involving their deliberation in a coordinating body, such as a joint force or component target board/meeting. Targets are then prioritized based on the JFC's objectives and guidance and the mutual support required between joint force components as they strive to achieve the joint force objectives.

- **Phase 3 - Capabilities Analysis.** Coincident with the determination of targets and desired outcomes for those targets, it is necessary to select the most promising forces for application against those targets. This phase of the joint targeting cycle involves estimating the effects of lethal or nonlethal attacks against specific targets. Its purpose is to weigh the relative efficacy of the available forces as an aid to achieving the objectives set forth by the JFC and subordinate commanders. Once the capabilities analysis phase is completed, the results can be merged with the individual component target nominations to create the target recommendations for the JFC. The essential element of the joint targeting cycle is to link anticipated effects to the JFC's objectives.

- **Phase 4 - Commander's Decision and Force Assignment.** Target nomination lists and associated forces are vetted through the appropriate coordinating bodies representing the joint force components and national interagency groups to ensure compliance with commander's objectives, guidance, and intent. Once the JFC has approved the target list, or elements thereof, tasking orders are prepared and released to the executing components and forces. The joint targeting process facilitates the publication of tasking orders by providing amplifying information necessary for detailed force-level planning of operations. This phase of the joint targeting cycle sets the stage for the planning and execution of operations that perform discrete tasks in synergistic support of over-arching objectives.

- **Phase 5 - Mission Planning and Force Execution.** Upon receipt of tasking orders, detailed planning is performed for the execution of operations. The joint targeting cycle supports this planning by providing the tactical-level planners with direct access to detailed information on the targets, supported by the nominating component's analytical reasoning that linked the target with the desired effect (Phase 2).

- **Phase 6 - Combat Assessment.** CA is a crucial part of operations. The joint targeting process provides short-term assistance for immediate decisions and aids long-term planning for the composition and capabilities of future forces. This is essential to provide to the JFC a fully developed picture of the battlespace. A critical ingredient for effective CA is an understanding of all aspects of target development and its link to the JFC's objectives and guidance. CA is performed at all levels. At the JTF level, the CA process should normally be an all source joint program supported by all components and designed to determine if the required effects on the adversary envisioned in the operations plan are being achieved. CA addresses the effectiveness of operations for tasked or apportioned missions. This directly impacts the JFC's apportionment nominations and decision. The supported commander makes these assessments. The end product of CA at the operational level is an assessment that is incorporated into strategy and guidance development. CA is composed of three interrelated components: battle damage assessment (BDA), munitions effectiveness assessment (MEA), and future targeting or reattack recommendations. Future target nominations and reattack recommendations, merge the picture of what was done (BDA) with how it was done (MEA) and compares the result with predetermined measures of effectiveness that were developed at the start of the joint targeting process. The purposes of this phase in the process are to determine degree of success in achieving objectives and to formulate any required follow-up actions, or to indicate readiness to move on to new tasks in the path to achieving the overall JFC objectives.

Upon receipt of tasking orders, detailed planning is performed for the execution of operations.

b. **Timeliness. A critical factor in prosecuting TSTs is the requirement to conduct all the steps of the joint targeting cycle in a short time.** The JFC has several options with which to structure C2 operations for attacks against TSTs. **One of the key elements in reducing the coordination time for these attacks is to delegate the authority to engage as low in the chain of command as possible.** Though the overall responsibility for the mission will remain with the various component commanders, the authority to engage should be delegated within the C2 node that has the best information or situational awareness to perform the mission and has direct communications with firing units. **Placing the appropriate level of battlespace awareness at subordinate C2 nodes can streamline the C2 cycle and allow timely engagement of these targets.** The decentralized C2 nodes can exchange sensor, status, and target information with a fidelity that permits them to operate as a single, integrated C2 entity. **Tied together by wide area networks and common interactive displays, they can effectively perform decentralized, coordinated execution on joint TSTs.**

c. **Compressed Decision Cycle.** Although successful attack of TSTs requires the targeting process to be significantly time-compressed, **each individual joint targeting cycle phase is still performed except in those unique TST instances specified by the JFC.** To successfully time-compress the targeting cycle, the joint force and component staffs must be thoroughly familiar with the details of each phase of the cycle and with the specific nodes or cells in the joint force and components responsible for each portion of the process. Conducting detailed prior planning and coordination between joint forces, a thorough intelligence preparation of the battlespace (IPB), employment of interoperable command, control, communications, computers, and intelligence (C4I) systems, and clear guidance on what constitutes a TST, all save considerable time.

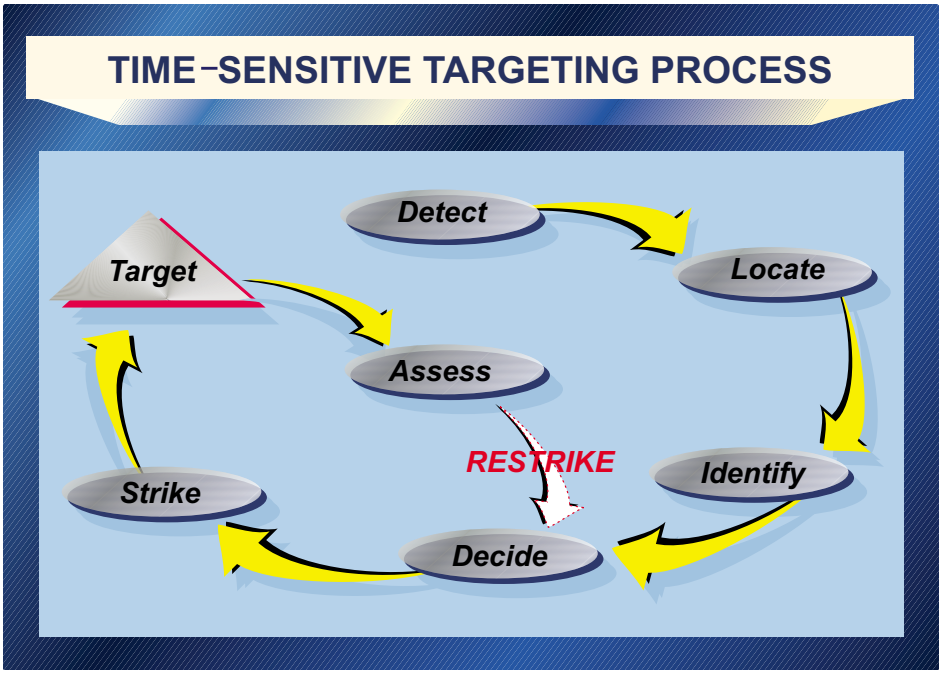

Figure II-2. Time-Sensitive Targeting Process

d. **TST Process.** Within the TST process, there are six steps: detect, locate, identify, decide, strike, and assess. (See Figure II-2) For the initial engagement, the outer cycle (detect, locate, identify, decide, and strike) is used. After the initial engagement, both cycles run at the same time and interact through analysis at the decision step. The six steps of the mission cycle interact continuously at the decision stage where target analysis is performed.

3. Service-Specific Considerations for Joint Time-Sensitive Targeting

a. **Air/Ground Operations.** The theater air-ground system (TAGS) is the functional architecture through which interoperable air/ground operations occur. Joint air operations are normally directed from a joint air operations center (JAOC). Depending on the appointed joint force air component commander (JFACC), the JAOC may either be an Air Force forces (AFFOR) air operations center (AOC), Marine Corps forces (MARFOR) aviation combat element tactical air command center (TACC), or Navy forces (NAVFOR) tactical air control center (TACC). Ground operations are normally directed through an operations center, such as the Army forces (ARFOR) tactical operations center (TOC) or MARFOR combat operations center (COC). Other key ARFOR agencies for ground operations are the fire support element (FSE), Army Air and Missile Defense Command (AAMDC), deep operations coordination cell (DOCC), and air, missile defense planning coordination system tactical operations center (AMD PCS TOC). Key MARFOR agencies include the force fires coordination center (FFCC), fire support coordination center (FSCC), and fire direction center (FDC). The NAVFOR supports ground operations with the supporting arms coordination center (SACC).

b. Interoperable air/ground operations enhance:

- Deconfliction of the battlespace
- Coordination and synchronization of attack assets
- Expeditious joint target coordination
- Transmission of joint battlespace control and coordination measures
- Conversion of target coordinates between latitude/longitude (LAT/LONG) and universal transverse mercators (UTM)
- Exchange of component commander's target lists
- Employment of common grid references (grid boxes)
- Enhancement of mutual air/ground situational awareness

c. **Liaison Agencies.** Between the JFACC and the land or maritime component commander, liaison agencies exist to conduct coordination, deconfliction, synchronization, and integration of operations. At an established JAOC, the ARFOR operate a battlefield coordination detachment (BCD). Liaison officers (LNO), as appropriate, represent the MARFOR and NAVFOR. Each Army Corps has an attached air support operations center (ASOC) that is functionally aligned to coordinate close air support. Similarly, the MARFOR operate a direct air support center (DASC) to coordinate air operations with land operations, either with the MARFOR COC or ARFOR TOC, as appropriate.

d. **Unique Air/Ground C2 Capabilities.** The ARFOR and AFFOR employ unique capabilities that enhance joint TST attacks.

- **Deep Operations Coordination Cell.** If assigned as the land component commander, the ARFOR may deploy a DOCC into the AO. The DOCC is a C2 node that plans, coordinates, and manages deep operations; to include surface joint TST attacks, within the land force commander's AO. The DOCC develops deep attack plans and selects attack assets based on several factors including the location of attack assets with respect to targets, the operational status of attack assets, target ranges, the number and type of missions in progress, munitions available, the adversary air defense threat, and the accuracy of the targeting acquisition data. This target-weapon pairing process is automatic. Targets that can be better serviced by joint or other component assets will be nominated to joint headquarters for prosecution (such as a JAOC). **DOCCs may recommend direct sensor-to-shooter dissemination of targeting information to meet critical timelines associated with urgent joint TSTs**. The DOCC may employ an AMD PCS TOC to decentralize execution of surface TST attacks.

- **Interconnectivity.** Currently fielded C4I systems have significant limitations in electronic interconnectivity and automated data planning between the JAOC (whether it be the USAF AOC, USMC TACC, or USN TACC) and the BCD. See Appendices A through C for recommendations establishing joint TST collaborative tools. Presently, only verbal and manual hardcopy coordination and deconfliction occurs. Similar limitations exist between the ARFOR TOC/MARFOR COC and ASOC/DASC. The level of interoperability is solely dependent on the ability of personnel in all organizations to work with each other. However, component unique C2 systems exist:

•• **Theater Battlespace Management Core System.** Theater Battlespace Management Core System (TBMCS) is a set of 54 applications, of which 16 are used jointly by all Services, that provides planning, execution, and intelligence processing in support of the air operations for force and unit level operations. It was developed from re-engineering existing air operations application softwares, Contingency Theater Automated Planning System and the Wing Command and Control System; Global Command and Control System (GCCS) Integrated Imagery and Intelligence (I3); the Defense Information Infrastructure Common Operating Environment (DII COE); commercial-off-the-shelf (COTS); and other supplied third party products. TBMCS also uses a DII COE Unified Build (UB) core and GCCS I3 components to produce an all source air Common Operational Picture (COP) that presents an integrated battlespace picture.

•• **Advanced Field Artillery Tactical Data System.** The advanced field artillery tactical data system (AFATDS) is the primary C2 fire support system for the ARFOR/MARFOR. AFATDS digitally links the land/amphibious force commander with their respective operations centers, FSE/FSCC, and firing units (to include the Army tactical missile system [ATACMS]). AFATDS enables timely and automated C2 connectivity, sharing of situational awareness, and coordination and deconfliction of surface TST attacks.

•• **AFATDS - TBMCS Interface.** Currently, AFATDS and TBMCS are undergoing modifications to enable each system to share key elements of information. Initially, AFATDS and TBMCS will be able to share preplanned air information (such as the ATO and airspace control plan [ACP]) and real-time

indirect fire trajectories (to include ATACMS) for coordination and deconfliction of surface joint TST attacks.

•• **Information Requirements:** Interoperable air/ground operations in the pursuit of surface joint TST attacks require information to be passed between air and ground C2 agencies.

4. Space Force Considerations for Joint Time-Sensitive Targeting

a. Space systems and space-based intelligence, surveillance, and reconnaissance (ISR) assets can provide increased battlespace awareness to a JFC. **Space systems may be able to detect an adversary's movement and support a TST engagement before its actions can affect the friendly operation.**

b. Precision navigation and smart munitions permit the engagement of targets with the minimum number of weapons needed to achieve the desired effect while minimizing collateral damage. This allows a JFC to concentrate forces and apply the combat power at other points in the battlespace. Precision navigation capability enables the application of overwhelming force at key points of attack. For example, accurate navigation signals can improve weapon accuracy, thus increasing the probability of kill against fixed targets, minimizing collateral damage and allowing use of advanced stand-off munitions to increase crew survivability.

c. The unique advantages of global coverage, wide fields of view, and the capability to revisit targets make observation of the Earth from space a powerful tool. Space forces can have access to any point on Earth, and proper management of satellite orbits and constellations offers overflight flexibility.

d. **Intelligence, Surveillance, and Reconnaissance.** ISR is the assimilation of personnel and capabilities that provides detailed information about a given operational area. The monitoring of air, land, and maritime targets from space contributes to the JFC's battlespace awareness by providing information on adversary threat locations, dispositions, and intentions. (See Figure II-3)

Space systems may be able to detect an adversary's movement.

FORCE ENHANCEMENT OPERATIONS-SURVEILLANCE AND RECONNAISSANCE

APPLICATION	ADVANTAGES	LIMITATIONS
Reconnaissance Surveillance	World-wide access Quick reaction	Atmospheric disturbances Predictable overflight schedule

Figure II-3. Force Enhancement Operations-Surveillance and Reconnaissance

- **Intelligence.** Space systems contribute to the development of intelligence through surveillance and reconnaissance activities.

- **Surveillance.** Space systems can provide commanders with systematic observation of space, air, surface or subsurface areas, places, persons, or things by visual, aural, electronic, photographic, or other means that provides commanders with increased situational awareness within a given operational area.

- **Reconnaissance.** Because space systems have unrestricted overflight of otherwise denied areas, they can gather information about the activities and resources of an adversary or potential adversary, or provide data concerning meteorological, hydrographic, or geographic characteristics of a particular area.

e. **Space Liaison Officers, Joint Space Support Teams, and Component Space Support Teams and Support Personnel**

- **Space Liaison Officers.** US Space Command (USSPACECOM) LNO may be attached to supported combatant command staffs in order to help ensure that space-based capabilities are appropriately integrated into respective combatant commander's planning, operations, training, and execution.

- **Joint Space Support Teams.** Upon request of a supported combatant commander and on order of the Secretary of Defense, USSPACECOM transfers task-organized joint space support teams (JSST) to the operational control (OPCON) of the supported commander to facilitate tasking and use of joint space forces, and ensure that space support is provided to the supported combatant commander. JSSTs provide support to the combatant commander through reach-back to USSPACECOM's Space Operations Center (SPOC). Specific examples of tailored support provided by JSSTs to the JFC include:

•• Facilitating the distribution of missile warning data and other space-based information to the theater

•• Forecasting the vulnerability of friendly operations to observation by satellites of hostile nations

•• Providing information on foreign space reliance and methods to deny (or exploit) adversary utilization of space,

which may support an adversary's targeting operations

•• Providing deconfliction of space systems requirements between the component commanders

•• Providing detailed information on US and foreign satellite capabilities and operational status and the threat posed by foreign space systems

•• Coordinating in-theater space control assets

- **Component Space Support Teams and Support Personnel.** In addition to JSST support, the commander, USSPACECOM may also direct space component commanders to provide tailored SSTs. Both Army Space Command (ARSPACE) and Naval Space Command (NAVSPACECOM) have SSTs that are task-organized and equipped to meet the needs of the supported combatant commander. The USAF does not maintain SSTs but has integrated space support personnel into all Air Force component staffs. Specific examples of tailored support provided by SSTs and personnel to Service components include the following:

•• Analysis of impact of space capabilities on courses of action

•• IPB

•• Mission rehearsal support

•• Imagery and rectified multi-spectral imagery (MSI) products in support of TST

•• Predicted global positioning system (GPS) navigation signal accuracy needed to support TST

•• Adversary and commercial space order of battle assessment

•• Orbit predictions to determine vulnerabilities of forces on the ground and availability of US, allied, and/or commercial satellites

•• Space-based information, products, and necessary reach-back

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CHAPTER III
JOINT TIME-SENSITIVE TARGETING COMMAND AND CONTROL

1. Introduction

Pre-established and well-rehearsed C2 procedures are essential to the timely engagement of joint TSTs. Beginning with the JFC's guidance on what constitutes a joint TST within the operational area, levels of acceptable risk are established and specific guidance is disseminated to joint force component commands. Joint force headquarters elements and components identify, monitor, and track targets and recommend target engagement priorities to the JFC. C2 coordination measures establish the parameters that are necessary to successfully engage targets across component boundaries and liaison elements within the joint force expedite the joint targeting process.

2. The Importance of Joint Target Visibility

a. The JFC has several options with which to structure C2 operations for attacks against joint TSTs. Though the overall responsibility for the mission execution remains with the component commanders, the authority to engage may be delegated to the C2 node that has the best information or situational awareness to perform the mission, or may be specified by the supported and supporting relationship of the C2 nodes involved. **Placing the appropriate level of battlespace awareness at component C2 nodes can streamline the C2 cycle and allow timely engagement of these targets.** The decentralized C2 nodes can exchange sensor, status, and target information with a fidelity that permits them to operate as a single, integrated C2 entity. **Tied together by wide area networks and common interactive displays, they can effectively perform decentralized, coordinated execution of joint time-sensitive attacks.** See Appendices A through C for recommendations on establishing and using joint TST collaborative tools.

b. Fire support planners and/or coordinators should ensure that target acquisition systems are identified and focused on detecting and locating priority targets. Staffs should ensure that target information

Target acquisition systems must be focused on locating priority targets.

from all sources is evaluated and routed to the appropriate engagement units. This includes information from all echelons and from adjacent and supporting elements.

c. **Timely response is key to successful joint TST attack.** To expedite joint TST response times, rapid communications and coordination between the components and their elements are vital. Often there are formal liaison elements in place to do just that. An example of one such liaison element is the BCD situated within the JAOC. The BCD stays abreast of the operational situation and provides information reports to its higher headquarters. **If the BCD, or any other element, recommends direct attack of a joint TST, the affected commander must be informed as soon as practicable.**

d. In-flight reports are also a valuable source of target information. Information on joint TSTs should be passed to responsible commands immediately. The JAOC, ASOC, airborne battlefield command and control center (ABCCC), Joint Surveillance, Target Attack Radar System (JSTARS), Airborne Warning and Control System (AWACS), and radar sites monitor in-flight reports and are able to expedite target information to the appropriate component commands via component liaison links.

3. The Joint Force Commander

a. **Commander's Guidance**

- The JFC develops guidance that directs and focuses operational planning and targeting. **The commander's objectives and guidance identify what is to be achieved and under what conditions and parameters. This is the most important stage in the joint targeting cycle.** Without clear understanding of what is to be achieved, it is impossible for efficient targeting strategies to be devised. **An objective must be understandable, attainable, measurable, and achievable.** The JFC guidance should also clearly define and coordinate joint TST procedures. Unclear guidance may result in misunderstandings and conflicting procedures throughout the joint force that delay attacks on joint TSTs. Clear guidance provides the framework for employing forces to achieve the objectives.

