

THE AIR LAND SEA BULLETIN



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FEATURE ARTICLES

The “New” JFIRE—
What’s so “new” about JFIRE?. 3

Kill Box Employment—
The use of kill boxes is not an isolated operation. 6

Weaponeering Anyone?—
Smartly plan your mission by finding the answers to your weaponeering questions. 8

Submarines as a Joint Suppression of Enemy Air Defenses (J-SEAD) Platform—
A mobile undersea platform can contribute to the joint-fires process . . . 9

IN HOUSE

Director’s Comments—
Themes of interest to warfighters and a look ahead 3



The new JFIRE incorporates JP 3-09.3 procedures, JAAT techniques, and an updated weapons section.

THE AIR LAND SEA BULLETIN (ALSB)

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**Cover Photo — Call in air support during combat operation Fallujah, Iraq, Nov. 13, 2004.
USAF photo by SFC Johancharles Van, USA.**

DIRECTOR'S COMMENTS — THEMES OF INTEREST TO WARFIGHTERS AND A LOOK AHEAD

Greetings from the Air Land Sea Application (ALSA) Center. Our last issue focused on time sensitive targeting and the common geographic reference system. We thank all those who contributed articles. These very relevant topics are being worked and discussed in various forums and will help define our battlefields of the future.

We are dedicating this issue to joint fires discussions, another area with great interest across the Services and joint communities. The transition of the Army to a modular force and efforts to maximize lethality while also maximizing efficiency in fires make these topics extremely pertinent to warfighters from all Services.

As a look ahead, we will focus the next issue, due out in the late spring, on convoys, movements, and protection issues. This is obviously an area of great interest across the Services and a great amount of effort is being focused on improving our operations. As always we welcome articles on this or other themes of interest to warfighters. They can be sent directly to the ALSA editor, alsaeditor@langley.af.mil.

ALSA's next issues will also cover the proud heritage of our organization as we mark our 30th anniversary. On June 13, 1975, the Air Land Forces Application agency was formed. We became the Air

Land Sea Application Center with addition of the Navy and Marine Corps in 1992. The inclusion of historical pieces will not be just a walk down memory lane, but rather will provide insight into why this unique organization was formed and the adaptability of the organization. This insight not only helps us as we focus on the extremely relevant and timely work we are currently undertaking, but also helps us shape our path to the future. Many of the issues that brought our organization into being following Vietnam are at work today. Issues at the time included a demand for greater efficiency in operations due to introduction of the all-volunteer force and concerns about recruiting, resource constraints, and tightening budgets. There continues to be a need for closer cooperation at the operational and tactical levels.

Thank you for taking the time to read the ALSA bulletin.



DAVID E. PETERSEN, Colonel, USAF
Director

THE "NEW" JFIRE

by
Maj "Slim" Pickens, USAF
ALSA Center

What's So "New" About JFIRE?

Commanders have a new lethal tool for the battlefield. The global war on terror has demonstrated the lethal synergy of inter-Service coordination. However, joint fires also ignite a great deal of controversy. Based on recent lessons, the Joint Action Steering Committee (JASC) directed an early revision of *Multi-Service Procedures*

for the Joint Application of Firepower (JFIRE) during their November 2003 meeting. The JASC directed three improvements to JFIRE: 1) incorporate the new close air support procedures published in Joint Publication (JP) 3-09.3, *Joint Tactics, Techniques, and Procedures for Close Air Support (CAS)*; 2) incorporate joint air attack team (JAAT) techniques; and 3) update weapons data to include satellite-guided munitions. In response, ALSA assembled subject matter experts (SMEs) from all four Services to develop

Being able to find weapons information at a glance is vital to the field user.

a solution.

The SMEs first condensed the joint CAS procedures from JP 3-09.3. Field users now have a pocket-sized overview of recent joint close air support improvements. Two new tables depict the attributes of types 1, 2, and 3 CAS. The new JFIRE also highlights the mandatory read-back items on all communications formats. Joint terminal attack controller (JTAC) responsibilities and urban CAS considerations are now included. The SMEs also added an overview of close air support procedures for non-JTAC qualified personnel. These new techniques fill a tactical void and offer guidance in the rare instance when a qualified JTAC is not available.

Field users will also appreciate the addition of JAAT techniques in JFIRE. Recent data from the Center for Army Lessons Learned (CALL) shows while planned JAATs are less frequent in Operation ENDURING FREEDOM (OEF) and Operation IRAQI FREEDOM (OIF); several on-the-spot JAATs were coordinated between AH-64s and A-10s. The JAAT section now includes planning, execution, and communication techniques in a format these users need. Battlefield handover techniques are also included for the first time. In support of JAAT and CAS, pictorial representations of the various attack and deconfliction methods are included in the appendices. These diagrams provide a quick, visual presentation for the JAAT players.

Being able to find weapons information at a glance is vital to the field user. The third change to JFIRE is a major rework of the weapons section. In addition to adding new guided-weapons data, this revision presents information in a more intuitive form. For instance, feedback from the field indicated that JTACs are more interested in the pod and munitions than in the aircraft. ALSA introduced a capabilities-based presentation in the aircraft capabilities table. The F-16 portion is now broken down by pod rather than block. Users can expect similar tables in the future. Finally, the most ambitious change to the weapons section is a major facelift of the entire risk estimate methodology.

Risk Estimate Distance (RED): What's in a Word?

