Joint Fires Coordination:

Service Competencies and Boundary Challenges

55th Signal Company (Russell J. Good)

By ROBERT J. D'AMICO

The boundaries between close and deep battlespace will vary among combatant commands in typical theaters of operations. The point at which deep and close battlespace meet rates attention from planners because it challenges joint force commanders (JFCs) who must conduct tactical and operational fires and maneuvers as well as joint fire support. One cause for this consideration is the umbrella under which joint fires are placed, where cross-boundary coordination is critical for synchronized actions that create economy of force, unity of effort, and integrated joint operations. Joint doctrine does not sufficiently address intra-theater, cross-boundary joint fires coordination. The answer lies in modifying doctrine. This proposal can be examined in joint publications, joint universal lessons learned (JULL) archives, combined forces command, and combatant command boundary relationships and sources. The problem transcends service interests. More importantly, lives depend on adequate joint fires coordination. A review of the differences between terms of art and service perspectives on battlespace reveals the implications of this issue for commanders and suggests some solutions.

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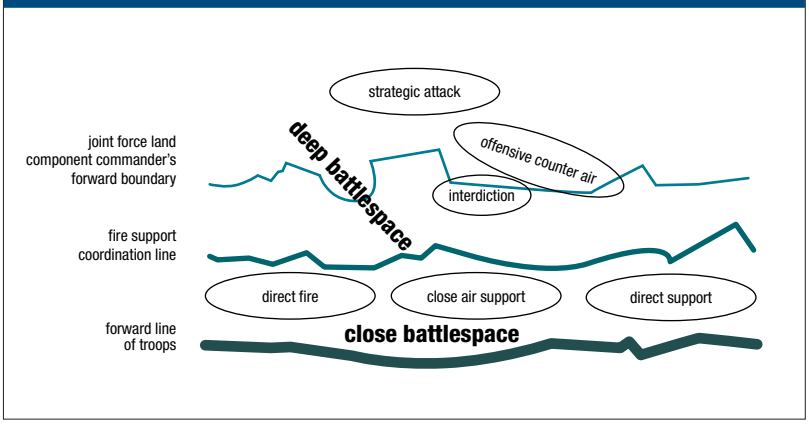
Figure 1. Generic Joint Operations Area: Missions And Battlespaces



Toward a Common Understanding

The services use different terminology to discuss joint fires and close and deep battlespace. In Joint Pub 3-09, *Doctrine for Joint Fire Support*, joint fires are "fires produced during the employment of forces from two or more components in coordinated action toward a common objective." The Army distinguishes between operational and tactical fires. In short, operational fires are lethal and non-lethal weapon effects that influence enemy operational forces, critical functions, and key facilities to accomplish operational objectives in support of either an operation or a campaign. For instance, advanced tactical missile system (ATACMS) fire against an enemy surface-to-surface launcher can be operational. On the other hand, tactical fires are lethal or non-lethal weapon effects that achieve tactical objectives in direct support of a major operation. ATACMS or multiple launch rocket systems, for example, when fired at an enemy heavy artillery position provide direct support and realize tactical objectives.

close operations involve immediate contact and include corps/division current battles

Close and Deep Operations. The Air Force considers operational fires as *deep operations*, or operational fires beyond the fire support coordination line (FSCL) which include air interdiction, strategic attack, suppression of enemy air defenses, and offensive counter-air missions. The goal of these fires is to achieve a desired effect on a given target set or system of targets. Tactical fires also include close air support for ground forces in the close battlespace before FSCL.

Again joint fires can be operational or tactical. The difference between them is their purpose: the former have operational objectives and the latter have tactical objectives. They can also be attacks on close or deep targets with direct fire, direct support, or deep supporting fire. Unfortunately, there is no consensus on the purpose of operational and tactical fires. For example, some sources state that the key distinction between them lies in the result, with operational fires having a decisive impact on the outcome of a major operation or campaign. As shown in figure 1, joint fires beyond FSCL occur in deep battlespace and before it in close battlespace.

This notion of a generic joint operations area (JOA) vividly depicts boundaries and typical missions. But what are deep and close operations? Navy, Marine Corps, and Air Force doctrine does not directly consider them. Only the Army conceptualizes these operations. In Field Manual 100-5, *Operations*, close operations involve immediate contact and include corps/division current battles. The battlespace lies beyond the forward line of troops. By contrast, deep operations may defeat an enemy outright and include activities against opposing forces and functions beyond close battle. Deep battlespace, moreover, is the area beyond FSCL.