- During the commander's objectives and guidance phase, the JFC/component commander designates specific surface joint TSTs as priorities requiring immediate response. Also, the JFC establishes specific guidance on how coordination, deconfliction, and synchronization will occur among components assigned in the operational area. Once this guidance is set forth, planned and reactive procedures for attacking surface joint TSTs are established. JFC guidance sets the basic procedural framework for the components to comply with the commander's intent and expedite targeting of surface joint TSTs. Commanders should also periodically review in-place TST guidance for possible adjustments to keep abreast of changing situations and the flow of battle or operation.

- **Defining joint TSTs, as a more highly focused target set, is insufficient to guarantee proper planning and coordination to allow rapid and effective prosecution. The key is for the JFC or component commander to designate their priorities in the commander's guidance.** A prioritized list of joint TSTs can then be developed using this guidance. However, since some joint TSTs may be unknown or unanticipated during normal planning

JFCs must clearly define a joint TST.

cycles, the commander's joint TST guidance should be broad enough to allow quick designation of, and response to, a new joint TST type, while still following the commander's intent.

- JFCs must also clearly define what a joint TST is so components have a common understanding of what constitutes a joint TST. **In this regard, the JFC and component commanders must identify those joint TSTs that truly require immediate action and are not just highly mobile or merely lucrative targets.**

- JFC objectives and guidance to component commanders enable and support different phases of the joint targeting process. Examples include:

  •• Identification and assignment of primary sensors and weapon systems specifically assigned to support attacks on joint TSTs.

  •• Establishment of planned, deconflicted fire areas (with definable trigger events) against specific surface joint TSTs.

  •• Directives to component commanders to task assets for standby or secondary missions as backup to primary sensors and weapon systems. An example would be the JFACC designating aircraft most likely to be diverted to assist attack operations.

  •• Determination of surface joint TST engagement authority and supported and supporting relationships based on either component commander AO, component commander assigned mission, or a combination thereof.

  •• **If necessary, specification of those few, exceptional circumstances when component commanders who first acquire specific surface joint TSTs have authority for immediate engagement responsibility regardless of assigned AO or mission.** In other words, the JFC should determine those situations, if any, where immediate destruction of the imminent TST threat outweighs the potential for fratricide or duplication of effort. Inherently, this determination, to whatever degree, may allow a component to bypass the

requirement for informing, coordinating, deconflicting, and synchronizing. However, if time allows, these efforts should be accomplished before engagement. The JFC carefully balances the risk between the surface TST threat and the potential for fratricide.

•• Identification of specific communication/data links between component C2 elements to conduct rapid coordination. This includes authorizing direct liaison and coordination authority. Establishment of priority sensor to shooter communication links with defined conditions for circumventing normal command/coordination channels, to improve timeliness of response.

•• The JFC also communicates guidance and intent to component commanders to allow them the flexibility to make the proper decision regarding rapid selection of "best capable" attack asset.

•• The JFC objectives and guidance are shaped by the principles of war, the LOAC, and established ROE.

b. **Rules of Engagement**

- All targeting decisions must be made in light of the applicable ROE. In addition to ROE regulated by the Secretary of Defense and operational commanders, US forces all operate under standing rules of engagement (SROE). The purpose of the SROE is to enable the inherent right of self-defense and provide guidance for the application of force for mission accomplishment. US Forces SROE apply to all military operations and contingencies including war. Joint force components and supporting commanders are responsible for ensuring compliance.

- The JFC provides guidance on targets that may not be engaged under the LOAC or applicable ROE. The JFC may also make available specific assets for operational area-wide employment, such as a certain number of ATACMS or Tomahawk land-attack missiles (TLAMs).

- Many air defense threats are not identified in enough time to plan suppression. This "opportune" suppression is usually unplanned and includes aircrew self-defense and attack against targets of opportunity. **The JFC**

Air defense threats may not be identified in time to plan suppression.

also coordinates and establishes the ROE for opportune suppression.

- **Certain joint TSTs, designated by the JFC may preclude the use of normal coordination procedures.** In such cases, appropriate coordination measures, prior coordination, on-scene command, and ROE should allow rapid attack of these targets. Joint TSTs and other targets of opportunity should be coordinated between affected component commanders prior to attack. When mission objectives, desired effects, and general deconfliction and time sequencing have been jointly planned and integrated, details such as attack tactics and individual mission deconfliction can be worked out by components responsible for execution.

c. **Acceptable Risk**

- The initial risk assessment is key to responsive joint TST prosecution. With the compression of the decision cycle comes increased risks due to insufficient time for more detailed coordination. Therefore, the requirement for early risk assessment and determining what constitutes acceptable risk becomes vital to an efficient joint TST program. **Time compression and the resulting increased risk requires dedicated means for expediting cross component/ staff coordination.** The solution lies in thorough training, detailed operating procedures, robust real-time communications, and an enabling collaborative tool. When target acquisition of an emerging joint TST occurs, operators rely upon JFC's guidance and their own experience to assess acceptable risk.

- Understanding the level of risk acceptable to the JFC is a critical aspect of successful joint TST engagement. This is a complex task. Often the need to attack quickly, at the expense of time for complete planning and coordination causes an increase in risk. These considerations must be balanced against the danger of not attacking the joint TST in time and thus risking mission failure or harm to friendly forces. Items to be considered in the risk assessment include:

  •• Risk to friendly forces

    ••• Possible fratricide

    ••• Increased risk to attacking forces due to less time for planning and coordination

  •• Risk to noncombatants or possible collateral damage

  •• Disruption of diverting assets from their deliberately planned missions

  •• Risk of possible redundant attacks

  •• Accepted use of nonoptimum weapons

- JFC's guidance may stipulate the degree of acceptable risk when engaging specific joint TSTs. **Specific joint TSTs may be such a threat to the force or to mission accomplishment that the JFC is willing to accept a higher level of risk and attack the target immediately upon its detection.** In its simplest form, this may mean announcing that a target is about to be fired on rather than waiting for confirmation of target area deconfliction. More commonly, the risk associated with joint TSTs involves the possible trade-off of diverting acquisition and/or attack assets from its planned mission to that of a joint TST. **Personnel involved in the prosecution of joint TSTs must have a clear understanding of the risks involved and balance the**

Prosecution of joint TSTs requires a well organized process for sharing data.

time required for coordination against the danger of not engaging the target in time.

- **While the JFC may accept an increased risk of fratricide in attacking joint TSTs, this does not eliminate the requirement to try to minimize this risk during joint TST engagements.**

- Once a joint TST is identified, the major steps required to prosecute it are similar to those in the deliberate joint targeting process. The key to accomplishing the required steps quickly enough to be effective against joint TSTs is to do as much of the coordination and decision-making ahead of time as possible. Successful prosecution of joint TSTs requires a well organized and well rehearsed process for sharing sensor data, targeting information, identification of suitable strike assets, obtaining mission approval, and rapid clearance for weapon employment.

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

- Of particular concern in risk management are those situations where it is anticipated that joint TSTs may develop in the joint force rear area. Coordination and deconfliction of these targets are especially difficult since the JFC must balance the need for fast response with the uncertainties of accurate location of all the personnel in the rear area, both military and civilian.

d. **Sample Joint Force Commander's Joint TST Guidance**

- Normally, the JFC will designate joint TSTs in a joint force OPORD and revise the list in subsequent joint force FRAGorders.

- Once a joint TST list has been defined by the JFC, the desired effects (e.g., immediate destruction, 50 percent damage, etc.) and the level of acceptable

risk to friendly forces and noncombatants should be clearly articulated and defined where needed. In addition, the fires responsibilities of the joint force components should be spelled out in detail. If joint TSTs are of sufficient importance to be designated joint TST, per the JFC guidance, a joint force staff would probably want to ensure that they are kept informed after each engagement.

- For a notional joint force with a mission of protecting a host nation's key leadership and keeping local sea lanes of communication open against an adversary that has threatened use of WMD, an example of JFC joint TST guidance in the joint force OPORD could resemble the following:

"Joint TSTs. **Joint TSTs are designated as follows:**

- Maritime vessels, military or civilian, in the act of laying mines.
- Adversary unconventional warfare/ special operations forces.
- Adversary weapons systems capable of engaging the host nation's capital.

These joint TSTs require expedient identification and engagement consistent with a compressed joint targeting cycle. **Destruction of these joint TSTs is desired."**

4. The Joint Force Operations Directorate, J-3

a. The J-3 assists the JFC in the discharge of assigned responsibility for the direction and control of operations, beginning with initial planning, follow-through, and completion of specific operations. In this capacity, the J-3 plans, coordinates, and integrates operations. The flexibility and range of modern forces require close coordination and integration for effective unity of effort. If a joint targeting coordination board (JTCB) is established by the JFC, the J-3 will normally organize the JTCB and serve as a member.

b. Normally, the J-3 fires plans branch prepares draft targeting guidance and objectives in conjunction with the joint planning group (JPG). This guidance is submitted to the JTCB members for comment and then sent to the JFC for approval. Upon approval, the guidance is sent to all subordinate headquarters and staffs for planning and joint TST development.

c. At the JTF level, the joint operations center (JOC) is the focal point for synchronizing and integrating joint operations and fires throughout the JOA. In some instances, JFCs have established TST reaction teams in the JOC to address joint TST engagement within the JOA.

d. The joint force J-3 **normally** performs joint targeting related duties as follows:

- Provides current operational assessment.
- Publishes the JFC's joint targeting guidance and objectives and the JFC's daily joint targeting guidance letter.
- The joint integrated prioritized target list (JIPTL), restricted target list (RTL), and no-strike list (NSL) are reviewed at the JTCB. The J-3 forwards these lists to the JFC for approval. Following JFC approval, they are used in the joint targeting planning process.
- Develops, for JFC approval, the theater fire support coordination measures (FSCMs) and other appropriate measures submitted by components or subordinate commanders.

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

- Provides the JTCB with the commander's joint targeting objectives, boundary, and FSCM changes for future operations to assist in the development of future targeting requirements.

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

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

- Nominates targets in support of the theater deception plan.

5. The Joint Force Intelligence Directorate, J-2

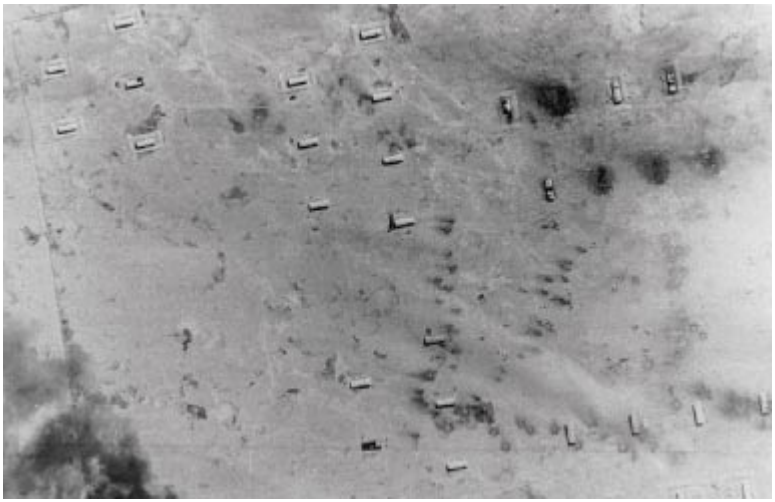
a. The theater JIC provides the coordination of intelligence resources, reporting, and services to support the joint force.

b. Because target development translates the JFC's objectives and guidance into a quantifiable list of targets, it is a critical part of the warfighting process. For this reason, effective target development by the J-2 provides an important contribution to successful execution of a JFC's campaign plan.

c. The J-2 oversees the intelligence operations of the joint force and provides intelligence to all levels of the command for planning, directing, and conducting operations. The J-2 is the staff agency with the primary responsibility for prioritization of intelligence collection efforts, target detection, validation, and BDA. Additionally, the J-2 is a major participant in the detection of targets and the target prioritization process. In addition, the J-2 provides a significant input to the J-3 and/or J-5 in the form of adversary COA assessments critical to the joint target prioritization process and identification of joint TSTs.

d. Joint targeting related duties that are **normally** performed by the J-2 are as follows:

- Assists the J-3 and J-5 in developing targeting guidance, priorities, and objectives for inclusion in the JFC's



The J-2 oversees the intelligence operations of the joint force.

planning guidance, planning directives, and daily guidance letter.

- **Identifies joint TSTs for immediate attack based on inputs using all-source fusion analysis in the JIC or JISE.**

- Recommends targets for inclusion in the JIPTL.

- **Supports target development for components via the JOC.**

- Assists the J-3 in development of the JFC RTL and/or NSL.

- Manages theater collection priorities via the daily aerial reconnaissance and surveillance conference and maintains appropriate collection operations management liaison with the components and national intelligence agencies during execution.

- Manages JFC's priority intelligence requirements.

- Serves as executive agent for overall coordination and direction of the JFC BDA cell within the JIC or JISE in support of the J-3's CA.

- Provides the theater and/or JOA intelligence assessment.

6. The Joint Targeting Coordination Board

a. Typically, JFCs organize a JTCB. If the JFC so designates, the JTCB may be an integrating center for the targeting oversight effort or a JFC-level review mechanism. In either case, it must be a joint activity comprised of representatives from the joint force staff, all components and, if deemed necessary, their subordinate units.

b. To provide the appropriate level of rank, experience, and focus, the deputy JFC or other senior officer generally heads the JTCB. Component and joint force staff representation on the JTCB should also possess the necessary rank, experience, and knowledge to speak authoritatively for their respective components and staff elements.

c. **The JFC defines the role of the JTCB.** The JTCB provides a forum in which all components can articulate strategies and priorities for future operations to ensure that they are synchronized and integrated. The JTCB normally refines the draft JIPTL for presentation to the JFC for approval.

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

e. The JTCB is typically responsible for the following:

- Reviews targeting information.

- Develops targeting guidance and priorities.

- Refines the draft JIPTL (this responsibility may be delegated).

- Maintains a complete list of restricted targets and areas where special operations forces (SOF) or component reconnaissance units are operating to avoid fratricide and endangerment of current or future operations.

- Maintains a macro-level view of the operational area and ensures that targeting nominations are consistent with the JFC's concept of operations.

- Ensures that IO considerations are adequately addressed.

f. The JTCB may address at least three joint planning cycles that are either being planned or are about to be executed. A three-part possible agenda follows.

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

- **Plan.** The second portion of the agenda covers the main focus of the daily JTCB; i.e., approving or validating the joint fires plan to be executed 48-72 hours out. The board will review the proposed JIPTL and apportionment recommendation. If necessary, the board may recommend a target or target set be handled by a specific component. The planning phase of the JTCB ensures that operations (to include SOF), IO, fires, and intelligence are fully integrated and coordinated in a complementary effort throughout the depth of the battlespace.

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

7. The Joint Fires Element (JFE)

a. The JFC may approve the formation of a JFE within the joint force J-3. The JFE is an optional staff element that provides recommendations to the J-3 to accomplish fires planning and coordination. Specific duties would be assigned by the J-3 with approval by the JFC and may include any or all of the J-3's tasks previously identified. The JFE would provide the capability to accomplish fires planning and coordination functions. Essentially, the JFE is the JFC's subject matter expert on joint fires, and recommends joint fires guidance and targeting priorities. **The JFE has no tasking authority.**

b. In its role as the JTCB primary agent, the JFE may pass guidance and apportionment decisions to the joint force components. Other JFE responsibilities could include:

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

- Assists the JIC in developing high-value targets (HVT) and high-payoff targets (HPT).

- Prepares and disseminates target bulletins.

The JFE may pass guidance to the joint force components.

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

- Deconflicts and validates target nominations originating at the JFC level and higher, then prioritizes and forwards to the J-3 for review and eventual transmission to the JFACC's JAOC for inclusion in the JIPTL.

- Identifies potential conflicts in preparation for the JTCB.

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

8. Joint Targeting Coordination Measures

a. JFCs employ various maneuver and movement control and FSCMs to facilitate effective joint operations. **These measures may be used to expedite attacks against surface joint TSTs.** Joint control and coordination measures apply to all joint force components, and as such, the JFC has final approval authority. The following is a joint targeting coordination measure overview, for more detailed information see JP 3-60, *Joint Doctrine for Targeting*, JP 3-0, *Doctrine for Joint Operations*, JP 3-03, *Doctrine for Joint Interdiction Operations*, JP 3-09, *Doctrine for Joint Fire Support*, and JP 3-56.1, *Command and Control for Joint Air Operations*. Also JP 3-09.3, *Joint TTP for Close Air Support (CAS)* has several excellent examples of how these different coordination measures can be used in different combinations to control attacking forces in many different situations.

b. A fundamental aspect of attacking a target is the supported and supporting commander relationships. The area between the forward line of own troops (FLOT) and the fire support coordination line (FSCL) is generally considered to be the area of close operations. Deep operations extend from the FSCL through the limits of the AO. The joint force land component commander's (JFLCC's) deep operations extend from the FSCL to the forward boundary (FB). Additionally, the battlespace geometry framework below describes the common authorities/responsibilities of the commanders in relationship to their battle area. (See Figure III-1)

Joint Force Areas of Target/Engagement Responsibilities

	FLOT TO FSCL	FSCL TO FORWARD BOUNDARY	FORWARD BOUNDARY AND BEYOND	AMPHIBIOUS OBJECTIVE AREA	JOINT SPECIAL OPERATIONS AREA	JOINT REAR AREA
Supported Commander	Joint Force Land Component Commander (JFLCC)	Joint Force Land Component Commander (JFLCC)	Joint Force Air Component Commander (JFACC)	Joint Force Maritime Component Commander (JFMCC)	Joint Force Special Operations Component Commander (JFSOCC)	Joint Rear Area Coordinator (JRAC) or Tactical Combat Force (TCF) Commander (if designated)*
Supporting Commander	All Others	All Others	All Others	All Others	All Others	All Others
Targeting Responsibility	All	All	All	All	All	All
Airspace Control Authority (ACA)	JFACC	JFACC	JFACC	JFMC	JFACC	JFACC

* See JP 3-10, *Joint Doctrine for Rear Area Operations*

Figure III-1. Joint Force Areas of Target/Engagement Responsibilities

c. The JFC is responsible for ensuring coordination measures are appropriate, function as designed, and are well understood. These measures include use of boundaries, FSCMs, and ACMs.

d. Boundaries are maneuver control measures that define surface areas to facilitate coordination and deconfliction of operations. JFCs use lateral, rear, and forward boundaries to define AOs for land and naval forces. **Boundaries give the JFC the ability to clearly define areas requiring coordination and deconfliction of surface joint TST attacks between components and units.**

- FSCMs and associated procedures assist in the C2 of joint forces. Within their AOs, land and amphibious commanders employ permissive and restrictive FSCMs to enhance the expeditious attack of targets; protect forces, populations, critical infrastructure, and sites of religious or cultural significance; and set the stage for future operations. Commanders position and adjust FSCMs consistent with the operational situation and in consultation with superior, subordinate, supporting, and affected commanders. FSCMs are identified by location and date/time effective (as well as termination date/time, if applicable). **FSCMs, when used properly, aid in the rapid engagement of surface joint TSTs.**

•• **Permissive Measures.** These measures are normally used to authorize the attack of targets without coordination from the establishing commander (within the commander's applicable boundaries) if certain circumstances are met. Permissive measures include free fire areas (FFAs), coordinated fire lines (CFLs), and the FSCL.