Users demanded high-fidelity risk estimate data for their commanders. They now have a useful and accurate tool with JFIRE. Over time, the RED table had been diluted by the cumulative effect of erring on the most-conservative side. This error inadvertently created a maneuver sanctuary for the enemy. The JFIRE SMEs recaptured that sanctuary by reviewing the RED methodology. Previous versions added a "Jane's factor" to keep the tables unclassified or continually rounded the numbers up. The cumulative error drifted towards a "min-safe" mentality and watered down the intent of a risk estimate distance. As such, users sometimes misused the terms and confused risk estimate with min-safe and collateral damage. To counter this trend, the SMEs removed the "Jane's factor" and masked the inputs to keep the table unclassified (these assumptions are available on the ALSA SIPRNET site). The SMEs also removed most of the rounding errors. This means there is little safety-factor built in so users must understand the assumptions and conditions listed on the SIPRNET site.

To create more honest REDs, the SMEs completely reworked the data as well. They used a "worst-probable" methodology rather than "worst-possible" scenario. To do this, the Joint Munitions Effectiveness Manual Team accomplished several computer runs using the most-probable delivery platforms. The highest value of these runs became the risk estimate distance for that munition. The resultant table covers over 95% of the expected deliveries. The runs that did not make the cut are listed on the ALSA SIPRNET. These additional runs are also a useful comparison tool for the commander. In extreme situations, users can generate situation-specific REDs using the Windows Joint Munitions Effectiveness Manual (WinJMEM) function of Joint Munitions Effectiveness Manual (JMEM)/air-to-surface weaponeering system (JAWS).

JTACs and forward air controllers (airborne) (FAC(A)s) must fully understand their commander's intent before using the WinJMEM function. To avoid dangerous miscommunication, self-generated REDs should be

thoroughly coordinated with both the land and air component commanders. Like any decision tool, risk estimates are only valid for their intended purpose. Safety dictates that users understand the difference between “risk estimate” and other similar terms.

Risk Estimate Distance: A risk estimate distance is a statistical probability of incapacitation (PI) to friendly forces. It is based on how close friendly forces are to the target. It is a spectrum of probabilities that starts at one-in-a-thousand and ends with 10% friendly incapacitations. The JFIRE RED table serves as the baseline for all CAS players. In CAS, risk estimate distances serve two functions. The first is to force the commander to accept the increased risk by passing initials. The second function is to define the actual spectrum of injury the commander can expect. JFIRE SMEs concentrated on this second function in order to provide the commander a useful, heat-of-the-battle tool.

Collateral Damage Estimation: CDE considers non-friendly personnel, equipment, and structures, whereas risk estimate distances account only for injury to friendly forces. JP 1-02, *Department of Defense Dictionary of Military and Associated Terms*, defines collateral damage as the “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.” Since “not excessive” is a highly subjective term, CDE calculations are complex and must be run for each scenario based on the commander’s intent. While some CDE values may be coincident with risk estimate distances, they *must not* be used as a direct substitute.

Danger Close: Many think of danger close and risk estimate as synonymous. However, danger close in this regard is simply one value on the spectrum of risk estimate distances. JP 1-02 defines danger close as the point when “friendly forces are within close proximity of the target. The close proximity distance is determined by the weapon and munition fired.” With artillery, this distance is a constant 600 meters. At 600 meters, the artillery is walked to

the target rather than bracketed. It is important to note—though forces use 600 meters as the common danger close for artillery, each warhead has a specific risk estimate associated with it. The new JFIRE lists both danger close and risk estimate numbers for artillery. During a CAS scenario, JP 3-09.3 defines danger close as the 0.1% PI risk estimate distance. “The ground commander must accept responsibility for the risk to friendly forces when targets are inside the 0.1% PI distance. When ground commanders pass their initials to JTACs, they accept the risk.”

Minimum-Safe: Minimum-safe is the most conservative number on the risk estimate spectrum. It is useful for determining peacetime range and training procedures. Usually defined as a one-in-a-million chance of injury, minimum-safe provides peacetime assurance of a near-zero chance of injury. As such, these numbers are very large and have little tactical use. Currently, there is no single joint standard for calculating minimum-safe distances. When the Services agree on a joint standard, ALSA will add minimum safe numbers to the SIPRNET RED table.

In a Nutshell

ALSA responded to the warfighter with an early revision of JFIRE. The new JFIRE incorporates changes the field user wanted. It echoes new joint CAS guidance, adds JAAT coordination techniques, and presents weapons data in a realistic and effective manner. The risk estimate distance table received a much-needed facelift. The printed table now covers the vast majority of situations. The augmenting SIPRNET table offers additional runs for comparison. It also lists the conditions and assumptions used to generate the printed table. For the risk estimate table to be effective, the user must understand these conditions and assumptions. Further, users must understand their commander’s intent in order to use the JFIRE data effectively. Misusing similar terms can create a dangerous situation. Even so, the changes in this revision set the groundwork for future revisions, making future JFIREs even more responsive and user-friendly. As such, the new JFIRE should prove a valuable tool, meeting the immediate needs of the warfighter.

To avoid dangerous miscommunication, self-generated REDs should be thoroughly coordinated with both the land and air component commanders.

KILL BOX EMPLOYMENT



Two F-16 Fighting Falcons fly over the Tigris River – USAF
photo by MSgt Lance Cheung

by
LTC Lou Schurott, USA
Lt Col Rob McCreadie, USAF
ALSA Center

Background

The conduct of Operation ENDURING FREEDOM (OEF) and Operation IRAQI FREEDOM (OIF) has generated considerable discussion concerning the lessons of those conflicts. One of these discussion areas involves joint fires and how to maximize the effects of joint fires. One methodology to this end is kill box tactics, techniques, and procedures (TTP). Research indicates that among the Services and joint community as a whole, there is not a common understanding of a kill box. The use of kill boxes is not an isolated operation but closely related to fire support coordinating measures (FSCM), airspace coordinating measures (ACM), and the common geographic reference system (CGRS).