In sum the inconsistency in service descriptions of joint fires and battlespaces makes debate over joint fires coordination difficult. Cross-boundary actions involving operational fires in depth and tactical fires in the close fight are important for planners. Joint fire support with synchronized actions can provide greater economy of force and unity of effort. Unfortunately, terminology is not the sole disparity. New weapons which can rapidly attack deep targets permeate the battlefield. Moreover, methodologies for establishing intra-theater boundaries are missing from joint doctrine.

Service Specialization

Every service has weapon systems that traverse intra-theater boundaries. They can attack close and deep targets; thus command, control, and coordination become critical operational design requirements. For example, the Army has ATACMS and Apache helicopters; the Marine Corps has F/A–18s, AV–8s, and LAMB aircraft; Special Operations Forces have direct action and special reconnaissance teams; and both the Navy and Air Force have strike aircraft, cruise missiles, and unmanned aerial vehicles. Service weapon systems can conduct close air support, strategic attack, and interdiction missions as well as others that affect deep battlespace.

55th Signal Company (Alfredo Barraza)

AH–64 helicopter, Joint Forge in Bosnia.

AV–8B providing close-air support, Cobra Gold '98.

31st Marine Expeditionary Unit (Kristen A. Lasica)

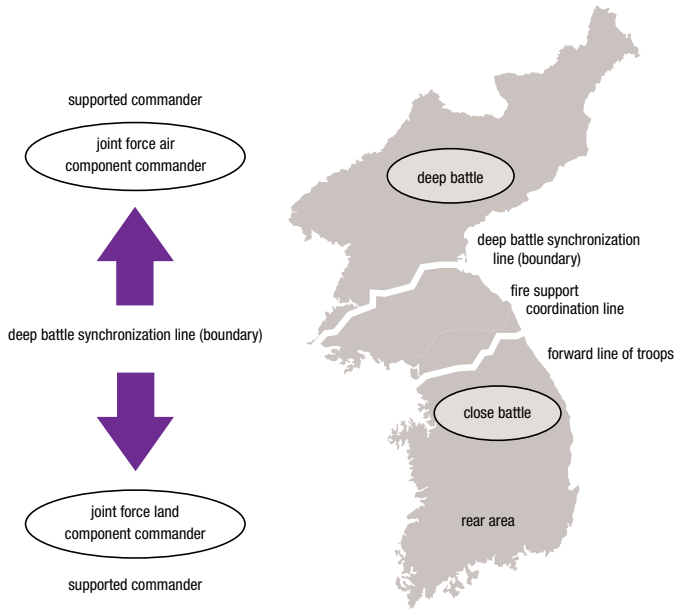
Because of increasing service capabilities to attack deep targets, there is a growing need for joint fire support and greater coordination for joint fires between close and deep battles. One perspective advocates that the joint force land component commander (JFLCC) control all assets which influence the close battlespace, such as A–10s, and that the joint force air component commander (JFACC) control all assets which influence the deep battlespace, such as ATACMS. Unfortunately, this approach to forming air and land commander boundaries may not solve the inevitable requirement for synchronized cross-boundary actions during wartime.

Boundaries that separate deep and close battlespaces are nominally well established within theaters of operations but are not clearly based on joint doctrine. Joint fires crossing intra-theater boundaries must be deconflicted to prevent fratricide and duplication while supporting operational momentum, maintaining the initiative, and conducting maneuvers.

The method of segmenting JOA varies among joint force commanders (JFCs). Various joint publications provide guidance. For example, Joint Pub 2, *Intelligence Support to Joint Operations*, discusses supported commander responsibilities and Joint Pub 3-0, *Doctrine for Joint Operations*, discusses establishing supported and supporting relationships between components. In a major theater war (MTW) like Korea, the commander in chief of Combined Forces Command (CFC) sets boundaries, areas of operations (AOs), and command relationships among subordinate commanders (see figure 2).

Close battlespace describes the area between the forward line of troops (FLOT) and FSCL. As shown in figure 1, joint fires in this area consist of close air support, counter air, direct support missions, and more. JFLCC is the supported commander whose forward boundary extends well beyond FSCL. In Korea this is called the deep battle synchronization line (DBSL). It is important since the airspace beyond it is controlled tightly by sequencing and prioritizing air assets to conduct simultaneous missions in the air component commander's deep battlespace. But from an Army perspective this boundary clashes with the independence of JFLCC and need to shape operational depth. JFACC is the supported commander for deep operations beyond the land component commander's forward boundary. In this AO, joint fires consist of air and surface interdiction missions that affect operational maneuvers of JFLCC, as well as support for special operations, strategic attack, counter air, and direct support missions.