••• FFAs are specific areas into which any weapon system may fire without additional coordination with the establishing headquarters. FFAs do not adequately deconflict between air and surface attacks on surface TSTs unless they are combined with adequate ACMs. The appropriate ground commander establishes FFAs.

••• Coordinated fire lines (CFLs) are lines beyond which

conventional, indirect, surface fire support means (such as ATACMS, TLAMs, or naval surface fire support [NSFS]) may fire at any time within the boundaries of the establishing headquarters without additional coordination. Typically, land and amphibious forces use CFLs. **CFLs expedite surface joint TSTs attacks as long as surface-to-surface means are used** because they do not adequately deconflict surface joint TST attacks by fixed-wing aircraft. CFLs are established by the appropriate ground commander and should be placed as close as practical to the FLOT.

••• A FSCL is a fire support coordinating measure that is established and adjusted by appropriate land or amphibious force commanders within their boundaries in consultation with superior, subordinate, supporting, and affected commanders. FSCLs facilitate the expeditious attack of surface targets of opportunity beyond the coordinating measure. An FSCL does not divide an AO by defining a boundary between close and deep operations or a zone for close air support. The FSCL applies to all fires of air, land, and sea-based weapon systems using any type of ammunition. Forces attacking targets beyond an FSCL must inform all affected commanders in sufficient time to allow necessary reaction to avoid fratricide. Supporting elements attacking targets beyond the FSCL must ensure that the attack will not produce adverse effects on, or to the rear of, the line. Short of an FSCL, all air-to-ground and surface-to-surface attack operations are controlled by the appropriate land or amphibious force commander. The FSCL should follow well defined terrain features. Coordination of attacks beyond the FSCL is especially critical to commanders of air, land, and special operations forces. In exceptional circumstances, the inability to conduct this coordination will not preclude the attack of targets beyond the FSCL. However, failure to do so may increase the risk of fratricide and could waste limited resources.

FSCMs and associated procedures assist in the C2 of joint forces.

•• **Restrictive Measures.** Restrictive measures are used to restrict the use of fire support assets in particular areas. They may be established by any component commander and are normally applicable to all subordinate elements. Examples of restrictive measures are no-fire areas (NFAs), restricted fire lines (RFLs), restricted fire areas (RFAs), and airspace control authorities (ACAs).

••• NFAs are areas into which no fires or effects may enter. The purpose of an NFA is to protect forces operating forward of the FLOT or to protect areas, friendly or adversary, that may serve a purpose in future operations. SOF NFAs are of particular concern during TST attacks before SOF teams are often providing "eyes on" for the attacks and are therefore often very close to the target locations.

••• RFLs are lines established between converging forces that prohibit fires or the effects of fires across the lines without coordination from the establishing headquarters. **RFLs deconflict component surface joint TST attacks "by default."** RFLs aid in deconfliction but limit the JFC's flexibility.

••• RFAs regulate and control fire and attacks into an area, according to stated restrictions. **Surface TSTs acquired within a RFA may only be attacked in accordance with the firing restrictions, unless the establishing authority approves otherwise.**

••• **ACAs are three-dimensional blocks of airspace with defined dimensions that significantly enhance deconfliction of surface joint TST attacks among components.** Friendly aircraft are reasonably free from friendly surface fires, with artillery, helicopters, and fixed-wing aircraft given specific lateral or vertical airspace within which to operate. **ACAs allow simultaneous component attacks of surface TSTs in close proximity to each other by multiple attack means, of which one is normally air.** ACAs are designed with a minimum altitude, maximum altitude, specified width/length, and defined off of a line between two coordinate points. Friendly fires are not permitted through established ACAs.

- **Airspace Control Measures.** The airspace in a combat zone is a crucial dimension of the battlespace used by all components of the joint and allied forces to conduct assigned missions. A high concentration of friendly surface, subsurface, and air-launched weapon systems must share this airspace without unnecessarily hindering combat power that is being applied in accordance with the JFC operation plan. The goal of combat zone airspace control is to enhance air, land, maritime, and SOF effectiveness in accomplishing the JFC's objectives.

- **Common Reference Systems.** Common reference systems provide a universal, joint perspective with which to define specific areas of the battlespace, enabling the commanders to efficiently coordinate, deconflict, integrate, and synchronize attacks. A common reference system is especially useful when used to coordinate mutually accessible areas of attack and to rapidly deconflict attack operations. Common reference systems result in rapid, deconflicted attacks, enhanced probability of mission success, and reduced potential for duplication of effort

and fratricide. Also, they allow for rapid coordination of joint engagement and the employment of combined arms. They are flexible enough to be used for a variety of other purposes, such as geographically identifying search and surveillance areas, identification of restricted zones, designation of high threat areas (such as adversary surface-to-air missile battery locations), and reference points navigation, deconfliction, and target guidance. **The primary purpose of a common system is to provide an integrated common frame of reference for joint force situational awareness to facilitate attack coordination, deconfliction, integration, and synchronization.** There are two general categories of theater-established common reference systems: area and point.

•• An area reference system provides a three-dimensional reference, enabling timely and effective coordination and control and facilitates rapid attacks throughout the designated operational area. Once identified, these areas may integrate control and coordinating measures (in particular FSCMs and ACMs), thereby enabling unhampered precision attack and flexibility of weapon system employment. Theater-level area reference systems are often described as "grid references," "kill boxes" or, in the case of Operation ALLIED FORCE, "engagement zones."

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

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

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CHAPTER IV
ENGAGING JOINT TIME-SENSITIVE TARGETS

1. Introduction

a. Successfully engaging joint TSTs requires centralized planning and decentralized execution. Centralized planning occurs at the joint force level with JFC guidance and intent, target prioritization, and establishing the criteria for what constitutes joint TSTs and the actions against them. Decentralized execution consists of delegating engagement authority to joint force component commands—either directly, or through joint force target coordinating agencies.

b. The joint force has several joint TST capable attack assets—each with its unique capabilities and limitations. However, no single weapon system encompasses the best of all of these characteristics under all conditions. No single weapon system is always "best capable" to deal with the joint TST threat.

2. Centralized Planning

There are many ways a JFC may implement centralized joint TST targeting procedures within a joint force. The case studies in Appendices A through C provide examples of how some joint commands address joint TST issues. Of course different combinations of these examples can be selected as needed to better fit a given environment or situation.

3. Decentralized Execution

When directed, joint force components and their assigned forces execute operations while monitoring other components. Components report laterally to each other and vertically to the JFC. Component commanders monitor the execution phase and provide real-time recommendations for redirection of forces, reattack, and other taskings as the situation warrants. Intelligence must also monitor the

The joint force has several joint TST capable attack assets—each with its unique capabilities and limitations.

execution of the plan and be prepared to provide immediate threat and target updates should a change in the plan be needed. Mission execution requires the flexibility to react to unforeseen TSTs. The intelligence architecture and collection plan must be designed to rapidly address these types of threats.

4. Intelligence/Operations Interface

a. Intelligence and operations staffs work closely to optimize the force necessary to achieve the objective considering operational realities and data (available assets). With guidance from the JFC, component commanders conduct force application planning to fuse target, weapon system, and munitions options. This results in the jointly coordinated selection of forces and associated weapon systems or platforms.

b. IPB can significantly enhance the targeting process for surface TSTs by identifying the probable locations or operating areas where surface TSTs may emerge. Depending on the seriousness of the threat, resources available, and level of confidence in the IPB, component commanders may elect to position or posture target acquisition and strike assets to rapidly respond to the forecasted areas. During execution planning, intelligence also closely monitors target status in order to update final planning before execution. It must identify changes required to current taskings, as well as provide changes to follow-on target development phases and weaponeering phases. Inputs from intelligence planners update adversary threat assessments and directly impact a broad area, such as tasking orders, OPORDs and associated annexes, deconfliction plans, decision support templates (DSTs), schedules of fires, and support OPORDs. Intelligence planners also play a major role in mission planning support. This includes threat locations, target materials, graphics, and geospatial products to include precise coordinates and surveyed data points.

5. Engagement Capabilities and Limitations

a. **Introduction**

- Generally, the primary weapon systems suitable for surface joint TST attacks in an operational area are fixed-wing aircraft, attack helicopters, ATACMS, multiple launch rocket system (MLRS), conventional artillery, cruise missiles, NSFS, and SOF.

- Determination of the "best capable" TST asset begins during the weaponeering assessment phase and continues through the force application phase. Each component provides recommendations highlighting the pros and cons of their available weapon systems based upon the current situation. The JFC also provides guidance to component commanders to allow them the flexibility to make the proper decision regarding rapid selection of "best capable" attack asset.

- Each of the different weapon systems has associated pros and cons in each of the following areas:

  - Effectiveness against different target types
  - Responsiveness
  - Range
  - Accuracy
  - Vulnerably to adversary threat
  - Associated risks of employment

MLRS and cannon artillery are usually the most numerous TST-capable systems in the battlespace.

b. **Surface-to-Surface Systems**

- The MLRS and cannon artillery are usually the most numerous TST-capable systems in the battlespace. They provide near immediate response times and all-weather capability. However, their limited firing ranges make them most suitable for TSTs located in the general area between the FSCL and the FLOT.

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

- NSFS provides the advantages of responsive, all-weather, mobile gun and missile support. However, it is relatively short ranged, limited in number, and restricted to use in the littoral area when attacking land-based targets.

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

d. **Manned Aircraft.** Due to their range, speed, and flexible weapon selection, manned aircraft are well suited to attack TSTs. Because the aircrew can provide “eyes on” during the attack, manned aircraft are of particular advantage when attacking mobile targets or when exact target coordinates are unavailable. However, a permissive threat environment or suppression of adversary air defenses may be required to avoid unacceptable risks to aircraft and aircrews.

Rapid deconfliction of airspace can be a challenge in a congested environment. Manned aircraft possess both day and night capability, but are weather-dependent.

- **Fixed-Wing Aircraft.** The ability of fixed-wing aircraft to move long distances in relatively short times provides the force with the flexibility to quickly mass effects throughout the battlespace. Weapon payloads can be adjusted to suit the mission, and with air-refueling they are capable of extended loiter times. If needed, they can be quickly diverted in-flight to a new target as long as suitable communications links are available.

- **Rotary-Wing Aircraft.** Attack helicopters provide excellent accuracy with an array of weapons but have relatively short range. They are both day- and night-capable, but are more vulnerable to adversary defenses than fixed-wing aircraft due to low altitude and relatively slow speed. However, due to their capability of slow flight, rotary-wing aircraft can often operate in poorer weather conditions than fixed-wing aircraft.

e. **SOF.** SOF's primary contribution against TSTs is covert reconnaissance, surveillance, and terminal control of weapons systems. If required, SOF can be employed in direct action to destroy or disable a TST, but this may compromise their primary mission and require extraction of the team.

f. **Sensors.** Various sensor platforms, both manned and unmanned, provide the warfighter with the capability of detecting, identifying, tracking, and assessing TSTs. These sensors are most effective when cross-cued, and linked, to provide multiple sources and types of information.

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

- Unmanned aerial vehicles (UAVs) have many of the same benefits as manned airborne sensors without risking human life. This makes them an excellent asset to provide surveillance of heavily defended areas. They are readily redirected if required, possess long loiter times, and provide real-time feedback. UAV sensor packages can be degraded by adverse weather. Some UAVs have a limited field of view and have limited responsiveness while being redirected in the battlespace due to their relatively slow speed.

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

6. Combat Assessment

a. CA is a crucial part of operations. The joint targeting process provides short-term assistance for immediate decisions and aids long-term planning for the composition and capabilities of future forces. This is essential in order to provide to the JFC a fully developed picture of the battlespace. A critical ingredient for effective CA is an understanding of all aspects of target

development and its link to the JFC's objectives and guidance.

b. CA is performed at all levels. At the JFC level, the CA process should normally be an all source joint program supported by all components and designed to determine if the required effects on the adversary envisioned in the campaign plan are being achieved. CA addresses the effectiveness of operations for tasked or apportioned missions. This directly impacts the JFC's apportionment nominations and decision. The supported commander makes these assessments. The end product of CA at the operational and/or strategic level is a campaign assessment that is incorporated into strategy and guidance development. (Note: Simply attacking targets on the JIPTL does not represent the total effectiveness of the operations.)

c. CA is composed of three interrelated components: BDA, MEA, and future targeting or reattack recommendations.

- **BDA.** BDA is the complementary activity to the selection of targets performed in target development. It takes a three-phased approach to proceed from a micro-level examination of the damage or effect inflicted on a specific target, to ultimately arriving at macro-level conclusions regarding the functional outcomes created in the target system, retracing the macro-to-micro path of analysis in target development. In addition, to conduct BDA in the three-phased approach, a baseline set of target system damage criteria and measures of effectiveness (MOE) must be established. These criteria and measures are invaluable to maintaining a standard measure of targeting effectiveness. They help drive the conduct of military operations against target systems in a more effective systematic fashion—achieving results at a greatly reduced effort, risk, and cost. The first phase examines the outcomes

Combat assessment is a crucial part of operations.

at the specific targeted elements; the second phase estimates the functional consequences for the target system components; and the third phase projects results on the overall functioning of the target system and the consequent changes in the adversary's behavior. The purpose of BDA is to compare what was actually accomplished to what target development determined should be accomplished when the targeting options were being formulated. (See Figure IV-1) Consequently, a critical ingredient for effective BDA is detailed familiarity with all aspects of the analysis performed in the target development that justified the chosen targets and their linkage to the JFC's objectives and guidance.

- **MEA.** MEA is the corresponding activity to BDA, and directs its assessments to after-the-fact studies of how capabilities were performed and the method in which they were applied. It complements the estimative analyses of capability assessment by examining the forensic evidence after attacks to determine whether weapons and weapon systems performed as expected. The purpose of MEA is to compare the actual effectiveness of the means employed to their anticipated effectiveness calculated during the capability assessment phase of the joint targeting process. The results of MEA support both near-term improvement in force employment tactics and techniques and long-term

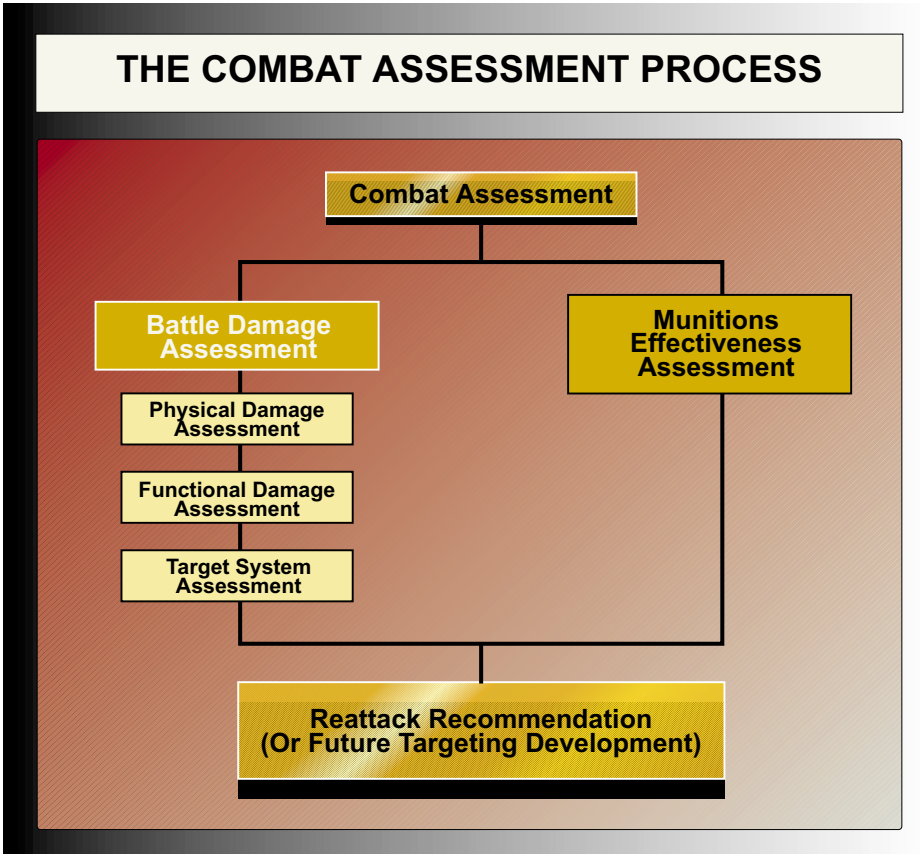

Figure IV-1. The Combat Assessment Process

improvements in lethal and nonlethal capabilities. Consequently, a critical ingredient for effective MEA is detailed familiarity with all inputs to the calculations performed in capability assessment that resulted in weapon system selection.

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

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

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APPENDIX A
US EUROPEAN COMMAND TST PROCEDURES AND TOOLS

Annex A US European Command TST Collaborative Tools

US EUROPEAN COMMAND TST PROCEDURES AND TOOLS

Appendix A was extracted from the US European Command, ED 40-16, *Crisis Targeting Support Architecture*, dated 11 March 2001.

1. **United States European Command** (USEUCOM) has considered the following concept of operations for coordination and deconfliction of joint TSTs within the USEUCOM area of responsibility (AOR).

a. The USEUCOM J-2 Targeting Division (ECJ22T) manages the TST effort for headquarters (HQ) USEUCOM. It administers the federated TST support network, acts as broker between theater and national targeting agencies to determine federation responsibilities, and provides direction to focus the intelligence preparation of the battlespace (IPB) effort during deliberate planning. ECJ22T is responsible for HQ USEUCOM TST roles until a joint force staff is established and prepared to assume them.

b. The JFC has primary responsibility for prosecuting TSTs within a JOA. **Authority for TSTs are normally delegated to a component commander in the interest of minimizing the TST engagement timeline.** However, the JFC retains TST oversight. The joint force staff is instrumental to the TST process during crisis action planning (CAP), providing recommendations for TST procedures. The JFC dictates how coordination, deconfliction, and synchronization will occur among components as well as develops a basic procedural framework for TSTs, and delegates collection management authority for IPB.

c. Specific targeting responsibilities of the joint force staff include:

- Promulgating procedures for establishing joint fires coordination measures. These are used to deconflict component fires and distinguish between procedures for close air support (CAS)/joint fire support (JFS) and TSTs.