A kill box is defined in Joint Publication (JP) 1-02 as: "A three-dimensional area reference that enables timely, effective coordination and control and facilitates rapid attacks." Although a definition exists, there is no formal kill box doctrine or TTP.

An Army White Paper entitled "Kill Box Concept" determined that the

Services and joint community needed to codify the use of kill box TTP into Service, joint, and multinational doctrine, including joint tactics, techniques, and procedures (JTTP). It was noted that, as joint operations evolve from deconfliction of components, to integration, to interdependence based on component capabilities, the "tools" of joint doctrine must evolve and new tools must be added. The Chief of Staff of the Army (CSA) said: "We cannot operate the Army the way we used to....[we] must move toward joint interdependence, which means we will give up some capability to gain some other capabilities." Interdependence is more than just interoperability, it is assurance that components work together and integrate to improve collective efficiency and tempo. Joint interdependence combines component capabilities to maximize their complementary effects, rather than merely to reinforce effects. It relies on the strengths of the others to multiply its own capabilities and offset inherent limitations. It is critical to joint force effectiveness and is achieved through the mutual reliance of each component on the capabilities of other components to optimize overall effectiveness. Doctrine must, where possible, codify those processes and measures that work toward achieving joint interdependence.

On 22 March 2004, the Air Land Sea Application (ALSA) Center started phase I, Program Research, for a kill box MTTP per a request from Lieutenant General Wallace, Commanding General, Combined Arms Center. This project was endorsed early by two members of the Joint Action Steering Committee (JASC), Major General MacGhee, Commander Air Force Doctrine Center and Major General Mixon, Deputy Director/Chief of Staff, Futures Center, Army Training and Doctrine Command as a spin off to the highly successful ALSA *MTTP for Targeting Time Sensitive Targets (TST)*.

To develop this MTTP, ALSA hosted two joint working groups (JWGs) at

"All movement on the battlefield have but one end in view; the development of fire in greater volume and more effectively than that of the opposing force."

T. Miller Maguire
The Development of Tactics, 1904

Langley Air Force Base in the summer of 2004, where subject matter experts (SME) from all four Services worked to develop the kill box employment MTTP. The participants from each Service represented expertise and experiences from the doctrine communities, each Services' training commands (both air and ground), and recently returning warfighters with first hand experience in planning and executing kill box procedures. Due to the remarkable efforts of these groups, this MTTP is currently under world wide review, being staffed with the Services and the combatant commands as a Final Coordination Draft (FCD).

Kill Box Employment* Overview

In the context of this MTTP a kill box is defined as a three-dimensional fire support coordinating measure (FSCM) used to facilitate the expeditious air-to-surface lethal attack of targets, which may be augmented by or integrated with surface-to-surface fires.

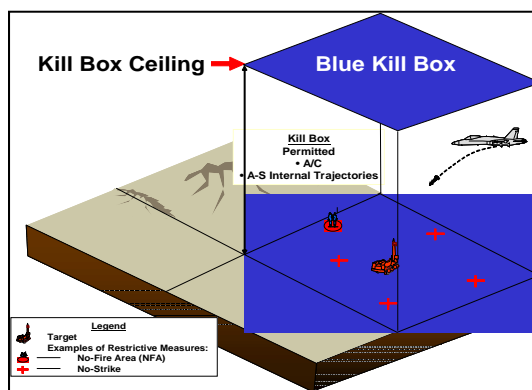
Its primary purpose when established is to allow air assets to conduct interdiction against surface targets without further coordination with the establishing commander and without terminal attack control. A kill box will not be established specifically for close air support (CAS) missions. However, this does not restrict CAS missions inside of established kill boxes if all CAS requirements are met. When developed and if used to integrate air-to-surface and surface-to-surface fires, the kill box will have appropriate restrictions.

A kill box is established and adjusted by the appropriate supported commander and is an extension of an existing support relationship established by the joint force commander (JFC). Kill box boundaries normally are defined using an area reference system (e.g., common geographic reference system [CGRS]), but could follow well defined terrain features or may be located by grid coordinates or by a radius from a center point.

There are two types of kill boxes—blue and purple.

(1) A blue kill box permits air-to-surface fires effects in the kill box without further coordination or deconfliction. When the kill box is active, air-to-surface munitions (and their

trajectories) to be delivered by aircraft not assigned to the blue kill box need to be coordinated. All aircraft not assigned to an active blue kill box are restricted from flying through it unless coordinated with the kill box coordinator (KBC). The airspace within a blue kill box extends from the surface up to the limit established by the airspace coordination area (ACA). A blue kill box minimizes the restrictions on air-to-surface fires, while also protecting aircraft. Effects and trajectories of surface-to-surface fires are not allowed to pass through the blue kill box. Land and naval force commanders must coordinate with the air component to deliver surface-to-surface fires into or through an established blue kill box.



Sample Blue Kill Box

(2) A purple kill box permits the integration of surface-to-surface fires with air-to-surface fires into the purple kill box without further coordination. The primary purpose of a purple kill box is to reduce the coordination requirements for air-to-surface fires, while still allowing ground commanders to employ surface-to-surface fires. The purple kill box allows the maximum use of joint fires in the kill box creating a synergistic effect and maximum potential for engaging targets.