- Providing a prioritized list of TSTs by target type and/or geography within the JFC's intent for fires. This can also include a weight of effort for TSTs compared with other fires, and is used to determine intelligence, surveillance and reconnaissance (ISR) and strike assets for TSTs during a given ATO cycle. This list is presented at the daily JTCB meeting, where it is coordinated and deconflicted with the joint force components.

d. Joint force component commanders and their staffs carry out the air tasking/fire support/strike operations orders with force planning and preparations for engagement of forces. Component commanders ensure that specific procedures for engaging TSTs that satisfy the overall TST CONOP are produced, promulgated, and rehearsed to the maximum extent possible. During combat operations, each component commander interacts with a **TST collaborative network** to most quickly and efficiently engage TSTs.

e. During deliberate planning, the foundation is established for future TST prosecution. Analysis is performed on potential enemies, providing assessments of their military capabilities. CONOPS and tactics, techniques, and procedures (TTP) for

prosecuting TSTs are developed and exercised, to demonstrate their feasibility and familiarize theater personnel with the TST process.

f. During CAP, procedures and IPB are expanded and focused to the operation. The goal is to be fully prepared and rehearsed to prosecute TSTs once hostilities commence. A joint force is identified and formed, guidance and intent promulgated, forces assigned, and procedures finalized. While time may be limited, it is essential to have a functioning TST process in place prior to force execution. To make use of valuable time as a joint force is being formed, USEUCOM staff directorates begin the planning for TST operations until the joint force staff is prepared to assume TST responsibilities.

g. Soon after a joint force is established, a TST authority is appointed, and the JFC promulgates guidance on how collateral damage will affect TST engagement as well as methods of deconfliction between functional/Service components.

h. **Authority for TSTs is normally delegated to a functional component commander**. This allows the prosecution of TSTs at a low enough level to minimize engagement timelines, yet high enough to interact effectively with other components. The JFC weighs such factors as preponderance of force, operational objectives, and enemy disposition prior to making this decision. TST authority can be delegated to any component, and, depending on circumstances, may even be held by the joint force. While the chosen component maintains control of the TST process, all components will perform certain TST functions, as outlined in specified TST procedures.

i. **When the JFC issues his intent for fires, it must include specific guidance on TSTs**. While this guidance may be relatively broad at first, it should allow the TST effort to begin developing tactics to successfully prosecute anticipated TSTs. Potential enemy courses of action should be identified, allowing a quick response to enemy behavior. Collection managers fashion an ISR plan to most efficiently prosecute the JFC's designated TSTs. The guidance should also identify ROE, commander's standards for TST approval (what is needed and at what level), allowing the TST cell to prepare for upcoming hostilities. While this initial guidance may change as the operation matures, it provides a baseline to begin the process.

j. **The USEUCOM TST engagement cycle mirrors the joint targeting cycle, but is executed in an accelerated fashion**. All the preparatory work allows a target to be identified, tracked, prioritized, approved, and engaged in very short order. Well-rehearsed procedures, adequate communications links, and trained personnel allow the right component to place the right weapon to bear on the right target at the right time. Individual component TTP conforms to these general procedures. **These procedures assume that a collaborative network is established and continually manned with all organizations supporting TSTs**.

k. **The component delegated TST authority manages the collaborative network with input from other members of the network**. TST procedures are executed in parallel to the maximum extent possible to minimize the TST timeline.

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ANNEX A TO APPENDIX A
US EUROPEAN COMMAND TST COLLABORATIVE TOOLS

1. **Existing systems are used by all USEUCOM organizations engaging TSTs to quickly pass data between themselves**. This allows rapid coordination and deconfliction between components.

2. Specific system requirements are identified in JTF TTPs. An example of likely USEUCOM TST collaboration tools include the following:

a. **SIPRNET**. A dedicated SIPRNET collaboration room (information workspace or equivalent) used by all federated TST partners to track, real time, all information gathered on potential TSTs. This collaboration also allows the federated development of **Digital Target Folders** (DTF) for each TST, and provides voice, chat, and white board capability. DTFs are constructed for TSTs in much the same manner as they are prepared during fixed target development, but on an accelerated timeline. During deliberate planning, DTF templates are constructed to the theater standard. They contain those fields necessary to develop a TST (target identification, location, image, collection time delay, significance, target type dwell time, collateral damage estimate, etc). **During force execution, the DTF is quickly built on the TST collaborative network to efficiently develop the target use of the DTF provides a common standard for TSTs, and ensures that all commands participating in the TST fight have the same information.**

b. **Sensitive Compartmented Information (SCI) ZIRCON Chat**. A windows-based SCI program that is capable of collaborating information from certain ISR assets that cannot be passed on the SIPRNET.

c. **Secure Telephone Unit III** (STU-III) capability for backup and point-to-point voice communications when necessary.

d. **Collection Management**. If a separate collection management cell is dedicated to TST prosecution, collection management software is provided. This may be the requirements management system (RMS), planning tools for resource integration, synchronization, and management (PRISM), or similar tools.

3. Conducting TST prosecution in a coalition environment requires a computer network releasable to coalition partners. For example, a NATO operation may use Linked Operational Intelligence Centers Europe (LOCE), with installed collaboration software, as the hub of the TST collaboration network. This setup may not allow as rapid a TST engagement cycle due to limitations in releasing certain US-ONLY collection information. The need to utilize coalition assets versus the degradation in timelines need to be weighed when deciding to engage TSTs in a coalition operation.

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APPENDIX B
US CENTRAL COMMAND
TST PROCEDURES AND TOOLS

Annex A US Central Command JTF TST Reaction Team Worksheet

US CENTRAL COMMAND TST PROCEDURES AND TOOLS

Appendix B was extracted from a US Central Command JTF standing operating procedure.

1. In **United States Central Command**, (USCENTCOM), some subordinate joint forces have established "TST Reaction Team Procedures" within their joint operations centers (JOCs).

a. The TST Reaction Team consists of:

- Senior FSE Representative
- J-3 Current Operations
- JOC Battle Captain
- Air Support Operations Center (ASOC) Fire Direction Officer
- Judge Advocate General (JAG) Representative
- Army Airspace Command and Control (A2C2) Representative
- Collections Manager
- Special Operations Component Representative
- C2 Representative
- Others as required

b. The TST Reaction Team procedures are:

- Notification of a surface joint TST is passed from the land component analysis and control element (ACE) to the joint force FSE by the quickest available method. (This is normally secure voice with SIPRNET backup.)
- The FSE determines if ATACMS (the joint force TST engagement asset of choice because of its response time, accuracy, and all-weather capability) is an appropriate asset for employment against the TST. In fact, if ATACMS is not available, the TST Reaction Team is not convened and the TST is processed as a routine target with a compressed time cycle.
- If ATACMS is available, the FSE initiates an "At My Command" mission with the land component and/or initiates an air mission through the BCD. **Coordinated ATACMS and air attacks are USCENTCOM's preferred method of engaging joint TSTs.** An "At My Command" mission indicates that the joint force FSE will provide requisite targeting information and engagement authorization to the land component.
- A "TST Alert" announcement is made in the joint operations and intelligence center. Upon this announcement, the on-watch TST Reaction Team convenes at the FSE map immediately upon notification of a TST that potentially could require an ATACMS engagement.
- The FSE Watch Officer rapidly briefs the TST Reaction Team from a TST Reaction Team Worksheet. An example of the TST Reaction Team Worksheet is in Appendix B.
- Following the TST briefing, an ATACMS mission is either approved or disapproved by the senior member of the TST Reaction Team.

- If ATACMS is denied, “End of Mission” is sent to the land component. Air engagement options may continue following normal air targeting cycle procedures.

- If ATACMS is approved, mission coordination continues and authorization to engage is passed to the land component. The FSE ensures time separation between ATACMS and air engagement assets.

- The FSE notifies the Battle Captain when ATACMS firing has commenced.

- Following the TST engagement, the FSE attempts to obtain and pass BDA to the ACE, determines re-engagement requirements, if any, and ends the TST mission once desired effects are achieved.

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ANNEX A TO APPENDIX B
US CENTRAL COMMAND JTF TST REACTION TEAM WORKSHEET

1. **ROLL CALL**

_____ Senior FSE Rep _____ JAG _____ JSOTF/SOCC Rep
_____ J-3, Current Ops _____ A2C2 _____ C2 Rep
_____ Battle Captain _____ Collect Mgr _____ Other: _____
_____ ASOC FDO

2. **FIRE SUPPORT ELEMENT TST SITUATION UPDATE**
(* Indicates information required from the Analysis and Control Element [ACE])

* Target Type/Size: _____
* Target Location: Lat/Long _____
UTM _____
* Activity/Movement: _____
* Acquisition Source: _____
* Acquisition Time: _____
* Observed Target Now: Yes or No
* Observed Target at TOT[1]: Yes or No or Undetermined
Launcher Location: _____
Other Remarks: _____

ATTACK OPTIONS: ATACMS and:
(Circle all that apply) USAF Air USAF PushCAS USMC Air Other: _____

ATTACK RECOMMENDATION: _____

3. **APPROVED ATTACK ASSET (S):** _____
APPROVED BY: _____ at _____
(Date/Time)

4. **AUTOMATIC RE-ATTACK CRITERIA**: _____
(Minimum measurable desired effects)

5. **FINAL CLEARANCE**

_____ JAG _____ BCD (airspace cleared at ____ until _____)
_____ A2C2 _____ USMC (airspace approval if required)
_____ ATACMS "Ready" with _____time of flight.

6. **FIRE ATACMS** (Complete the below procedures)

_____ Notify BATTLE CAPTAIN of "SHOT"
_____ Obtain and pass BDA to ACE
_____ Determine re-attack requirements, if any, and end the ATACMS mission once desired effects are achieved.

[1] Time on target.

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APPENDIX C
US FORCES KOREA
TST PROCEDURES AND TOOLS

Annex	A	Shared Target Worksheets and Database
	B	Joint TST Website
	C	Joint TST Information Network
	D	Text Chat, Audio Chat, and Secure Conferencing
	E	Whiteboarding

US FORCES KOREA
TST PROCEDURES AND TOOLS

Appendix C was extracted from the Department of Defense Joint Warfighters Test and Evaluation, *Time-Sensitive Target (TST) Guide*, dated February 2001.

1. In **United States Forces Korea** (USFK), the CINC's staff plans fires and maintains centralized control while delegating actual execution to the components for decentralized execution. For example, the JFLCC may designate a multiple launch rocket system (MLRS) platoon in a "hot" status to expedite fires on TSTs. The field artillery battalion postures launchers within the "hot platoon" with "At My Command" missions to reduce response times. In the case of air assets, the JFACC may designate a block of aircraft sorties to be kept in a higher than normal alert status for rapid launch, or pre-identify sorties as suitable candidates for a possible re-role of its current airborne mission.

a. The decision authority to prosecute individual TSTs is maintained by the components. Some general guidelines (relative to joint TST decision authorities) are outlined below:

- TST location and current AO boundaries determine the lead component for each TST.
- TST targeting authority is derived from supported and supporting command relationships.
- The supported commander is responsible for converting JFC's guidance into actionable TST taskings based on the current operational situation.
- There is only one authority in each component that may nominate TSTs for joint prosecution.
- Supporting commanders will provide augmentation or other support to a supported commander as required, and develop supporting procedures.

b. USFK has established a **TST Information Network** which links TST information, enables rapid dissemination of target information, and enables timely execution instrumental to a sensor-to-shooter application. This virtual group of component warfighters facilitates joint TST prosecution and integrates component TST decision cycle requirements into joint procedures.

c. The USFK components' lateral coordination requirements are satisfied with the TST information network, which consists of the TST server, a shared target worksheet database, a TST website, and a printed TST guide. The network is implemented by a TST information CONOPS. It supports the sharing of information when, for whatever the reason, dynamic targeting is employed. Although flexibility is required to capitalize on new capabilities, changes to the plan may bring unsought consequences. **The network applies existing software applications to improve timeliness of lateral coordination and to reduce response cycle times associated with joint TST prosecution.**

d. The TST server is a rider on the theater wide-area network (WAN) and uses MeetingPoint conferencing software, Microsoft NetMeeting, a web server for the TST web site, and a Microsoft Access database. The MeetingPoint conferencing software is used to enable multi-channel voice conferencing. Microsoft NetMeeting will

support video conferencing, but due to bandwidth limitations on the WAN backbone, video conferencing is not used. The number of MeetingPoint conferencing users are limited by the number of licenses purchased.

e. Target information is shared using electronic target worksheets generated by the database software in a shared directory on the TST server.

f. The USFK TST web site is a web-based capability primarily designed to post TSTs, their prosecution status, and advise of BDA. It also provides a central location containing links to battle rhythm related data, commander's guidance, and legacy electronic documentation. This capability provides near real-time information to the theater's targeting positions and cells. All TST-related positions can access the TST web site via the Netscape browser using AFATDS, TBMCS, Joint Targeting Toolbox (JTT), and GCCS.

g. The TST web page contains target information posted to a joint TST targeting log, planning documents, command guidance, and other reference material.

h. Links are provided to each associated command's/ component's web page. This provides each component's operational scheme of maneuver, master attack plan, or fire support plan. Also, links are provided to selected battle rhythm products, an electronic copy of the TST guide, as well as theater and component TTPs and other references.

i. Links to the JFC and component hit lists provide a bulletin board to post specific command guidance and interest items as well as JFC and component specific guidance on prosecuting TSTs.

j. Both target development and operational analysts use the log. Target development uses the log to examine the scope of dynamic targeting activity, to anticipate BDA reporting, and to update the JIPTL. Operational analysts use the log to provide feedback to combat plans. Additionally, based on Internet protocol (IP) address control, a user may be given privileges to edit any target record. (Note: In the latest version of the TST Network, individuals (we recommended select colonels) can designate whom they want on the network. This eliminates programmers/ technicians bringing the application down to add/change users. The edit feature is now based on password vice IP addresses.)

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ANNEX A TO APPENDIX C
SHARED TARGET WORKSHEETS AND DATABASE

1. Target information is shared using electronic target worksheets generated by an Access database application in a shared directory on the TST Server. The application allows users to configure data views that are formatted into targeting worksheet forms. Views of database records are distributed in programmed frames to selected clients. These distributed views effectively query clients for database inputs then redistribute the data to another set of clients, based on the TST process and associated information requirements. An Access application file generates the selective views of the data records, effectively filtering data for the selective redistribution by assigning data states. After data is entered on a target worksheet, the data updates the database and changes the data record state. The worksheet state diagram is shown in Figure C-A-1.

2. The target worksheet that displays these different data states is shown in Figure C-A-2. The target worksheet is designed to act as an electronic database. A form from the database serves as an electronic routing slip in a SALUTE or SPOT format that can act as a system message alert (SMA) on any C4I system. The users can configure the target worksheet routing.

3. An example configuration for shared target worksheet distribution is shown in Figure C-A-3. A check in a configuration node box allows the checked state to be viewed by that node. The only exception is the first state or "Enter Target" state that has a single send to restriction. The designated node in the "Send To Initial Data" column will only view "Enter Target" data from their respective nodes. This ensures that each component (or specified node[s]) screens each nominated joint TST and verifies, validates, and qualifies the target.

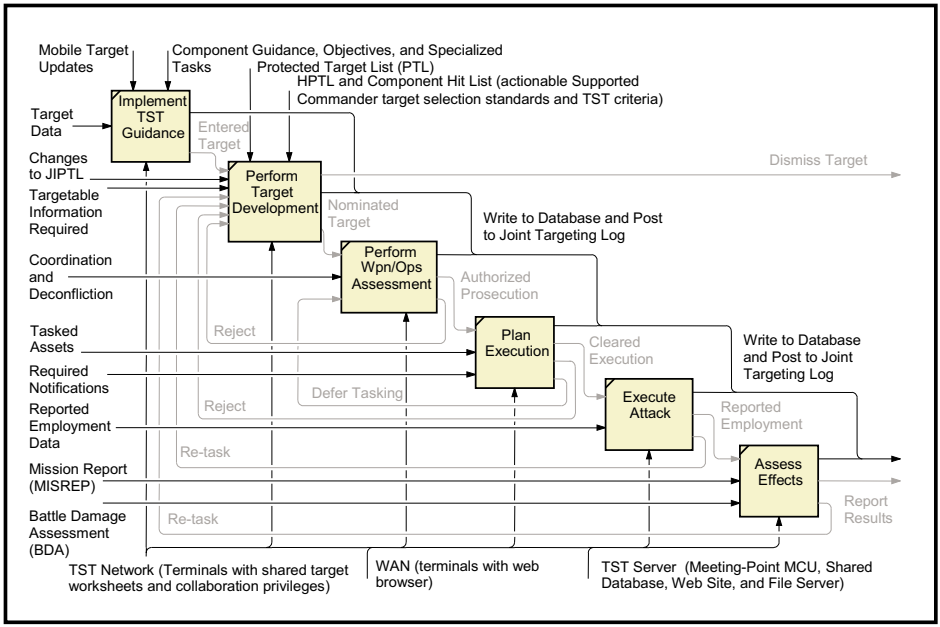


Figure C-A-1. Shared Target Worksheet "State Diagram"

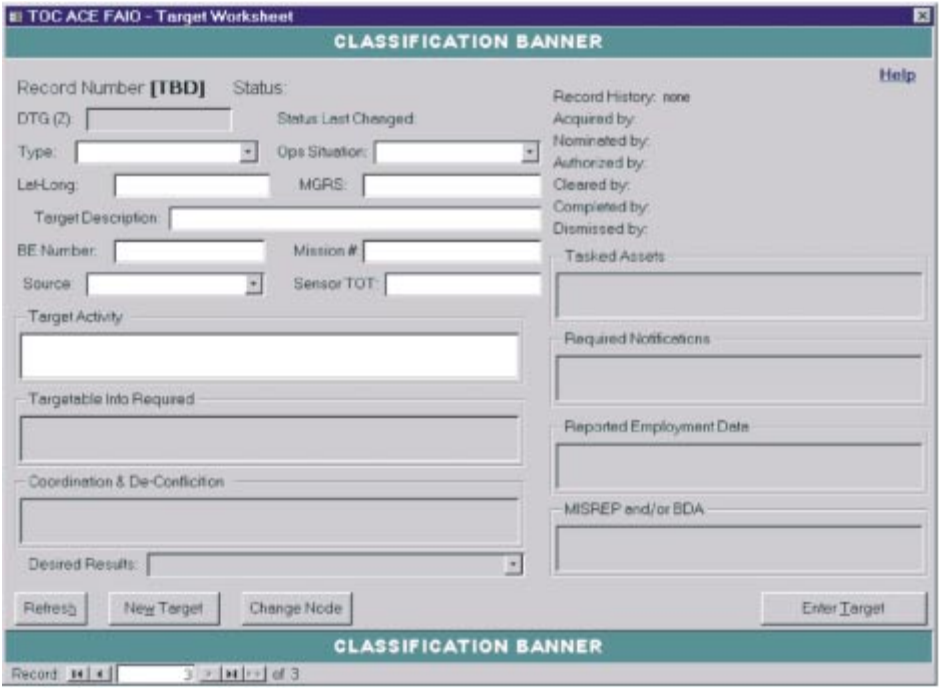


Figure C-A-2. Target Worksheet

		Enter	Nominate	Approve	Clear	Report	Results	
NodeType	Component	Capability	Capability	Capability	Capability	Capability	Capability	SendTo_initialData
CACC FAIO	Army	☑	☐	☐	☐	☐	☑	CP Tango DOCC FCO
C7F JOC Battle Captain	Navy	☐	☑	☑	☑	☐	☐	C7F JOC Battle Captain
COC CMEF Current Fires Officer	Marines	☐	☑	☑	☑	☐	☐	COC CMEF Current Fires Officer
COC CMEF Current Fires Officer [Target Entry]	Marines	☑	☐	☐	☐	☐	☑	COC CMEF Current Fires Officer
Counterfire Bunker FDO	Army	☐	☐	☐	☐	☑	☐	CP Tango DOCC FCO
CP Tango DOCC ALO	Army	☐	☐	☐	☐	☑	☐	CP Tango DOCC FCO
CP Tango DOCC Battle Captain	Army	☐	☐	☐	☑	☐	☐	CP Tango DOCC FCO
CP Tango DOCC FCO	Army	☐	☑	☑	☐	☐	☐	CP Tango DOCC FCO
CP Tango DOCC G2	Army	☐	☐	☐	☐	☐	☐	CP Tango DOCC G2
HTACC BCD Airspace	Army	☐	☐	☐	☐	☐	☐	CP Tango DOCC FCO
HTACC BCD Ops Officer	Army	☐	☐	☐	☐	☑	☐	CP Tango DOCC FCO
HTACC C2BM Director	Air Force	☐	☐	☐	☐	☑	☐	HTACC Intel Duty Officer
HTACC DCO/CCO	Air Force	☐	☐	☐	☑	☐	☐	HTACC Intel Duty Officer
HTACC INT Director	Air Force	☐	☐	☐	☐	☑	☐	HTACC Intel Duty Officer
HTACC Intel Duty Officer	Air Force	☐	☑	☐	☐	☐	☐	HTACC Intel Duty Officer
HTACC Intel Duty Officer [Target Entry]	Air Force	☑	☐	☐	☐	☐	☑	HTACC Intel Duty Officer
HTACC JSOLE Director	CUWTF	☐	☑	☐	☐	☐	☐	HTACC JSOLE Director
HTACC MARLO	Marines	☐	☐	☐	☐	☑	☐	COC CMEF Current Fires Officer
HTACC NALE	Navy	☐	☐	☐	☐	☑	☐	C7F JOC Battle Captain
HTACC TMO Intel Officer	Air Force	☑	☐	☐	☐	☐	☑	HTACC Intel Duty Officer
KCOIC CIO DTC	Joint	☐	☐	☐	☐	☐	☐	HTACC Intel Duty Officer
KCOIC CIO-AOWO	Air Force	☑	☐	☐	☐	☐	☑	HTACC Intel Duty Officer
KCOIC Combined Targeting Cell	Joint	☐	☐	☐	☐	☐	☐	HTACC Intel Duty Officer
C7F JOC Battle Captain [Target Entry]	Navy	☑	☐	☐	☐	☐	☑	C7F JOC Battle Captain
KCOIC BDA	Joint	☐	☐	☐	☐	☐	☐	HTACC Intel Duty Officer
HTACC TMO Attack Ops [Target Entry]	Joint	☑	☐	☐	☐	☐	☑	HTACC TMO Attack Ops
HTACC TMO Attack Ops	Joint	☐	☑	☐	☐	☐	☐	HTACC TMO Attack Ops
HTACC IDO CM	Air Force	☐	☐	☐	☐	☐	☐	HTACC Intel Duty Officer
HTACC Targets Duty Officer	Air Force	☐	☐	☑	☐	☐	☐	HTACC Intel Duty Officer
SOCKOR	CUWTF	☑	☐	☐	☐	☐	☑	HTACC JSOLE Director
HTACC JSOLE SOGLE	CUWTF	☑	☐	☐	☐	☐	☑	HTACC JSOLE Director
		☐	☐	☐	☐	☐	☐	

Figure C-A-3. Notional Target Worksheet Distribution Configuration

ANNEX B TO APPENDIX C
JOINT TST WEBSITE

1. The TST web site is a web-based capability designed to establish a central location containing links to battle rhythm related data, commander's guidance, and legacy electronic documentation. This capability provides near real-time information to the theater's targeting positions and cells. The web server provides a central site for all targeting information relative to current operations. An example web page is illustrated in Figure C-B-1. The top half of the page deals with proactive or timely targeting information. The bottom half is component guidance actionable tasks. All TST-related positions are able to access the TST web site via CTAPS, ADOCS, AFATDS, TBMCS, and GCCS.

2. The TST web page contains target information posted to the joint targeting log, HPTL link, mobile target updates, unsourced changes to the published weaponeered and sourced JIPTL, and the protected target list.

3. The command patch buttons are links to each command's web page. Their purpose is to provide the component's operational scheme of maneuver, master attack plan, or fire support plan. Links are also provided to selected battle rhythm products, an electronic copy of the US Forces Korea TST Guide, as well as theater and component TTPs and references.

4. "Hit List" buttons under each component patch provides a bulletin board for components to post specific guidance, interest items, or commander's guidance with specific actions required to prosecute TSTs. Supported commanders are responsible for establishing guidance—relative to their operational

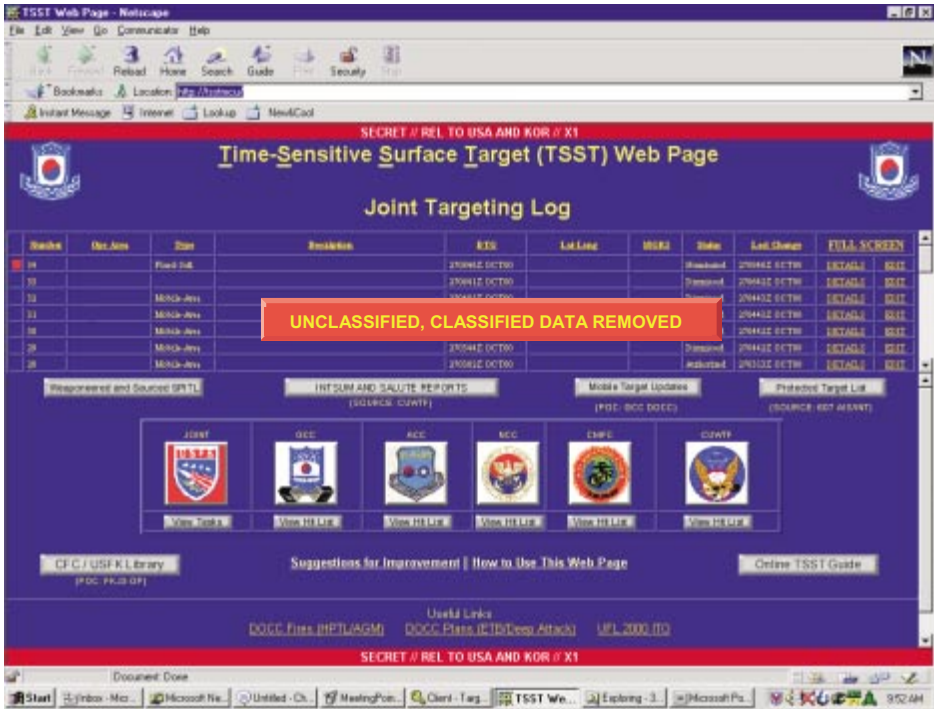


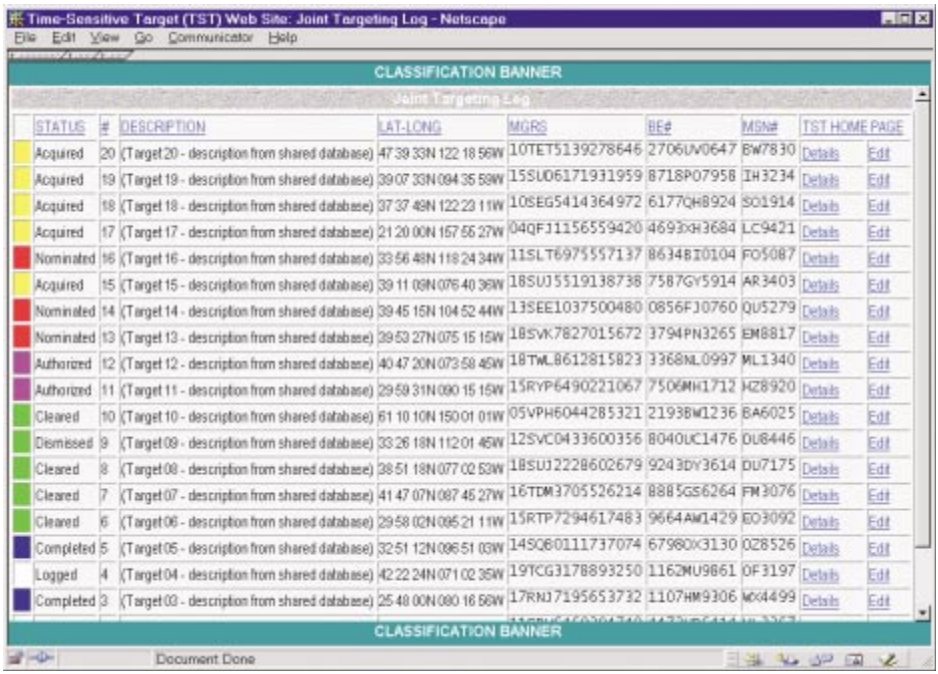
Figure C-B-1. TST Web Page

situations and critical combat effects requirements—into actionable items for supporting commanders to execute. Information includes actionable tasks and control measures required to execute pre-planned attacks and dynamic targeting as well as securing target data when the operational situation dictates and combat effects are most critical.

5. The joint targeting log provides a history of joint target prosecution data, decision, and activity taken directly from the Access database. This log can be sorted by column heading and may be viewed as a full page spread sheet. Color codes are used to show the current status of each target. A notional targeting log is shown in Figure C-B-2.

6. Both target development and operational analysis should use this log. Target development uses this log to examine the scope of dynamic targeting activity, to anticipate BDA reporting, and to update the JIPTL. Operational analysts use this log to provide feedback to OPLANS. Analysts should determine why operational situations had dynamic targeting requirements and if future plans should be adjusted accordingly. Analysis of data should determine if control measures allowed adequate responsiveness or were too restrictive for dynamic targeting to be effective. Analysts should also determine if these changes were the result of the enemy operating inside our decision cycle or because strike effects were not as expected. Additionally, based on internet protocol (IP) address control, a user may be given privileges to edit any target record. This TST web page edit feature displays the edit screen and an example is shown in Figure C-B-3.

7. The "The How To Use This Web Page" link on the web page (Figure C-B-1) provides user information as well as details in maintaining, updating, and manipulating the site. A "Suggestion for Improvement" link allows users to post comments and suggestions for improving the site.



STATUS	#	DESCRIPTION	LAT-LONG	MGRS	BE#	MSN#	TST HOME PAGE	
Acquired	20	(Target 20 - description from shared database)	47 39 33N 122 18 56W	10TET5139278646	2706UV0647	BW7830	Details	Edit
Acquired	19	(Target 19 - description from shared database)	39 07 33N 094 35 59W	15SUD6171931959	8718PO7958	IH3234	Details	Edit
Acquired	18	(Target 18 - description from shared database)	37 37 49N 122 23 11W	10SEG5414364972	6177QH8924	SO1914	Details	Edit
Acquired	17	(Target 17 - description from shared database)	21 20 00N 157 55 27W	04QFJ1156559420	4693XH3684	LC9421	Details	Edit
Nominated	16	(Target 16 - description from shared database)	33 56 48N 118 24 34W	11SLT6975557137	8634BI0104	FO5087	Details	Edit
Acquired	15	(Target 15 - description from shared database)	39 11 09N 076 40 36W	18SUJ5519138738	7587GY5914	AR3403	Details	Edit
Nominated	14	(Target 14 - description from shared database)	39 45 15N 104 52 44W	13SEE1037500480	0856FJ0760	QU5279	Details	Edit
Nominated	13	(Target 13 - description from shared database)	39 53 27N 075 15 15W	18SVK7827015672	3794PN3265	EM8817	Details	Edit
Authorized	12	(Target 12 - description from shared database)	40 47 20N 073 58 45W	18TWL8612815823	3368NL0997	ML1340	Details	Edit
Authorized	11	(Target 11 - description from shared database)	29 59 31N 090 15 15W	15RYP6490221067	7506MH1712	HZ8920	Details	Edit
Cleared	10	(Target 10 - description from shared database)	61 10 10N 150 01 01W	05VPH6044285321	2193BW1236	BA6025	Details	Edit
Dismissed	9	(Target 09 - description from shared database)	33 26 18N 112 01 45W	12SVC0433600356	8040UC1476	DU8446	Details	Edit
Cleared	8	(Target 08 - description from shared database)	38 51 18N 077 02 53W	18SUJ2228602679	9243DY3614	DU7175	Details	Edit
Cleared	7	(Target 07 - description from shared database)	41 47 07N 087 45 27W	16TDM3705526214	8885GS6264	FM3076	Details	Edit
Cleared	6	(Target 06 - description from shared database)	29 58 02N 095 21 11W	15RTP7294617483	9664AW1429	EO3092	Details	Edit
Completed	5	(Target 05 - description from shared database)	32 51 12N 096 51 03W	14SQB0111737074	6798OX3130	OZ8526	Details	Edit
Logged	4	(Target 04 - description from shared database)	42 22 24N 071 02 35W	19TCG3178893250	1162MU9861	OF3197	Details	Edit
Completed	3	(Target 03 - description from shared database)	25 48 00N 080 16 56W	17RNJ7195653732	1107HM9306	WX4499	Details	Edit

Figure C-B-2. Target Coordination Log

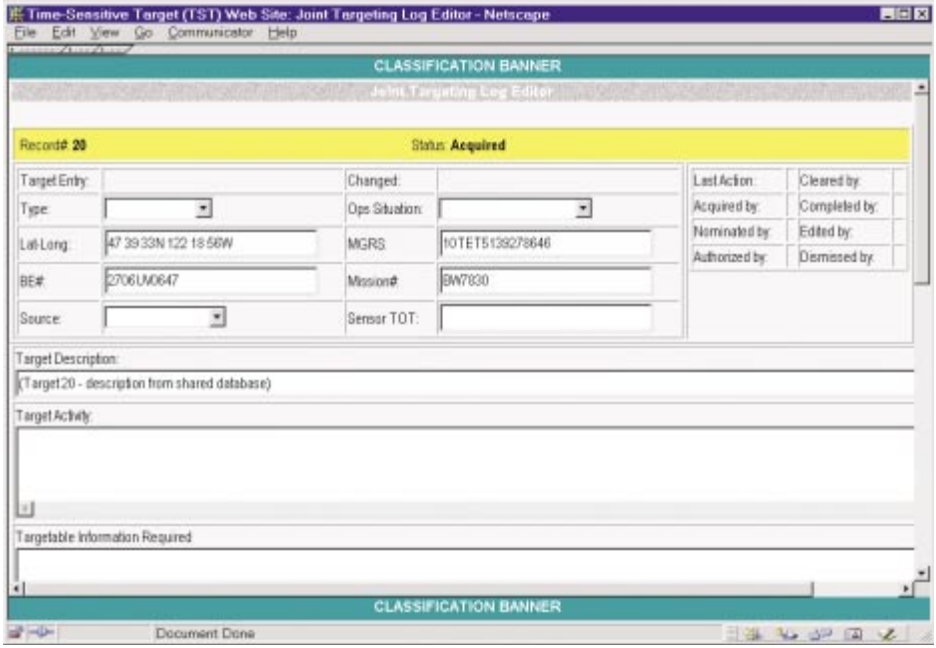


Figure C-B-3. TST Web Page Edit Feature

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ANNEX C TO APPENDIX C
JOINT TST INFORMATION NETWORK

1. Based on USFORKOREA's experience, some recommended information network operational procedures are summarized below.

a. TST Information Network

- Restrict the Access target worksheets to only the core component TST lateral coordination points-of-contact terminals.
- Allow others to load amplifying target worksheet information using the TST web page edit feature through all collateral C4I systems.
- Always "Refresh" the target worksheet to pull-in updated information (loaded from the TST web page) before making processing decisions.
- Implement separate component TST information networks as inputs to the joint TST information network.

b. Collaboration

- Use more broadcast "Text Chat" for announcements and acknowledgements associated with web page TST record data.
- Use private "Text Chat" for component TST activity and Access target worksheet coordination.
- Format "Text Chat" like radio transmissions and use to support the TST network and not as a system work-around.

2. The decision authority to prosecute individual TSTs is strictly limited to warfighting components. Some simple rules (relative to joint TST decision authorities) are outlined below.

- Authority is derived from supported and supporting command relationships.
- Supported commander is responsible for converting commander's guidance into actionable TST taskings based on the current operational situation.
- Only one component authority may "Nominate Target" for joint prosecution.
- Target location and AO determines the lead component for "Authorize Prosecution."
- Attack asset OPCON determines the lead component for "Clear Execution."
- Supporting commanders will provide augmentation or other support to a supported commander as required, and develop supporting procedures.

3. Specific CONOPS for each phase of the joint TST prosecution process and associated tool/applications are outlined below.

a. "Text Chat" Collaboration

- Configure "My Information" under the "Tools" and "Options" menu options as shown in Figure C-C-1. This allows instant recognition of nodes during collaboration.
- Conference number one is reserved for text chat. Four other conferences are available for different applications as listed in Figure C-C-2. The system administrator can establish an unlimited number of conferences.
- A good way to keep abreast of joint TST activities is to open Netscape to the TST

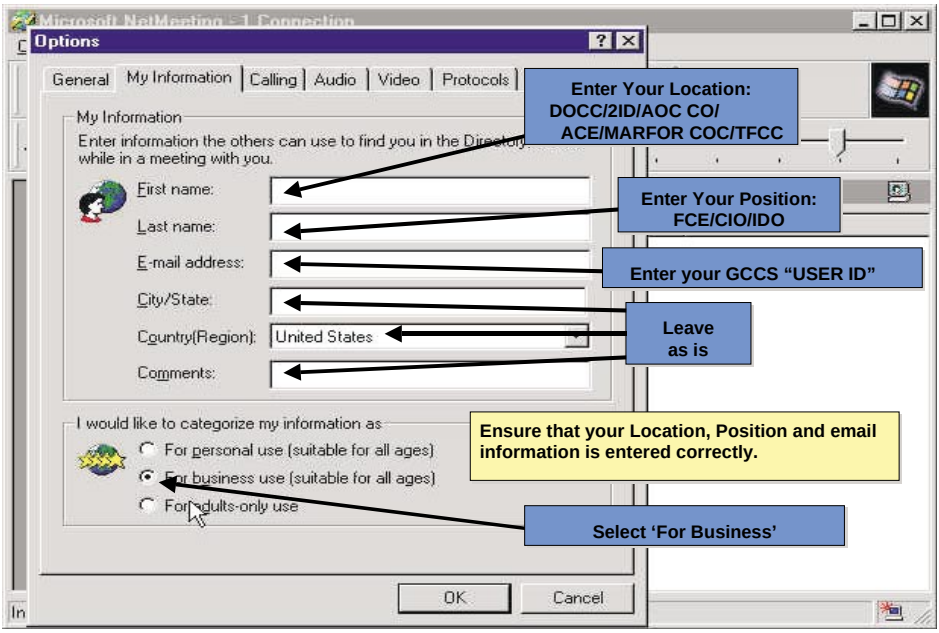

Figure C-C-1. "My Information" Window Set-up

web page and open text chat across the bottom half of the screen as shown in Figure C-C-3. Start Access and the "Startup" form. When the "Waiting for Targets…" dialog box appears, minimize Access and the TST client form will emerge as a system message alert (SMA) when TST data is distributed. If you only participate in the "Initiate" process, then minimize Access until a target is entered