**This MTTP is still in DRAFT form and changes may have been made to the concepts expressed in this article due to Service or combatant command comments following the World Wide review of the Final Coordination Draft dated 22 October 2004.*

WEAPONNEERING ANYONE?

by
LtCol D.B. "Buck" Larkin, USAF
Joint Targeting School

Crisis action planning hits the CAOC full force. The general wants a range of response options for striking a specific target set. The targets include a runway, a SAM site and EW radar, a bridge, tanks, buildings, and both above-ground and deep-underground hardened bunkers. Weapon choices are limited, the number of delivery platforms is very limited, and collateral damage is a concern for several of these targets. How do we optimize the aircraft and number of weapons to achieve the best effect against these targets? Who can compute weaponneering solutions for all these target types?

Some smart aviators would tell you that they can come up with the right answer just off the top of their nugget. Sure. It's easy, right? Just take the number of DMPIs, assign one JDAM or LGB to each, and then figure out how many aircraft you need to carry those weapons to the target. Done - right? Not quite. What happens when:

- You run out of smart weapons and have to use dumb bombs?
- The target is a big building - how many weapons do I need to put against it?
- The general asks, "Is one LGB really enough against that target?"
- What weapon will penetrate into the underground bunker? How can I find out?
- What run-in heading will minimize collateral damage concerns?

All of these concerns are usually taken care of by operations and intelligence personnel at the AOC level or the Navy/USMC equivalent afloat. So if you might ever end up working on one of these, read on. If you are at the squadron level, you might want to read on as well to be able to smartly plan your mission if this information is not given to you.

The answers to all these weaponneering questions can be found by using the software programs developed by the Joint Technical Coordinating Group for Munitions Effectiveness (JTTCG/ME), Joint Warfare Analysis Center (JWAC), and Defense Threat

Reduction Agency (DTRA). Anyone who has ever used the orange JMEM books in the past will find these programs much easier to use, but still complicated. In some cases they allow us to get answers to problems we had no tools for in the past. These software programs will allow you to analyze the outcome of attacking a target with different munitions, optimize the right number and type of weapon, and assess collateral effects that might result. The software programs are:

JMEM Air-to-surface Weaponneering Software (**JAWS**). The JTTCG/ME suite of programs allow the user to weaponneer various targets with air-to-surface munitions from all Services. It provides predictive results in the form of a probability of meeting specified damage criteria.

JMEM/SS Weapons Effects Software (**JWES**). Also produced by JTTCG/ME, this software program allows the user to weaponneer both direct and indirect surface-to-surface fires against a range of targets.

FAST-CD (or "Bugsplat"). A JWAC program that allows detailed assessment of possible collateral damage effects of an attack and how these effects can be reduced or minimized.

Munitions Effects Assessment (**MEA**). High fidelity DTRA product that allows the user to predict the outcome of penetration attacks against bunkers and tunnels.

The results of all these programs are classified, so I can't go into more detail on them here in this article. If this sounds like information you need, here's one way to get the training. The Joint Targeting School (JTS) is a Joint Forces Command school dedicated to teaching targeting principles to all Services. One of the courses taught is the 2-week "Applications Course," teaches all the software programs mentioned above. The course won't make you a weaponneering expert, but it will get you smart on the tools of the trade. The next class start dates are February 14th and February 22nd in Virginia Beach. More information, including the full year's

See **WEAPONNEERING** Page 11

SUBMARINES AS A JOINT SUPPRESSION OF ENEMY AIR DEFENSES (J-SEAD) PLATFORM



USS *Lake Champlain* and USS *Greenville* are both patrolling the Arabian Sea
USN photo by PH1(AW/SW) Greg Messier

by
LTC Michael Bray, USA
ALSA Center

*Adapted from the article
"Transforming the Submarine Force"
by Capt Floyd D. Kennedy Jr., USNR,
Retired, published in Air & Space
Power Journal, Fall 2002, Vol XVI,
No. 3.*

Submarines in Joint Fires Concept

"The submarine force embraced concept development and experimentation (CD&E) in 1999 as a means of integrating itself into the joint force. The first operational concept was entitled *Submarines in Joint Fires* and

explored the means by which the inherent characteristics of a mobile undersea platform could contribute to the component elements of the joint-fires process: target acquisition, command and control, and attack resources."

Undersea Platform Characteristics

"Before there was stealth in the air, there was stealth in the sea. In the year 2000, the US submarine force celebrated a centennial of silent service. Early submarines were submersible torpedo boats, using the sea as a cloaking device to enable an undetected approach to the enemy. Not until the advent of nuclear power in the mid-1950s did submarines become true undersea platforms with the ability to

remain submerged indefinitely and navigate with impunity.”

“Nuclear-powered submarines are multi-mission platforms that when properly equipped can make significant contributions in a number of joint roles. They have the inherent advantages of stealth, agility, and endurance. As stealthy platforms, they have dramatically reduced signatures in all detection regimes and are simply not vulnerable to the types of weapons (ballistic and cruise missiles, including those armed with weapons of mass destruction) that dominate a joint force commander’s force-protection concerns. Their agility enables them to execute different taskings in a multi-mission environment, and their endurance on-station is measured in months”—without need of a logistics tail, the need for escorts or other mutually supportive assets. “These characteristics have made submarines extremely effective in a variety of missions, from antisurface and antisubmarine warfare to persistent intelligence, surveillance, and reconnaissance (ISR). Since World War II, these missions have been conducted primarily as independent operations. Nevertheless, tomorrow’s relevance in the battle space will be predicated on the ability to integrate into the joint force.”