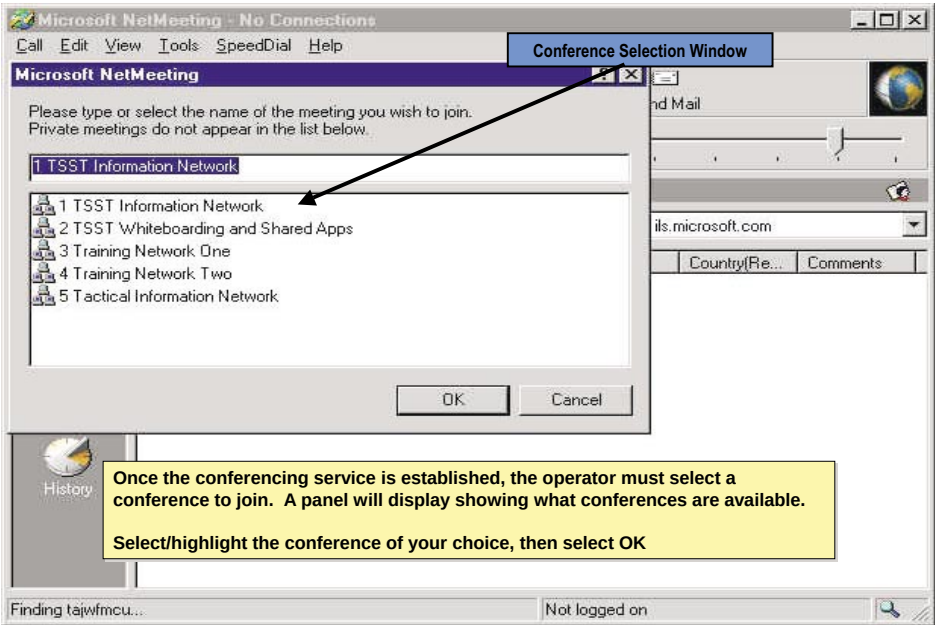

Figure C-C-2. TST Conference Selection

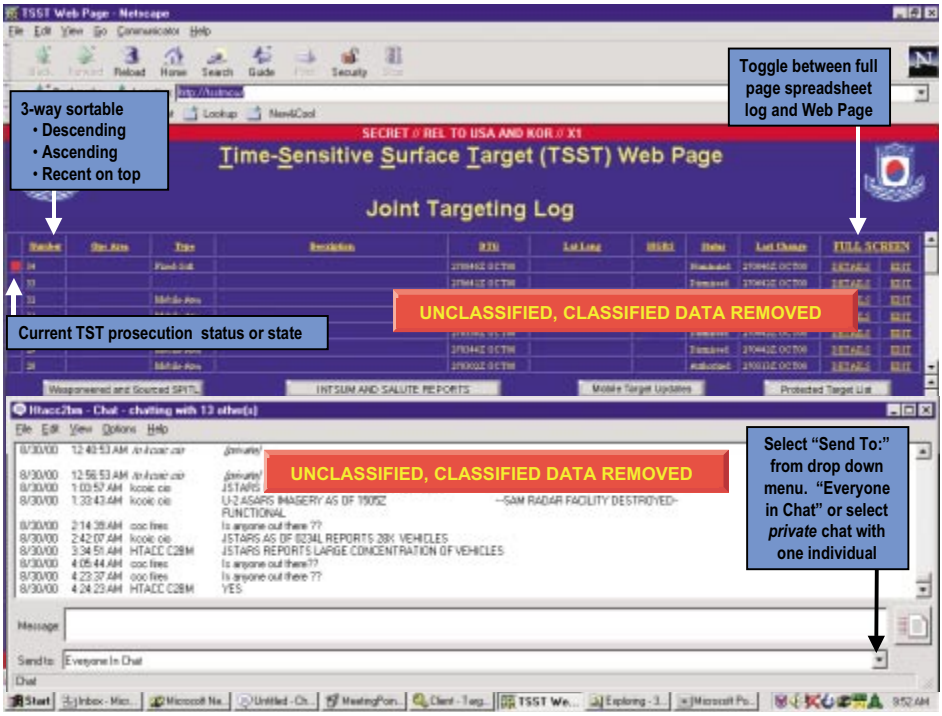

Figure C-C-3. "Text Chat" and Targeting Log Desktop

for TST priority consideration. Open Outlook and minimize until needed.

b. Implement TST Guidance

- Review component synchronization cell definition of TST operational situations and convert into actionable tasks.
- Focus ISR cross-cueing and operational tipping resources to monitor operational situations likely to generate TSTs.
- Load TST detection (SALUTE or SPOT format) into a target worksheet.
- Click the "Enter Target" button followed with private text chat, plain text message, or secure voice. (See Figure C-C-4)
- Update target worksheet (by assigned reference number) on TST web page with the edit feature.

c. Perform Target Development

- Acknowledge the red pop-up window by clicking "OK" or scroll worksheets in queue to a specific targeting worksheet.
- Review target worksheet and determine target responsibilities (assess against current targeting guidance, restrictions and limitations).
- Collaborate (using broadcast "Text Chat" or "Secure Conferencing") to establish level of confidence in reported data, to determine targetable data required, to determine what additional information is required to prosecute the target with available assets, and to order time-sensitive requests for information.
- Perform target development (identify all collateral damage restrictions).

After available data is loaded into the white fields, select "Enter Target." The data writes to the database and a record number will be automatically assigned. The information updates the TST web page when Netscape ® refresh/reload is selected.

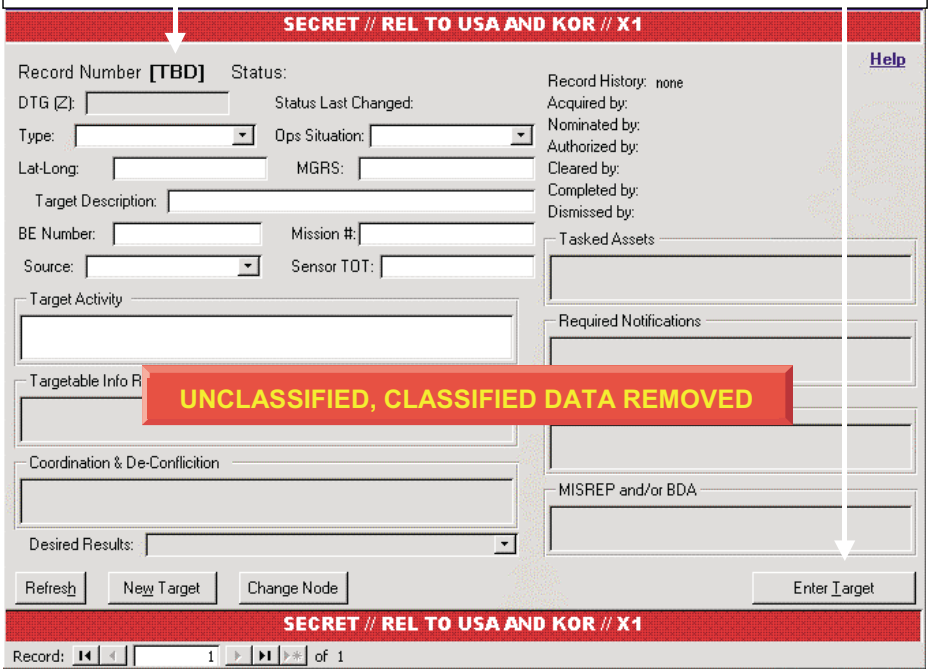

Figure C-C-4. Enter Target Worksheet

- Track target and develop target data package (formatted for the specific weapon system selected for employment).

- Select "Refresh" on target worksheet to display any additional information loaded into the target record.

- Modify or update target worksheet.

- Input "Targetable Information Required" remarks. (See Figure C-C-5)

- Record your decision by either selecting "Dismiss" or "Nominate Target." (Note: "Dismiss" removes the record from all worksheet views but keeps it on the web page for future consideration in the planning cycle).

d. Perform Weaponeering/Operational Assessment and Force Application

- Acknowledge the red pop-up window by clicking "OK" or scroll worksheets in queue to a specific target worksheet.

- Review target worksheet and determine what options are available and assess the effects on current operations and planned activity.

- Assume component responsibility for TST prosecution based on target location and supported and supporting commander relationship.

- Coordinate and de-conflict using collaboration (broadcast "Text Chat" or "Secure Conferencing") to determine the

After target is "Acquired," the target worksheet enters the "Nominate" state. After target development requirements are determined, decide if targetable data is available and if the acquired target meets all criteria to be a joint TST. Click "Refresh" prior to deciding to "Dismiss" or "Nominate" the target (as this will provide updated information entered from any source via the web page edit feature). "Dismiss" removes the record from others view and records the node's decision in the data base.

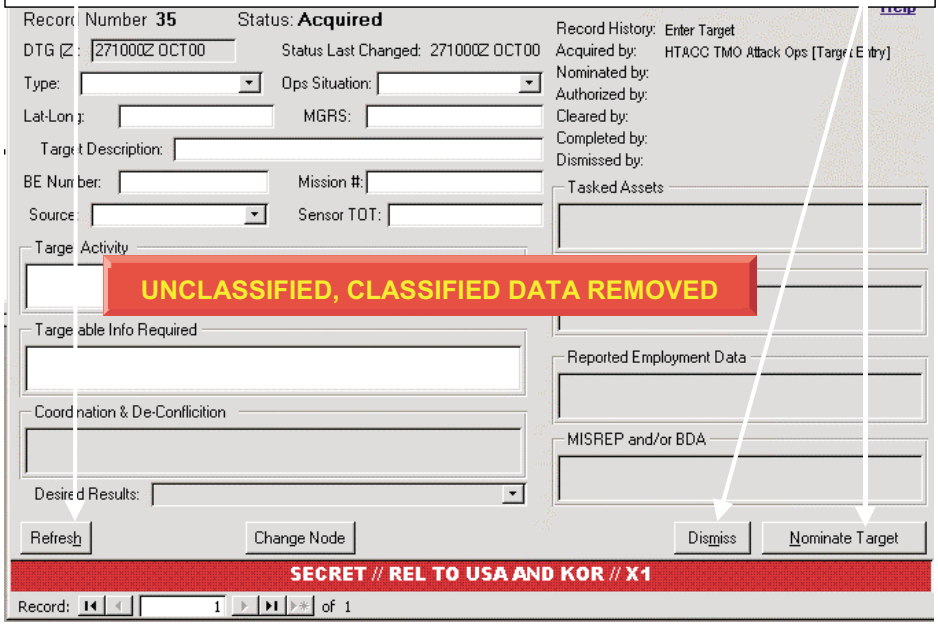

Figure C-C-5. Nominate Target Worksheet

optimum joint asset available to provide the required target effects and other options available.

- Perform weaponeering and operational assessment.
- Execute force application.
- Present the recommended course(s) of action to the OPCON decision authority for the attack assets.
- Select "Refresh" on target worksheet to display any additional information loaded by other TST decision authorities.
- Assume responsibility for TST execution planning if you have OPCON authority of selected attack asset.
- Perform risk assessment for fratricide, combat losses, collateral damage, and mission failure.
- Apply control measures and issue associated alert orders.
- Input "Coordination & De-Confliction" remarks. (See Figure C-C-6)
- Record your decision by either selecting "Reject" or "Approve Prosecution."

e. Perform Execution Planning and Attack Execution

- Acknowledge red pop-up window by clicking "OK" or scroll worksheets in queue to targeting worksheet reference number.

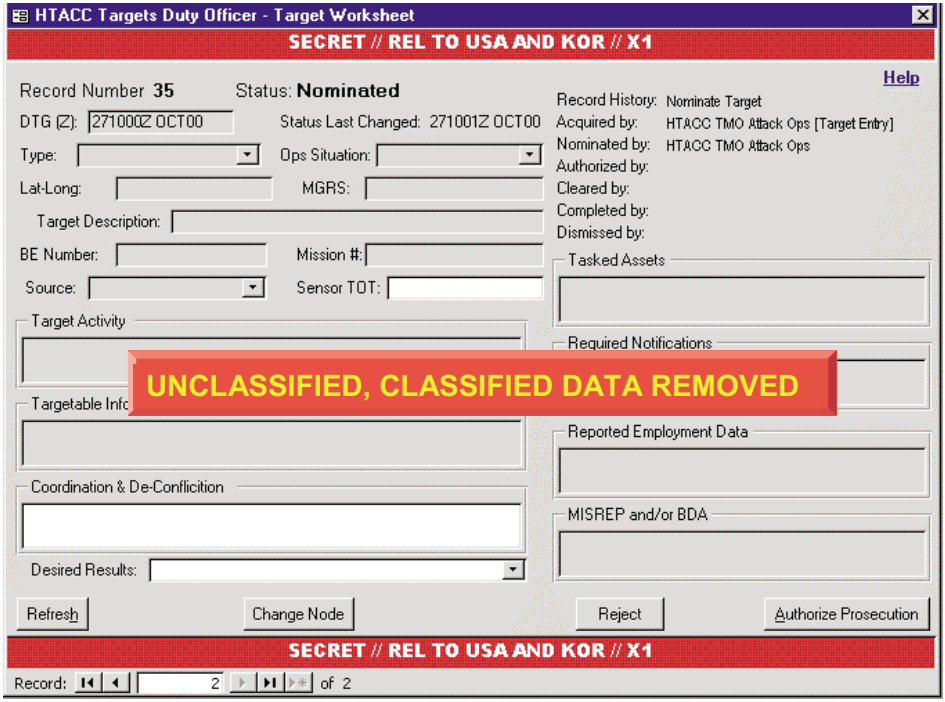

Figure C-C-6. Authorize Prosecution Worksheet

- Review target worksheet and determine what final coordination, alert order or notifications, and orders are required to execute attack.

- Broadcast intentions or warning order with "Text Chat", and issue associated orders.

- Select "Refresh" on target worksheet to display any additional information loaded by other coordinating authorities.

- Issue "Execution Orders". (Figure C-C-7)

- Input "Tasked Assets" and "Required Notifications" remarks.

- Record your decision by either selecting "Defer," "Reject," or "Clear Execution."

- If "Clear Execution" is selected, this decision authority is accepting the risk of collateral damage, mission failure, fratricide, and mission losses and/or ensuring control measures are employed to prevent unsought consequences

f. Assess Mission Results and Strike Effects

- Select "Refresh" on target worksheet to display any additional information loaded by other reporting units, battle management, and/or monitoring agencies.

- Input "Reported Employment Data" remarks. (See Figure C-C-8)

- Record your decision by either selecting "Re-task" or "Report Employment."

After a TST is authorized for prosecution, collateral damage probability is determined and execution-planning results are considered for dynamic tasking. Select "Refresh" to view all amplifying data entered through the web page. Based on situational leadership, system capabilities, and risk assessment; decide to "Defer" (which moves the state back to "Approve"), "Reject" (which moves the state back to "Nominate"), or "Clear Execution" (which moves the state forward to "Report Employment"). Associated orders and warning notifications must be transmitted (via C2 systems) and recorded in the "white" text blocks as deemed necessary.

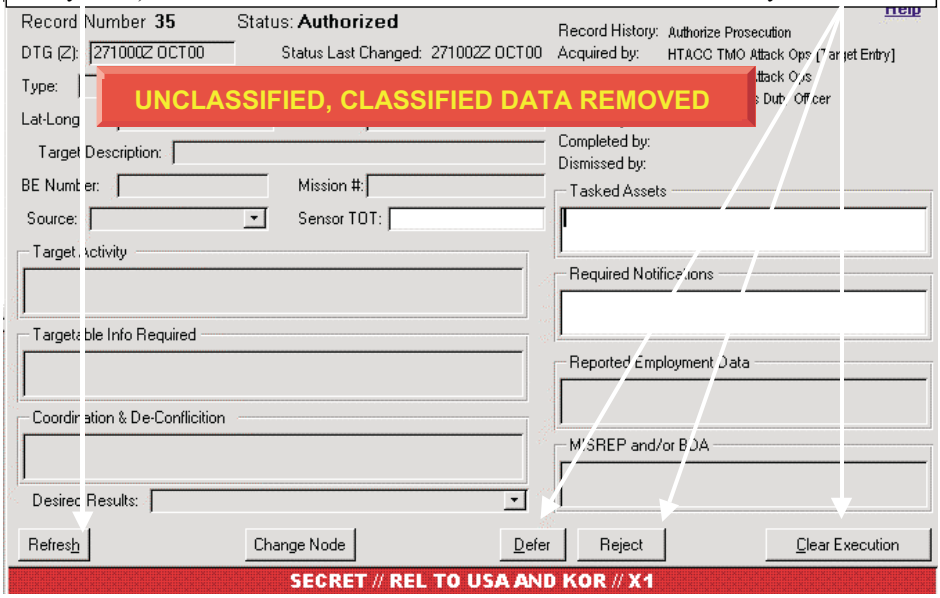

Figure C-C-7. Clear Execution Worksheet

- Broadcast employment execution accomplished on "Text Chat."
- Select "Refresh" on target worksheet to display any additional information loaded by other reporting units or as reflected in a mission-fired report, INFLTREP, and MISREPs.
- Input MISREP and/or BDA remarks. (See Figure C-C-9)
- Record your decision by selecting either "Re-task" or "Report Results."
- Broadcast mission results on "Text Chat."

After "Cleared Execution" the state changes to "Report Employment". Monitor attack execution to ensure compliance with control measures and accomplishment of supporting actions. Report confirmation that fire unit, tactical element, or assigned mission authority has accepted employment tasking. Prior to input of "Reported Employment Data", click on "Refresh" to update worksheet data from any nodes that loaded target record data directly through the TST Web Page "Edit" Feature. Based on available information, decide to either "Re-task" (which changes state back to "Nominate") or "Report Employment".

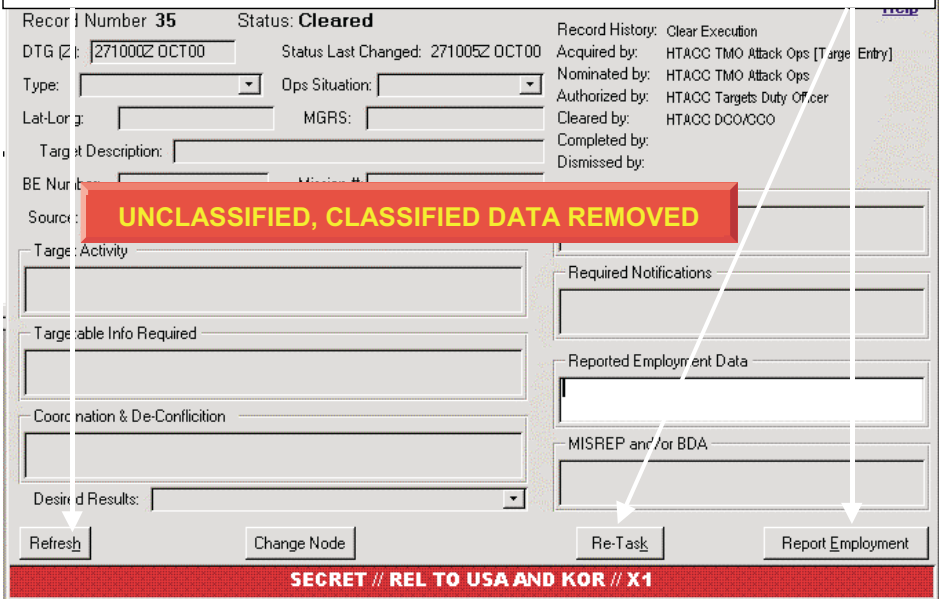

Figure C-C-8. Reported Employment Worksheet

After "Report Employment" the state changes to "Report Results". After this action, the record can only be edited via the TST Web Page edit feature. After employment (and when weapons system mission reporting is not available to all components), record the "Mission Fired Report", INFLTREP, and/or MISREP into the "MISREP and /or BDA" data field. Based on the results and collaboration with decision authorities, decide to either "Re-task" (which changes the state back to "Nominate" and keeps the historical data and tracks last history), "New Target" to start fresh, or "Report Results" to log the record and remove the target worksheet from view. Action can be delayed, however, holding a worksheet open will prevent the SMA feature from functioning (as the pop-up SMA will only occur when no previous records are waiting in a node's queue).