Submarines are already performing several tasks that could contribute to the target-acquisition process, e.g., serving as launch platforms for special operations forces (SOF) and firing Tomahawk Land-Attack Missiles (TLAMs) as directed by the air tasking order (ATO). Thus, integrating submarines into joint fires would seem to be a natural progression. The question the Navy faces, and the submarine community in particular, is how best to apply the characteristics of stealth, agility, and endurance to support joint fires. “This includes potential roles in developing and maintaining intelligence preparation of the battlefield (IPB) situational awareness, transitioning from deterrence to hostilities, participating in the daily ATO process, and providing fires on call. A possible answer to that question was a draft operational concept that has driven much of the force’s experimentation effort over the past two years.”

Concept of Operations (CONOPS)

As an attack resource, today’s submarines carry torpedoes and TLAMs. Tomorrow’s submarines will add to that inventory the Tactical Tomahawk (TACTOM) cruise missile, which will have considerably greater operational flexibility, including a launch-to-loiter capability, and in-flight retargeting. This concept, together with other submarine-force research and development ideas, envisions future submarines with tactical ballistic missiles and unmanned aerial vehicles that can perform a variety of ISR and attack tasks employing a wide range of payloads. Among the nonlethal payloads envisioned are decoys and jammers to stimulate and suppress enemy air defenses. Potential lethal payloads include penetrating warheads and a variety of munitions that can individually target both soft and armored targets.

Submarines could penetrate deep within the seaward defensive perimeter of hostile littoral nations, permitting them to launch from within the enemy’s integrated air defense system (IADS) and coastal-defense threat rings. This could dramatically increase the threat axes an enemy would have to consider; it would greatly reduce warning time and generate surprise. Undersea-based attack could be used to support a rollback of the enemy’s IADS and coastal defenses and/or strike directly at operational or strategic centers of gravity.

“Submarines constitute both a complementary and supplementary attack platform to existing and planned platforms of the Navy and other Services. They are complementary in the sense that their platform characteristics of stealth and long loiter time (measured in months) in potentially high-threat areas are not duplicated by other types of platforms, thus adding a new dimension to platform options available to the joint force commander. They are supplementary in that they can carry the same types of weapons and ordnance as other types of platforms. Against a technologically unsophisticated enemy far removed

Air-to-surface and surface-to-surface fires can be deconflicted by altitude, lateral, or time separation. The establishing headquarters will coordinate with the air component to define the appropriate deconfliction technique for operations within the purple kill box. All aircraft not assigned to an active purple kill box are restricted from flying through it unless coordinated. Also, air-to-surface munitions (and their trajectories) to be delivered by aircraft not assigned to the kill box will not enter the purple kill box unless coordinated. Ground units are required to obtain clearance from the air component for any surface-to-surface fires whose trajectories will violate the altitude, lateral, or time restrictions.

the commander's objectives and desired effects. As such all target engagements within them should adhere to the supported commander's established priorities, desired effects, and timing of fires. Of key note is the use of kill boxes is not mandatory.

It is important to understand that a kill box is an FSCM and is not a reference system. Kill box boundaries are normally defined by using an area reference system which provides the construct (a two-dimensional system) and a kill box (a three-dimensional system) in its application. Applicable rules of engagement (ROE), collateral damage (CD) guidance and restrictions, positive identification (PID), and special instructions (SPINS) must still be followed in a kill box.

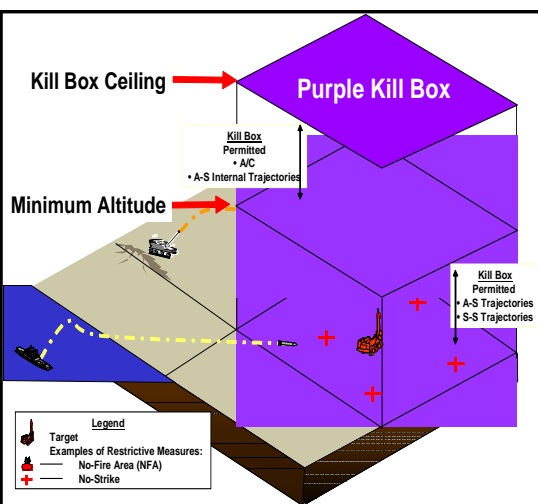
The decision to use a kill box requires careful consideration by the JFC or the supported commander. If used, its size, location, and timing are based on estimates of the situation and concept of operations. Disposition of enemy forces, friendly forces, anticipated rates of movement, concept and tempo of the operation, surface-to-surface weapon capabilities, and other factors must be considered by the commander.

We, at ALSA, would like to thank all the personnel who worked on this project. From the Combined Arms Center (CAC) who requested this project; all those who attended the working groups and provided valuable inputs to the SME drafts; and finally to those who provided inputs during the world wide review process. Without there effort, time, and commitment ALSA would never have been able to keep this publication on its published timeline.

The ALSA Center's *MTTP for Kill Box Employment* will be an unclassified document (limited distribution). Once approved by the Services, it will be available at <http://www.alsa.mil>.

"The effective and flexible employment of killing fires in the deep battle space by joint air-ground forces is the key to future victory in high-intensity combat."

GEN Barry R. McCaffrey
USA, Retired



is normally
relationship
to or more
elements. The

goal is to reduce the coordination required to fulfill support requirements with maximum flexibility, while preventing fratricide. Kill boxes support

schedule and how to sign up for the course is available on our SIPRNET site at <http://jts.damneck.navy.smil.mil>.