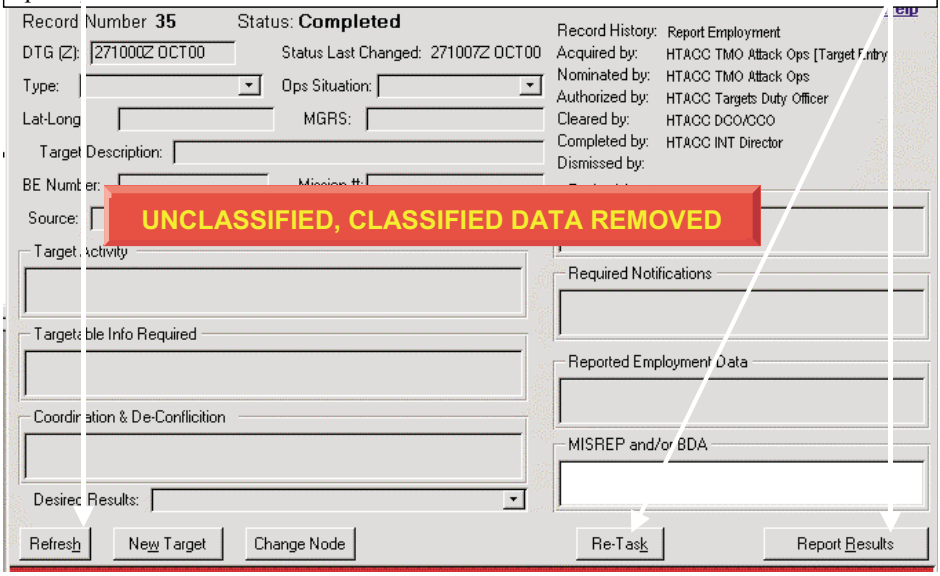

Figure C-C-9. Report Results Worksheet

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ANNEX D TO APPENDIX C
TEXT CHAT, AUDIO CHAT, AND SECURE CONFERENCING

1. **Text Chat**

a. **"Text Chat" is the preferred method for communication by collaborative groups**. It also has the important benefits of providing a log of activities as well as allows members to review what has gone on in previous sessions. Several considerations are listed below.

b. Although all nodes can save the "Text Chat" record, one node should be designated to save the "Text Chat" as an official record of the session.

c. "Private Chat" provides a two-person virtual private network capability. "Private Chat" can enhance the collaborative effort, but too much use can negatively impact the group effort. One use of "Private Chat" is the ability to brief a node that arrived late on what happened during its absence without interrupting the rest of the group.

2. **Audio Chat**. "Audio Chat" is secure voice communications to complement "Text Chat." Audio allows group members to quickly express ideas and understand the group direction. Several "Audio Chat" considerations are as follows:

- Decide what actions the group will take when a member loses audio. Is it necessary to duplicate the "Audio Chat" via "Text Chat"? Users must determine the criticality of the cell losing audio to the current collaborative session.

- Decide when and if the group will allow, "hot miking." Hot miking leaves microphones on during the entire session. While hot miking makes the audio portion more like normal conversation, it has two disadvantages. First, it may pick up classified conversations in the background. For this reason, hot miking cannot be done from sensitive areas such as a sensitive compartmented information facility (SCIF). Second, there is a risk that participants will talk at the same time and cause some confusion or loss of information. The session leader should determine whether or not to allow hot miking.

- The network may not have the bandwidth to support audio for every member. When this occurs, the group should reschedule the session or continue with text only. If one or more of the TST cells lose audio, then the group leader must decide on how to proceed. That decision is greatly simplified if agreements are made on to how to handle the situation prior to the session.

- Military personnel using NetMeeting should view the audio capability as an extension of a tactical radio net and use radio procedures in the collaborative environment. Members should make specific requests or give specific answers.

3. **Secure Conferencing**. Secure conference network (SCN) is a telephone hotline that rapidly connects all TST nodes in a conference call mode. The instrument at any particular node may be a dedicated KY-68 or DRSN telephone, or simply a speed-dial mode on a secure telephone. Secure conferencing is both an independent means of collaborating on TST prosecution and a tool to support other collaborative tools such as NetMeeting.

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ANNEX E TO APPENDIX C
WHITEBOARDING

1. Whiteboard is a graphical collaboration tool. It is the primary tool to share a common view of things such as PowerPoint slides, maps, and imagery. The utility of the whiteboard is that anything seen on the desktop of one member's computer (regardless of the program, application, or web site) can be captured and placed onto the whiteboard for group viewing. When a whiteboard is initiated, everyone in the conference will receive the whiteboard in front of other applications. Each time a change is made to the whiteboard, the board re-opens in front of all other windows. You must always lock to maintain control of the whiteboard. If bandwidth is restrictive, do not allow collaboration (which allows different, collaborative users to edit whiteboard while all other view the session).

2. The whiteboard can be used concurrently with "Audio and Text Chat." However, operators must ensure that the "Text Chat" box is not obscured by the whiteboard to prevent loss of information flow. Each operator should keep the whiteboard at less than full screen size and align it with the upper left-hand corner of the screen. The "Text Chat" box should then be aligned with the lower right right-hand corner of the screen to remain visible while not interfering with the view of the whiteboard.

3. Protocols for whiteboard use should be established, disseminated, and enforced. Some organizations have found whiteboard control to be of such concern that it is only used between two or three nodes at a time rather than shared with the entire network. To enable all TST cells an opportunity to use this valuable collaborative asset, the following considerations are recommended:

- The whiteboard has a common view that is shared by all persons in the conference. The session leader should lock the whiteboard and allows others to make entries only after the coordinating by "Audio or Text Chat." When control of the whiteboard is handed over to another member, the new whiteboard controller should lock the whiteboard to prevent others from changing the view. If one person changes the view or the page or erases an object, all members of the conference will see the change simultaneously. Chaos can occur if several people try to make simultaneous changes or entries.

- The session leader is responsible for orchestrating the save operation and new whiteboard or image loading.

  •• He decides who is responsible for placing images on the whiteboard. Only one cell should load images at a time. If multiple cells simultaneously load an image onto the whiteboard, the last cell to load will override the others. If a new image is loaded before the previous whiteboard is saved, the work on the previous whiteboard is lost (unless properly saved).

  •• He decides who is responsible for saving the work in-progress and how often it will be saved. Frequency of saves will depend on the experience of the group, the importance of the work, and the amount of work done since the last save operation.

- Each cell should be assigned a color for whiteboard marking. This allows cell members to quickly ascertain who placed a comment or drawing on the whiteboard. Colors can be assigned to drawing tools as well as text.

- The session leader decides who will be responsible for clearing the whiteboard

at the end of each session. When saving, consider the following:

•• When a whiteboard is saved using routine procedures, it is saved to the server. This can be a problem in the event of server failure and the whiteboard file is lost. Therefore, one of the TST cells in the network should be designated to save the whiteboard to its personal hard drive. It is easier if this is the same cell responsible for clearing the whiteboard.

•• Another technique used for protecting the saved whiteboard is called multi-save. Multi-save is saving the product to the server twice under two different names. The multi-save technique is implemented using the suffix of "***bu***" for back up. If the whiteboard product were called TST5, for example, then a second copy named TST5bu would be also saved to the server. This ensures that a copy of the master is available should someone accidentally destroy your work. However, the file is still subject to loss if the server becomes inoperable.

- Before clearing annotations or images from the whiteboard, other cells in the session should be notified and provided the opportunity to save their own copy of the whiteboard.

4. **Advanced Techniques**

- Place standard session requirements on the bottom of the whiteboard. Most groups list their requirements on "Text Chat" or in a Word document maintained in a file. By transferring the requirements to the bottom of the whiteboard, the screen (whiteboard) does not have to be moved to access information from other documents.

- A good way to work on slides is to *capture* a PowerPoint slide onto the whiteboard and then have the group annotate changes. While the group is making changes and coming to consensus, one group member is updating the slide in the PowerPoint program on his computer. When the group is finished collaborating and all changes are made to the original slide, the updated slide is *captured* from the PowerPoint user's computer and loaded on the whiteboard. Now the group can view the final product to ensure all members agree with the changes.

APPENDIX D
ENGAGEMENT CAPABILITIES AND LIMITATIONS

1. US Army Assets

a. **Attack Helicopters**. Attack helicopters are employed in a variety of roles. Normally, they are employed by components as organic assets. Army attack helicopters are usually employed as a maneuver unit capable of all normal maneuver force missions. In most circumstances, the Army does not consider attack helicopters a CAS system, although they can perform CAS functions when operating in support of another component.

Advantages. Rapid response times and weapons accuracy.

Disadvantages. Inclement weather flying restrictions, speed, limited range and available munitions, and vulnerability to adversary fire.

AIRCRAFT	WEAPONS
AH-1F "Cobra"	BGM-71 TOW missiles, 2.75" rockets, 20mm cannon
AH-64 "Apache Longbow"	AGM-114 Hellfire missiles, 2.75" rockets, 30mm cannon
OH-58D "Kiowa Warrior"	AGM-114 Hellfire missiles, 2.75" rockets, 50 cal machine gun

AH-64 Apache

b. **Missiles**. The ATACMS provide long-range, surface-to-surface fire support. The ATACMS are ground-launched missile systems consisting of a surface-to-surface guided missile with an anti-personnel/anti-materiel (APAM) warhead.

Advantages. Range, accuracy, all weather capability, wide area coverage, and rapid response time.

Disadvantages. Limited effectiveness against hardened targets.

WEAPON	RANGE
ATACMS	300,000m

ATACMS

c. **Rockets**. The MLRS provides counter battery fire and suppression of adversary air defenses, light materiel, and personnel targets. The MLRS is a free-flight, area-fire, artillery rocket system that supplements cannon artillery fires by delivering large volumes of firepower in a short time against TSTs. The basic warhead carries improved conventional submunitions.

Advantages. Range, all weather capability, wide area coverage, and rapid response time.

Disadvantages. Accuracy and limited effectiveness against hardened targets.

WEAPON	RANGE
MLRS	32,000m
MLRS Extended Range	45,000m

MLRS

d. **Artillery**

Advantages. All weather capability, accuracy, and rapid response time.

Disadvantages. Range

WEAPON	CALIBER	RATE OF FIRE[1]	RANGE
M102	105mm	3	15,300m
M119A1	105mm	3	19,500m
M109A6	155mm	1	30,000m
M198	155mm	2	30,100m

[1] Rounds per minute.

M109A6 "Paladin"

2. US Marine Corps Assets

a. **Fixed-Wing Aircraft**

Advantages. Range, accuracy, and rapid response time.

Disadvantages. Inclement weather flying restrictions and vulnerability to adversary fire.

F/A-18 "Hornet"

AIRCRAFT	WEAPONS
AV-8B "Harrier II"	Laser-guided bombs (LGB), AGM-65 Maverick missile, AGM-122 Sidearm missile, Joint Stand-Off Weapons (JSOW), Joint Direct-Attack Munitions (JDAM), general purpose (GP) bombs, cluster bomb units (CBU), 2.75" rockets, 5" rockets, 25mm cannon
F/A-18A/C/D "Hornet"	LGB, AGM-65 Maverick missile, AGM-62 Walleye missile, AGM-84 SLAM missile, AGM-88 HARM missile, JSOWs JDAMs, GP bombs, CBUs, 2.75" rockets, 5" rockets, 20mm cannon

b. **Attack/Utility Helicopters**

AIRCRAFT	WEAPONS
UH-1N "Huey"	7.62mm machine gun, .50 caliber machine gun, 2.75" rockets
AH-1W "Super Cobra"	BGM-71 TOW missile, AGM-114 Hellfire missile, 5" rockets, 2.75" rockets, 20mm cannon, AGM-122 Sidearm missile

AH-1W "Super Cobra"

c. **Artillery**

WEAPON	CALIBER	RATE OF FIRE	RANGE
M198	155mm	2	30,100m

M198

3. US Navy Assets

a. **Fixed-Wing Aircraft**

AIRCRAFT	WEAPONS
F-14 "Tomcat"	LGB, GP bombs, CBUs, 20mm cannon
F/A-18A/C "Hornet"	LGB, GP bombs, CBUs, AGM-65 Maverick missiles, AGM-62 Walleye missiles, AGM-84 SLAM missiles, AGM-88 HARM missiles, JSOWs, JDAMs, 2.75" rockets, 5" rockets 20mm cannon
S-3B "Viking"	GP bombs, CBUs, 2.75" rockets, 5" rockets
P-3 "Orion"	JSOWs

F-14 "Tomcat"

b. **Missiles**. US Navy TLAMs can be effective interdiction assets and provide a potent employment option to the joint force. Several variants provide single warhead unitary blasts or multi-effect submunition capabilities. Low risk, accuracy, and range make missiles most viable in the planning of interdiction contingency operations against stationary, non-hardened targets. The TLAM weapon system may require coordination between strike planners in-theater and supporting mission planners out of theater. This is an ongoing process independent of the decision to use the weapon. With proper preplanning, TLAMs are capable of conducting short-notice strikes, without aircraft support, against targets in heavily defended areas where the probability of the loss of manned aircraft is too high. TLAMs are also capable of

neutralizing adversary air defenses to facilitate a much larger attack by land- and sea-based airpower. In theater, the associated afloat planning systems suites provide the maritime component commander with the capability to plan new missions or modify selected missions in the AO.

Advantages. Range, accuracy, and all weather capability.

Disadvantages. Response time.

WEAPON	RANGE
TLAM	1,836km

Tomahawk Land-Attack Missile

c. **NSFS**. US Navy cruisers and destroyers are armed with a 5-inch, 54-caliber, MK 45, lightweight gun which provides accurate naval gunfire against fast, highly maneuverable surface targets, air threats, and shore targets.

Advantages. Accuracy, rate of fire, and all weather capability.

Disadvantages. Range.

MK 45

WEAPON	CALIBER	RATE OF FIRE	RANGE
MK 54	5 inch	16-20	14.9 miles

4. US Air Force Assets

a. Fixed-Wing Aircraft

AIRCRAFT	WEAPONS
A/OA-10A "Thunderbolt II"	LGBs, GP bombs, CBUs, AGM-65 Maverick missile, 2.75" rockets 30mm cannon
B-1B "Lancer"	GP bombs, CBUs, JDAMs
B-2 "Spirit"	JDAMs, JSOWs, GP bombs, CBUs
B-52H "Stratofortress"	ALCMs, JDAMs, LGBs, GP bombs, CBUs, AGM-142 Have Nap missile
F-15E "Eagle"	JSOWs, JDAMs, LGBs, GP bombs, CBUs, 20mm cannon
F-16 "Falcon"	LGBs, JDAMs, GP bombs, CBUs, AGM-65 Maverick missile, 20mm cannon
F-117 "Nighthawk"	LGBs, JDAMs, GP bombs, CBUs

F-16 "Falcon"

5. Special Operations Command Assets

a. **Fixed-Wing Aircraft**

AIRCRAFT	WEAPONS
AC-130H "Spectre"	105mm howitzer, 40mm cannon, 20mm cannon
AC-130U "Spectre"	105mm howitzer, 40mm cannon, 25mm cannon

AC-130 "Spectre"

b. **Attack/Utility Helicopters**

AIRCRAFT	WEAPONS
AH-6J	AGM 114 Hellfire missile, 2.75" rocket pods, 40mm MK 19 grenade launcher, .50 caliber machine gun, 7,62mm miniguns
MH-53 "Pave Low"	.50 caliber machine gun, 7.62mm miniguns
MH-60G "Pave Hawk"	XM-218 .50 caliber machine guns, 7.62mm M-60 machine guns, GAU-2 7.62mm machine guns, and provides a long range hover platform for the employment of shoulder fired weapons
M60K "Blackhawk"	M134 7.62mm miniguns

MH-60 "Blackhawk"

c. **SOF Direct Action**. One of the many capabilities provided by SOF is the attack of operational targets by direct action. SOF are specially trained and equipped units with unique skills enabling them to penetrate deep into adversary areas to execute critical missions. These units are rapidly deployable and can be inserted by parachute, boat, submarine, helicopter, or on foot.

Advantages. Range, accuracy, and all weather capability.

Disadvantages. Mission planning and rehearsal time.

SOF may attack operational targets by direct action.

APPENDIX E
NOTIONAL TIME-SENSITIVE TARGET CHECKLISTS

General Considerations

1. Are rules of engagement (ROE) available?

2. Is commander's guidance available?

3. Are there redundant, secure communications between key nodes in the different components?

- Secure conferencing telephone?
  - STU-III
  - KY-68
  - Red Phones
- Collaborative tools (such as NetMeeting)
- Are communications established?
- Is e-mail available/established?

4. Are common maps and charts available and posted showing:

- Friendly forces
- Adversary forces
- FSCMs and ACMs
- Kill boxes
- Bullseyes

Posturing Assets

1. Where is the TST located in the battlespace?

- Forward line of own troops (FLOT) to FSCL
- FSCL to forward boundary
- Forward boundary & beyond
- Amphibious objective area
- Special operations area
- Rear area

2. What are the command relationships?

- Who is the supporting commander?
- Who is the supported commander?

3. What assets are available for attacking TSTs?

- Intelligence, surveillance, reconnaissance (ISR) assets
- Attack helicopters
- ATACMS/MLRS
- Artillery
- Fixed-wing aircraft
- Cruise missiles
- NSFS
- SOF
- Space assets

4. What available assets can range the TST?

5. What available asset is most appropriate for the TST type?

- Ground-based
  - What is the risk of counterfire?
- Aviation
  - Are appropriate weapons loaded?
  - Is suppression of adversary air defenses required?
  - Is refueling required?

6. Estimate of TST dwell time?

7. Impact on joint targeting coordination board plan of re-rolling or diverting attack asset from planned targets?

8. Should TST be attacked, monitored, or exploited?

Target Location/Identification

1. Target location–who is the supported commander of operational area where target is located?

2. Does collection management have the most current PIR/intelligence requirement (IR)?

3. Are PIR/IR adequately defined?

4. Were all the PIR/IR converted into specific orders and requests?

5. Does collection management worksheet match the high-payoff target list (HPTL) and master air attack plan (MAAP)?

6. Does collection management worksheet match accuracy requirements specified in PIR/IR?

7. Are assigned reconnaissance, surveillance, and target acquisition (RSTA) adequate to detect, locate, identify and track targets? Can we get required information from sensor/platform?