The class is open to all US military, DOD, and government civilians with a Secret clearance.

from the coast,” such as the current conflict in Afghanistan, “submarine-launched weapons merely supplement those of other platforms. Against a peer competitor or near-peer competitor, submarine-launched weapons complement those of other platforms by adding unexpected launch positions well within a perimeter that other platforms could penetrate only at much greater risk.”

The location of the previously undetected submarine is only potentially provided to the enemy by a missile-launch event. “However, the information is very fleeting, especially if the submarine uses a “shoot and scoot” tactic. Enemy antisubmarine forces would need to be poised and ready to attack in the immediate area of the submarine to have any chance at success, a potential risk the submarine’s preceding and succeeding stealth would minimize. In fact, studies have concluded that even with an enemy submarine positioned within two nautical miles of a submerged TLAM launch event, no enemy firing solution on the launching submarine could be achieved. Navy submarines engaged in these attack missions would necessarily be maintaining situational awareness by sharing a common, relevant, operational picture with other forces in the joint task force—thus being provided warning of proximate enemy antisubmarine warfare (ASW) forces.”

As crises develop, at least one, potentially two, submarines can be on scene early and be able to operate well within a potential enemy’s defensive perimeter. They would integrate with other forward-deployed forces and work in concert with other undersea platforms.

Feasibly, submarines could also contribute to the IPB process—feeding information for target generation to the operations staff. Off-board sensors that could be launched include SOF, recoverable unmanned undersea vehicles (UUV), and expendable unmanned aerial vehicles (UAV). These sensors would complement onboard and off-board sensors to help fill collection gaps in the integrated space/

airborne/surface/undersea sensor grid.

“When the potential enemy drives the transition from prehostilities to open hostilities, friendly surface and air forces operating under prehostilities rules of engagement are at high risk. A properly concealed submarine maintains its stealth and can avoid that risk. Submarines can remain close-in to the enemy coast and either preempt hostile action, launch on unambiguous warning of an impending strike, and target enemy strike platforms before they launch—or constitute the leading edge of a retaliatory strike and open the door for follow-on forces by creating holes in the enemy’s IADS. Of the three options, a preemptive launch from an undetected submarine (standing just offshore) can be devastating—as was demonstrated during the Navy’s Title 10 Global 01 war game. By employing miniature air-launched decoys and jammers launched as submunitions on either TLAMs or tactical ballistic missiles, submarines can stimulate and jam enemy sensors; moreover, by using lethal missiles, they can kill the IADS sensors and weapons themselves. With large onboard inventories of such weapons, cruise-missile platforms can perform this function over and over again—and did, as was executed during joint suppression of enemy air defenses (J-SEAD) CONOPS in the Air Force Future Capabilities Game.

The Way Ahead

Fiscal constraints will necessitate the need to reprioritize payloads and other developmental strategies. “To that end, the Navy plans to continue to play in Service- and joint-experimentation venues. These venues will help refine submarines’ role in the joint-fires concept, prioritize research and development, adapt existing and future weapons to undersea platforms, and ultimately—transform the submarine force.”

ALSA PROJECTS UPDATE
CURRENT ALSA PUBLICATIONS

TITLE	DATE	PUB #	DESCRIPTION
ADUS: <i>MITP for AIR DEFENSE of the United States</i> Classified SECRET/RELCAN	22 MAR 04	A: FM 3-01.1 N: NTTP 3-26.1.1 AF: AFTTP(I) 3-2.50	This MITP supports planners, warfighters, and interagency personnel participating in air defense of the US by providing planning, coordination, and execution information. Pub is primarily focused at the tactical level. Includes Operation NOBLE EAGLE and Clear Skies Exercise lessons learned. Assess: 1 Sep 05 (18mo); 1 Mar 07 (3yr) POC: Team E alsae@langley.af.mil
AMCI: <i>Army and Marine Corps Integration in Joint Operations</i>	21 NOV 01 (Transitioned to the Army in NOV 04)	A: FM 3-31.1 (FM90-31) M: MCWP 3-36	Describes the capabilities and limitations of selected Army and Marine Corps organizations and provides TTP for the integrated employment of these units in joint operations. The example used is C2 of a notional Army Brigade by a MEF or C2 of a MEB by an Army Corps. Current Status: Scheduled for revision in November 2004 (3yr). (New POC is CAC/CADD, Ft. Leavenworth) ALSA transition POC: Team F alsaf@langley.af.mil
AVIATION URBAN OPERATIONS: <i>Multiservice Tactics, Techniques, and Procedures For Aviation Urban Operations</i>	15 APR 01	A: FM 3-06.1 (FM 1-130) M: MCRP 3-35.3A N: NTTP 3-01.04 AF: AFTTP(I) 3-2.29	MITP for the tactical-level planning and execution of fixed- and rotary-wing aviation urban operations. Current Status: Revision JWG held 2-5 Nov 04. Expect FCD out for worldwide review 10 Dec 04. POC: Team E alsae@langley.af.mil
BREVITY: <i>Multi-Service Brevity Codes</i> Distribution Restricted	05 JUN 03 Under Revision	A: FM 3-54.10 (FM 3-97.18) M: MCRP 3-25B N: NTTP 6-02.1 AF: AFTTP(I) 3-2.5	A dictionary of multi-Service use brevity codes to augment JP 1-02, <i>DOD Dictionary of Military and Associated Terms</i> . This pub standardizes air-to-air, air-to-surface, surface-to-air, and surface-to-surface brevity code words in multi-Service operations. Current Status: Active: JWG scheduled 4-6 Jan 05, Nellis AFB POC: Team F alsaf@langley.af.mil
COMCAM: <i>Multi-Service Tactics, Techniques, and Procedures for Joint Combat Camera Operations</i>	15 MAR 03	A: FM 3-55.12 M: MCRP 3-33.7A N: NTTP 3-13.12 AF: AFTTP(I) 3-2.41	This publication fills the void that exists regarding combat camera doctrine, and assists JTF commanders in structuring and employing combat camera assets as an effective operational planning tool. Assess: 1 Sep 04 (18mo); 1 Mar 06 (3yr) POC: Team C alsac@langley.af.mil
EOD: <i>Multi-Service Procedures for Explosive Ordnance Disposal in a Joint Environment</i>	15 FEB 01 Under Revision	A: FM 4-30.16 M: MCRP 3-17.2C N: NTTP 3-02.5	Provides guidance and procedures for the employment of a joint explosive ordnance disposal (EOD) force. The manual assists commanders and planners in understanding the EOD capabilities of

ALSA PROJECTS UPDATE
CURRENT ALSA PUBLICATIONS

TITLE	DATE	PUB #	DESCRIPTION
JTMTD: <i>Multiservice Procedures for Joint Theater Missile Target Development</i> Distribution Restricted	11 Nov 03	A: FM 3-01.51 (FM 90-43) N: NTTP 3-01.13 AF: AFTTP(I) 3-2.24	The JTMTD publication documents TTPs for threat missile target development in early entry and mature theater operations. It provides a common understanding of the threat missile target set and information on the component elements involved in target development and attack operations. Assess: 1 May 05 (18mo); 1 Nov 06 (3yr) POC: Team D alsad@langley.af.mil
NLW: <i>Tactical Employment of Nonlethal Weapons</i>	15 JAN 03	A: FM 3-22.40 (FM 90-40) M: MCWP 3-15.8 N: NTTP 3-07.3.2 AF: AFTTP(I) 3-2.45 USCG Pub 3-07.31	This publication supplements established doctrine and TTP and provides a source of reference material to assist commanders and staffs in planning/coordinating tactical operations. It incorporates the latest lessons learned from real world and training operations, and examples of TTP from various sources. Assess: 15 Jul 04 (18mo); 15 Jan 06 (3yr) POC: Team B alsab@langley.af.mil
PEACE OPS: <i>MITP for Conducting Peace Operations</i>	26 OCT 03	A: FM 3-07.31 M: MCWP 3-33.8 AF: AFTTP(I) 3-2.40	This publication provides tactical level guidance to the warfighter for conducting peace operations. Assess: 1 Apr 05 (18mo); 1 Oct 06 (3yr) POC: Team E alsae@langley.af.mil
REPROGRAMMING: <i>Multi-Service Tactics, Techniques, and Procedures for the Reprogramming of Electronic Warfare and Target Sensing Systems</i> Distribution Restricted	06 JAN 03	A: FM 3-51.1 (FM 34-72) M: MCRP 3-40.5B N: NTTP 3-13.1.15 AF: AFTTP(I) 3-2.7	This publication supports the JTF staff in the planning, coordinating, and executing of reprogramming of electronic warfare and target sensing systems as part of joint force command and control warfare operations. Assess: 15 Jul 04 (18mo); 06 Jan 06 (3yr) POC: Team G alsag@langley.af.mil
RISK MANAGEMENT	15 FEB 01	A: FM 3-100.12 (FM 5-19.1) M: MCRP 5-12.1C N: NTTP 5-03.5 AF: AFTTP(I) 3-2.34	Provides a consolidated multi-Service reference, addressing risk management background, principles, and application procedures. To facilitate multi-Service interoperability, it identifies and explains the risk management process and its differences and similarities as it is applied by each Service. Assessment complete, recommended to retain, will be reassessed Oct 05 (18 mo); 15 Feb 07 POC: Team G alsag@langley.af.mil
SURVIVAL, EVASION, AND RECOVERY: <i>Multi Service Procedures for Survival, Evasion, and Recovery</i> Distribution Restricted	19 MAR 03	A: FM 3-50.3 (FM 21-76-1) M: MCRP 3-02H N: NTTP 3-50.3 AF: AFTTP(I) 3-2.26	This publication provides a weather-proof, pocket-sized, quick reference guide of basic survival information to assist Service members in a survival situation regardless of geographic location. Assess: 15 Jul 04 (18mo); 1 Mar 06 (3yr) POC: Team B alsab@langley.af.mil
TADIL-J: <i>Introduction to Tactical Digital Information Link J and Quick Reference Guide</i>	30 JUN 00 (Incorporating with FORSCOM JTAO Handbook)	A: FM 6-24.8 (FM 6-02.241) M: MCRP 3-25C N: NTTP 6-02.5 AF: AFTTP(I) 3-2.27	Provides a guide for warfighters with limited or no experience or background in TADIL J and needing a quick orientation for supplemental or in-depth information. TADIL J is also known in NATO as Link 16. Current Status: The information in this publication will be incorporated into the FORSCOM Joint Tactical Air Operations Procedural Handbook. POC: Team C alsac@langley.af.mil
TAGS: <i>Multi-Service Tactics, Techniques, and Procedures for the Theater Air Ground System</i>	8 DEC 03	A: FM 3-52.2 (FM 100-103-2) M: MCRP 3-25F N: NTTP 3-56.2 AF: AFTTP(I) 3-2.17	This publication promotes inter-Service awareness regarding the role of airpower in support of the JFC's campaign plan, increases understanding of the air-ground system, and provides planning considerations for the conduct of air-ground operations. Assess: 1 Jun 05 (18mo); 1 Dec 06 (3yr) POC: Team D alsad@langley.af.mil
TACTICAL RADIOS: <i>Multi-Service Communications Procedures for Tactical Radios in a Joint Environment</i>	14 JUN 02	A: FM 6-02.72 (FM 11-1) M: MCRP 3-40.3A N: NTTP 6-02.2 AF: AFTTP(I) 3-2.18	Standardizes joint operational procedures for Single-Channel Ground and Airborne Radio Systems (SINCGARS) and provides and overview of the multi-Service applications of Enhanced Position Location Reporting System (EPLARS). Assess: 1 Jun 05 (3yr) POC: Team C alsac@langley.af.mil
TMD IPB: <i>Multi-Service Tactics, Techniques, and Procedures for Theater Missile Defense Intelligence Preparation of the Battlespace</i>	04 MAR 02 (Transitions to the Army in Fall 04)	A: FM 3-01.16 M: MCRP 2-12.1A N: NTTP 2.01.2 AF: AFTTP(I) 3-2.36	This publication provides a systematic and common methodology for analyzing the theater adversary missile force in its operating environment. Current Status: Scheduled for revision in March 2005 (3yr). (New POC is CAC/CADD, Ft. Leavenworth) POC: Team B alsab@langley.af.mil