8. Have additional assets from higher, adjacent, or subordinate units been requested/coordinated?

9. Are high-payoff targets (HPTs) adequately covered in the collection management plan (CMP)?

10. Are JFC high priority targets sufficiently covered?

11. Are component HPTs aligned and integrated IAW campaign guidance?

12. Are sufficient assets available to support rapid cross-cueing?

13. Are there procedures in place for sensor/platform hand-off?

14. What RSTA assets are available to support extended TST tracking?

15. Does collection plan provide flexibility for ad hoc or dynamically re-tasking of collection assets?

16. Have all collection options been considered?

17. Has immediate post-strike BDA been requested on selected targets?

18. Were ad hoc re-taskings for collection passed to appropriate authority?

19. Did the component collection managers pass target collection requirements to the joint/theater collection manager?

20. Was the ad hoc re-tasking approved?

21. Were requests for dynamic re-tasking passed to appropriate authority?

22. Was the CMP approved?

23. Is the CMP easily available to all?

Deconfliction

1. Is more than one component attacking the same TST?

2. Have components deconflicted airspace requirements internally and externally?

3. Have formal and informal airspace coordination area options been considered?

4. Has a common reference system been identified?

   - Grid box

   - Kill box

   - Bullseye

5. Do all components have the most current version of the system?

6. Has short-notice TST target area deconfliction been accomplished?

7. Are there particular weapon systems considerations?

   - ATACMS (fire direction center (FDC) evaluation w/BCD input, as required)?

   - Aircraft (combat air patrols, diverts, re-roles, airborne elements of the Theater Air Control System advisories)?

   - Helicopter minimum risk route (MRR) considerations?

8. SOF operations conflicts?

   - SOF area protection measures?

   - Clandestine operations impact?

9. Have activation/deactivation windows been established?

10. Are there any current airspace control order implications?

Sample Airspace Clearance Responsibilities and Actions for Surface Forces

1. Request permission from the commander responsible for the target area to attack the target.

2. The commander or his representative will:

- Determine whether he has the means to attack the target.
- Determine whether or not to attack the target.

3. Is the airspace clear?

- If clear, clear ground component to attack.
- If not clear, determine whether airspace can be cleared in time.
  - If airspace can be cleared in time, clear ground component to attack.
  - If airspace cannot be cleared in time and target destruction is not deemed a high priority, notify air control element that the target is deferred.
  - If airspace cannot be cleared in time and target destruction is deemed a high priority, notify the air component and clear ground component to attack when bullseye call is confirmed.

4. Ground component will notify air component of imminent weapons launch/fire.

5. AWACS, control and reporting centers (CRCs), forward air control posts and/or ABCCC will broadcast bullseye call.

6. Ground component will launch/fire into a commander's AO when cleared with the commander or his representative.

Operational Assessment

1. Did post-strike collection assets cover the TST? (Either by the current collection plan or TST supporting assets.) (Intel)

2. Was initial BDA received within time limits? (½ hour from ground or air component depending on weapon employed and target disposition.) (Intel)

3. Was the TST successfully struck? (Refer to BDA reporting responsibilities chart)? (BDA reporting schedule should support timing requirements.) (Intel)

4. Can the level of damage/destruction to the TST be determined from initial BDA? (Conclusive combat assessment of BDA intelligence source.) (Ops/Intel)

5. Is Phase I BDA (physical damage) analysis sufficient for making re-attack recommendation (if required)? (Ops/Intel)

6. Are indications clear enough for an informed follow-on decision? (Ops/Intel)

7. If Phase II BDA (functional damage) collection is still required, is the collection timeframe supportive of re-attack recommendation? (Ops/Intel)

8. Does current collection plan account for TST location? (Intel)

9. Does initial combat assessment confirm that the objectives were met? If yes, then this TST process is complete. (Ops)

10. Is the criticality of the TST such that additional BDA collection must be acquired? (Ops/Intel)

11. Was high priority effort initiated with commensurate level of support required? (Ops/Intel)

12. Has the collection manager (CM) been advised?

13. Will the current collection plan be altered? Consequences incurred? (Intel)

14. Are all TST data requirements available to the CM? (Complete and accurate TST target data is a key requirement.) (Ops/Intel)

15. Did combat assessment provide a re-attack recommendation? (Ops/Intel)

16. Coordination process expedited for short window of opportunity. (Intel)

17. What is the impact of changing the collection management plan?

18. Have possible impacts on next 24–72 hours been weighed against anticipated objectives? (Ops/Intel)

19. Are collection assets/sensors available for expedited collection?

20. Did CMs review component and national availability? (Intel)

21. Is this an ad hoc or dynamic re-tasking collection requirement?

22. Is priority of TST high enough to alter current plan. (Ops/Intel)

23. What is the timeframe for re-attack?

24. What is the window of vulnerability, especially for mobile targets? (Ops/Intel)

25. Have weapons options changed?

26. Determine revised target disposition, fixed or mobile, hardened or soft. (Intel)

27. If re-attack is required, which weapon will satisfy the requirement?

28. Consider most recent weapons options/ developments for best success. (Ops/Intel)

29. What are ATACMS limitations/ availability (fixed/soft targets)?

30. Has type and range of target been determined? (Ops/Intel)

31. Has aircraft re-role/diversion been considered?

32. What are the impacts on ATO, airspace deconfliction difficulties, and threat environments? (Ops/Intel)

33. Has the CM requested the long-term collection plan be adapted for additional TST BDA requirements?

34. Has the requirements list been reviewed and adjusted accordingly? (Intel)

35. Is this a new/revised standing collection requirement?

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APPENDIX F
JOINT TIME-CRITICAL TARGETS

1. Joint Time-Critical Targets

Although not currently approved by joint doctrine, many combatant commands use the term "time-critical target (TCT)" as a sub-category of TSTs. These TCTs are deemed to pose such a threat to friendly forces that they are afforded distinctive ROE by the JFC.

a. In these instances, a joint TCT may be defined as: "Those targets, **specified by the JFC** that require immediate engagement because they pose (or will soon pose) a significant threat to friendly forces. The JFC determines those situations, if any, **where immediate engagement of the TCT threat outweighs other operational considerations**. Component commanders, who first acquire specified TCTs, may be specifically delegated the authority by the JFC for **immediate engagement responsibility regardless of assigned area** of operations or mission."

b. Joint TCTs are normally based upon adversary capabilities. In other words, a joint TCT is a target of great immediacy that poses such a significant threat to the joint force that it is specifically designated by the JFC for immediate engagement in order to prevent damage to friendly forces.

c. Attacks against surface joint TCTs are characterized by preemptive or reactive offensive actions, executed by joint force component commands, intended to destroy land or sea targets as part of counterair, strategic attack, interdiction, fire support, antisurface warfare, strike warfare, or special operations direct action missions.

d. As seen in Figure F-1, TCTs are a small subset of TSTs. It is up to the JFC to specify which TSTs will be considered as TCTs, and what actions are to be taken against them. The TCT guidance from the JFC will be dependent on the current situation, phase of the campaign, adversary capability, etc. and may be changed or updated as needed.

2. Risk Assessment

When required, the JFC specifies those few, exceptional circumstances when joint force component commanders, who first acquire specific surface joint TCTs, have authorization for immediate engagement regardless of

Joint TCTs Require Immediate Engagement

Figure F-1. TST/TCT Relationship

assigned AO or mission. In essence, **the JFC determines those situations, if any, where immediate destruction of the surface joint TCT threat outweighs the potential for friendly casualties, collateral damage, or duplication of effort**. Inherently, this determination, to whatever degree, may allow a component to bypass the requirement for informing, coordinating, deconflicting, and synchronizing. However, if time allows, these efforts should be accomplished before engagement.

3. Commander's Guidance

The JFC may issue a statement, similar to that below, to make command guidance on joint TCTs clear to component commanders:

"The adversary is known to possess, and has the capability to employ nuclear WMD against the joint force. Accordingly, the following target types are designated joint TCTs:

- Adversary activities deploying WMD from known storage areas.
- Known or suspected TBM with WMD payloads.

These joint TCTs require immediate engagement. Components will inform all affected agencies when attacking joint TCTs, but they will not delay the attack – the requirement to wait for coordination with other affected components is waived. Destruction of these joint TCTs is desired. The JFC accepts the risk of fratricide, loss of assets and duplication of effort in attacking these joint TCTs. Immediately notify the JFC of all joint TCT engagements."

"(USCENTCOM) Current Operations works with two categories of targets: time-sensitive and ***time-critical****. Time-sensitive targets call for speed but allow enough time to coordinate to clear the airspace.* ***Time-critical targets are like the Scud missiles during the Gulf War and call for a notice to airmen: 'Clear the airspace. We are engaging the target*** **now.'"**

General Tommy R. Franks, US Army
Commander in Chief, US Central Command
***FA Journal*, May-June 2001**

APPENDIX G
REFERENCES

The *Commander's Handbook for Joint Time-Sensitive Targeting* is based upon the following primary references.

1. Joint Pub 2-01.1, *Joint Tactics, Techniques, and Procedures for Intelligence Support to Targeting*, (under development).

2. Joint Pub 3-09, *Doctrine for Joint Fire Support*, 12 May 1998.

3. Joint Pub 3-33, *Joint Force Capabilities*, 13 October 1999.

4. Joint Pub 3-55, *Joint Doctrine for Intelligence, Surveillance, and Reconnaissance (ISR) and Target Acquisition (TA)*, (under development).

5. Joint Pub 3-60, *Joint Doctrine for Targeting*, 17 January 2002.

6. Department of Defense Joint Warfighters Test and Evaluation, *Time-Sensitive Target (TST) Guide*, dated February 2001.

7. US Joint Forces Command, *Coherent Joint Fires 2000*, Final Report dated January 2001.

8. US European Command, ED 40-16, *Crisis Targeting Support Architecture*, dated 11 March 2001.

9. US Air Forces Europe Air Operations Center briefing, "Time-Sensitive Targeting," undated.

10. Air, Land, Sea Application Center, *Targeting (The Joint Targeting Process and Procedures for Targeting Time-Critical Targets)*, dated July 1997.

11. Air, Land, Sea Application Center, *J-Fire (Multi-Service Procedures for the Joint Application of Firepower)*, dated November 1997.

12. *FA Journal*, Volume VII, No.3, May-June 2001.

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GLOSSARY

PART I—ABBREVIATIONS AND ACRONYMS

A2C2	US Army airspace command and control
AAMDC	Army Air and Missile Defense Command
ABCCC	airborne battlefield command and control center
ACA	airspace control authority
ACE	analysis and control element
ACP	airspace control plan
ACM	airspace control measures
AETACS	airborne element tactical air control system
AFATDS	advanced field artillery tactical data system
AFFOR	US Air Force forces
AI	air interdiction
AMD PCS TOC	air, missile defense planning coordination system tactical operations center
AO	area of operations
AOC	air operations center
AOR	area of responsibility
APAM	anti-personnel/anti-material
ARFOR	US Army forces
ARSPACE	US Army Space Command
ASAS	all source analysis system
ASOC	air support operations center
ATACMS	US Army tactical missile system
ATMDE	US Army theater missile defense element
ATO	air tasking order
AWACS	airborne warning and control system
BCD	battlefield coordination detachment
BDA	battle damage assessment
C2	command and control
C4I	command, control, computers, and intelligence
CA	combat assessment/counter air
CALCM	conventional air-launched cruise missile
CAP	combat air patrol/crisis action planning
CAS	close air support
CFL	coordinated fire line
CM	collection manager
CMP	collection management plan
COA	course of action
COC	combat operations center
COP	common operational picture
COTS	commercial off-the-shelf
CRC	control and reporting center
CTAPS	contingency theater automated planning system

DAS	deep air support
DASC	direct air support center
DOCC	deep operations coordination cell
DOD	Department of Defense
DST	decision support template
DTF	digital target folder
FB	forward boundary
FDC	fire direction center
FFA	free-fire area
FFCC	force fires coordination center
FHA	foreign humanitarian assistance
FLOT	forward line of own troops
FRAGorder	fragmentary order
FSCC	fire support coordination center
FSCL	fire support coordination line
FSCM	fire support coordination measures
GCCS	Global Command and Control System
GPS	global positioning system
HPT	high-payoff target
HPTL	high-payoff target list
HQ	headquarters
I3	integrated imagery and intelligence
IO	information operations
IP	Internet protocol
IPB	intelligence preparation of the battlespace
IR	intelligence requirement
ISR	intelligence, surveillance, and reconnaissance
J-2	joint force intelligence directorate
J-3	joint force operations directorate
J-5	joint force planning directorate
JAG	Judge Advocate General
JAOC	joint air operations center
JFACC	joint force air component commander
JFC	joint force commander
JFE	joint fires element
JFS	joint fire support
JFLCC	joint force land component commander
JFMCC	joint force maritime component commander
JFSOCC	joint force special operations component commander
JIC	joint intelligence center
JIPTL	joint integrated prioritized target list
JISE	joint intelligence support element
JOA	joint operations area

JOC	joint operations center
JP	joint publication
JPG	joint planning group
JSST	joint space support team
JSTARS	Joint Surveillance, Target Attack, Radar System
JTCB	joint targeting coordination board
JTF	joint task force
JTL	joint target list
LAT	latitude
LNO	liaison officer
LOAC	law of armed conflict
LOCE	linked operational intelligence centers Europe
LONG	longitude
MAAP	master air attack plan
MARFOR	US Marine Corps forces
MEA	munitions effectiveness assessment
MISREP	mission fired report
MLRS	multiple launch rocket system
MOOTW	military operations other than war
MRL	mobile rocket launcher
MRR	minimum risk route
MSI	multi-spectral imagery
MTW	major theater of war
NALE	naval amphibious liaison element
NAVFOR	US Navy forces
NAVSPACECOM	US Navy Space Command
NFA	no-fire area
NMJIC	National Military Joint Intelligence Center
NSFS	naval surface fire support
NSL	no-strike list
OPCON	operational control
OPORD	operation order
PIR	priority intelligence requirement
PRISM	planning tools for resource integration, synchronization, and management
RFA	restricted fire area
RFL	restricted fire line
RMS	requirements management system
ROA	restricted operations area
ROE	rules of engagement
RSTA	reconnaissance, surveillance, and target acquisition
RTL	restricted target list

SACC	supporting arms coordination center
SAM	surface-to-air missile
SARDOT	search and rescue DOT
SCN	secure conference network
SMA	system message alert
SOF	special operations forces
SOLE	special operations liaison element
SOMPF	special operations mission-planning folder
SPOC	space operations center
SROE	standing rules of engagement
SSC	small-scale contingency
STU	secure telephone unit
STW	strike warfare
TACC	tactical air command center (USMC)
	tactical air control center (USN)
TARBUL	target bulletin
TBM	theater ballistic missile
TBMCS	theater battle management core system
TCF	tactical combat force
TEL	transporter, erector, launcher
TCT	time-critical target
TISD	theater integrated situation display
TLAM	tomahawk land-attack missile
TOC	tactical operations center
TST	time-sensitive target
UAV	unmanned aerial vehicle
UB	Unified Build
UN	United Nations
USCENTCOM	United States Central Command
USEUCOM	United States European Command
USFORKOREA	United States Forces Korea
UTM	universal transverse mercator
WMD	weapons of mass destruction

PART II—TERMS AND DEFINITIONS

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

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

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

bullseye An established reference point from which the position of an object can be referenced. (JP 1-02)

close air support. Air action by fixed- and rotary-wing aircraft against hostile targets that are in close proximity to friendly forces and that require detailed integration of each air mission with the fire and movement of those forces. Also called **CAS**. See also air interdiction. (JP 1-02)

collateral damage. Unintentional or incidental injury or damage to persons or objects that would not be lawful military targets in the circumstances ruling at the time. Such damage is not unlawful so long as it is not excessive in light of the overall military advantage anticipated from the attack. (JP 1-02)

combat assessment. The determination of the overall effectiveness of force employment during military operations. Combat assessment is composed of three major components: (a) battle damage assessment; (b) munitions effectiveness assessment; and (c) reattack recommendation. Also called **CA**. (JP 1-02)

high-payoff target. A target whose loss to the enemy will significantly contribute to the success of the friendly course of action. High-payoff targets are those high-value targets that must be acquired and successfully attacked for the success of the friendly commander's mission. Also called **HPT**. See also high-value target; target. (JP 1-02)

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

immediate targets. Targets that have been identified too late, or not selected for action in time to be included in the normal targeting process, and therefore have not

been scheduled. Immediate targets have two subcategories: unplanned and unanticipated. (JP 1-02)

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

joint fires element. An optional staff element that provides recommendations to the J-3 to accomplish fires planning and synchronization. Also called **JFE.** (JP 1-02)

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

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

joint integrated prioritized target list. A prioritized list of targets and associated data approved by the joint force commander or designated representative and maintained by a joint force. Targets and priorities are derived from the recommendations of components in conjunction with their proposed operations supporting the joint force commander's objectives and guidance. Also called **JIPTL**. (JP 1-02)

joint target list. A consolidated list of selected targets considered to have military significance in the joint operations area. Also called **JTL**. (JP 1-02)

joint targeting coordination board. A group formed by the joint force commander to accomplish broad targeting oversight functions that may include but are not limited to coordinating targeting information, providing targeting guidance and priorities, and refining the joint integrated prioritized target list. The board is normally comprised of representatives from the joint force staff, all components, and, if required, component subordinate units. Also called **JTCB**. (JP 1-02)

joint targeting. The process of selecting targets within a commander's AO or a designated JOA and matching the appropriate component responses to them, considering operational requirements and capabilities. (*Commander's Handbook for Joint Time-Sensitive Targeting*)

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

joint time-critical target. Those targets, **specified by the CJTF** that require immediate engagement because they pose (or will soon pose) a significant threat to friendly forces. The CJTF determines those situations, if any, **where immediate engagement of the imminent joint TCT threat outweighs other operational considerations**. Component commanders, who first acquire specified joint TCTs, may be specifically delegated the authority by CJTF for immediate engagement responsibility regardless of assigned area of operations or mission. (*Commander's Handbook for Joint Time-Sensitive Targeting*)

joint time-sensitive target. Refers to a TST that requires cooperation and/or coordination by two or more Services or components to successfully engage. (*Commander's Handbook for Joint Time-Sensitive Targeting*)

kill box. A three-dimensional area reference that enables timely, effective coordination and control and facilitates rapid attacks. (JP 1-02)

measures of effectiveness. Tools used to measure results achieved in the overall mission and execution of assigned tasks. Measures of effectiveness are a prerequisite to the performance of combat assessment. Also called **MOEs**. (JP 1-02)

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

no-strike list. A list of geographic areas, complexes, or installations not planned for capture or destruction. Attacking these may violate the law of armed conflict or interfere with friendly relations with indigenous personnel or governments. Also called **NSL**. (JP 1-02)

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

on-call targets. Planned targets that are known to exist in an operational area and are located in sufficient time for deliberate planning to meet emerging situations specific to campaign objectives. (JP 1-02)

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

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

restricted target. A target that has specific restrictions imposed upon it. Actions that exceed specified restrictions are prohibited until coordinated and approved by the establishing headquarters. (JP 1-02)

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

scheduled targets. Planned targets upon which fires will be delivered at a specific time. (JP 1-02)

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

target of opportunity. A target visible to a surface or air sensor or observer, which is within range of available weapons and against which fire has not been scheduled or requested. (JP 1-02)

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

unanticipated immediate targets. Those immediate targets that are unknown or not expected to exist in an operational area. (JP 1-02)

unplanned immediate targets. Those immediate targets that are known to exist in an operational area but are not detected, located, or selected for action in sufficient time to be included in the normal targeting process. (JP 1-02)

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

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