ALSA PROJECTS UPDATE

CURRENT ALSA PUBLICATIONS

TITLE	DATE	PUB #	DESCRIPTION
TST: MTTP for Targeting Time-Sensitive Targets Distribution Restricted	20 APR 04	A: FM 3-60.1 M: 3-16D N: NTTP 3-60.1 AF: AFTTP(I) 3-2.3	This publication provides the JFC, the JFC's operational staff, and components unclassified MTTP to coordinate, de-conflict, synchronize, and prosecute TSTs within any AOR. Includes OIF and OEF lessons learned, multinational and other government agency considerations. Appendix D (COMUSCENTAF Counter-SCUD CONOPS and Playbook – Secret Rel GBR/AUS), Appendix F (TST collaboration tools) and Appendix G (CGRS) available via electronic means only. Assess: Oct 05 (18mo); Apr 07 (3yr) POC Team F alsaf@langley.af.mil
UHF TACSAT/ DAMA OPERATIONS: Multi Service Tactics, Techniques, and Procedures package for UHF TACSAT Frequency Management	JUN 04	A: FM 6-02.90 M: MCRP 3-40.3G N: NTTP 6-02.9 AF: AFTTP(I) 3-2.53	Recent operations at JTF level have demonstrated difficulties in managing limited number of UHF TACSAT frequencies. TTP documented in this publication will improve efficiency at the planner and user levels. Current Status: Awaiting Print POC Team C alsac@langley.af.mil
UXO: Multi-Service Procedures for Unexploded Ordnance Operations (UXO)	23 AUG 01	A: FM 3-100.38 M: MCRP 3-17.2B N: NTTP 3-02.4.1 AF: AFTTP(I) 3-2.12	This publication describes hazards of unexploded explosive ordnance (UXO) sub-munitions to land operations, addresses UXO planning considerations, and describes the architecture for reporting and tracking UXO during combat and post conflict. Current Status: Active: JWG scheduled 1-4 Feb 05, Langley AFB POC: Team B alsab@langley.af.mil

NEW ALSA PROJECTS

TITLE	EST PUB DATE	PUB #	DESCRIPTION AND STATUS
DETAINEE OPERATIONS: MTTP for Detainee Operations in a Joint Environment Distribution Restricted	NOV 04	A: FM 3-19.401 M: MCRP 4-11.8D N: NTTP 3-07.8 AF: AFTTP(I) 3-2.51	MTTP regarding detainee operations (unprivileged belligerents) to include transporting, transferring and holding of the high-risk detainees. Current Status: On hold awaiting DoD Legal Counsel review. POC Team B alsab@langley.af.mil
INTERPRETER OPERATIONS	APR 04	Center for Army Lessons Learned Handbook 04-7	Team B will monitor this project for 18 months following the release of the handbook and then decide whether to develop as an MTTP or remove it as a monitored project. Current Status: Complete. Available electronically and will be printed as a Center for Army Lessons Learned (CALL) Handbook. POC Team B alsab@langley.af.mil
KILL BOX: MTTP for Kill Box Operations	APR 05	N: NTTP 3-09.2.1	This MTTP assists the Services and joint force commanders in developing, establishing, and executing Kill Box procedures to allow rapid target engagement. This MTTP describes timely, effective multi-Service solutions to FSCMs, ACMs, and maneuver control measures with respect to Kill Box operations. Current Status: Program Development, final coordination draft currently under world wide review. POC Team B alsab@langley.af.mil
TACTICAL CONVOY OPERATIONS: MTTP for Tactical Convoy Operations	JAN 05	N: NTTP 4-01.3 AF: AFTTP(I) 3-2.58	This MTTP consolidates the Services' best tactics, techniques, and procedures used in convoy operations into a single multi-service TTP with the objective of reducing casualty rates and increasing the probability of mission success during convoy operations. This MTTP focuses on combat support and combat service support forces and provides a quick reference guide for convoy commanders and subordinates on how to plan, train, and conduct tactical convoy operations in the contemporary operating environment. Current Status: FAST TRACK, Awaiting Print POC Team E alsae@langley.af.mil

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