Figure 2. Boundaries and Areas of Operations: Combined Forces Command



Supported Commanders

The cross-boundary joint fires coordination problem is intense between FSCL and the land component commander's forward boundary because both supported commanders in the close and deep battles have time-sensitive missions there. Overlapping actions must be synchronized since they are interdependent, but joint doctrine offers little guidance on how to achieve it. In addition, the situation is exacerbated in rapidly mobile battles when FSCL and the JFLCC forward boundary move quickly. As a battle becomes more mobile, the distance between FLOT and FSCL grows, which increases the demand for close air support (CAS) missions. Moreover, controlling CAS in a rapidly moving battle is difficult (figure 3).

fire support coordination lines are established and adjusted by JFLCC

Furthermore, interdiction beyond FSCL but before the JFLCC forward boundary must be preplanned to complement operational maneuvers, disrupt the movement of troops and equipment toward the close battle, and control the airspace. JFACC is normally the supported commander for interdiction; however, such missions are critical just beyond FSCL where JFLCC is normally the supported commander. This battlespace area is not within the JFACC boundary. Unfortunately, joint doctrine offers little direction on ensuring economy of force and unity of effort in this critical warfighting zone.

Joint Pub 3-0 briefly discusses control and coordinating measures. It states that FSCLs are permissive fire support coordinating measures established and adjusted by JFLCC. Additionally, Joint Pub 3-09 asserts that commanders conducting joint fires beyond FSCL must inform all affected commanders to avoid fratricide. Doctrine specifically addressing joint fire support declares that coordinating is critical to "avoid conflicting or redundant attack operations."

Because an FSCL is a permissive fire support coordinating measure, joint fires beyond this point allow for rapid attacks of targets of opportunity which are within the air tasking order (ATO) planning cycle. Major operations and command relationships must be flexible enough to capitalize on the growing capability of supported commanders to attack time sensitive targets beyond FSCL. Moreover, FSCL is not a boundary. The synchronization of actions on both sides of it is normally the responsibility of JFLCC out to the forward boundary. Furthermore, joint publications state that in exceptional situations commanders unable to coordinate activities may attack targets beyond FSCL. But failing to coordinate "may increase the risk of fratricide or waste limited resources." If ground forces can attack targets without coordinating with JFACC, then synchronizing actions, coordinating targeting, and achieving objectives are jeopardized.

Joint doctrine offers little advice on the cross-boundary problem and in some cases affords special status to a service. For example, Joint Pub 0-2, *Unified Action Armed Forces (UNAAF)*, protects a Marine air-ground task force (MAGTF) from supported commanders who desire to use its air assets. During an amphibious operation, the integrated use of Marine air and ground forces is mandated because an amphibious objective area (AOA) is vulnerable. But once an operation is complete and AOA disestablished, synchronized joint fires in the deep battle become problematic. For instance, Joint Pub 0-2 indicates that excess MAGTF sorties go to JFC. However sorties for counter-air, long-range interdiction, and reconnaissance do not qualify as excess since they furnish "a distinct contribution to the overall joint force effort."

Self-propelled howitzers and ammunition carrier, Bosnia.

55th Signal Company (Glenn W. Suggs)

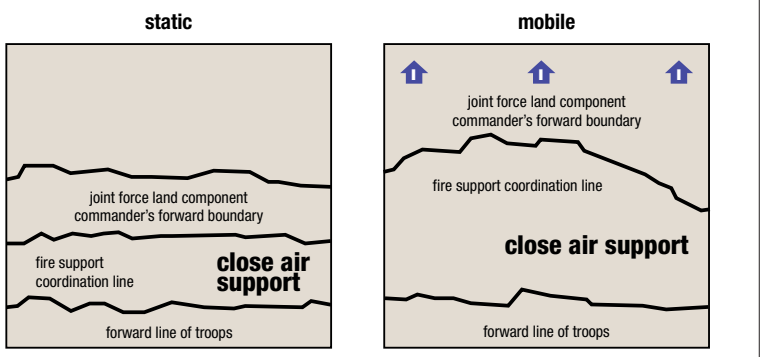
Synchronization

When AOA is disestablished and MAGTF uses organic air to shape its deep operational maneuvers, joint fires among the services become nearly impossible to synchronize. Deconflicting offensive counter-air, strategic attack, and interdiction missions is a priority to prevent fratricide. The problem is that concerns for joint service deconfliction override those for synchronized actions when there is clearly an opportunity for joint fires coordination which provides greater economy of force and unity of effort. A simple solution to deconflict forces has been to provide MAGTF with its own boundary (AO), which protrudes well beyond FSCL and the JFLCC forward boundary. This allows freedom of maneuver, but with a loss of joint fires coordination and support, economy of force, and unity of effort. This separate organization fragments JFC command and control because integrated MAGTF operations, even as part of an MTW, are protected.

The complexity of this difficulty can be seen in the controversy associated with Joint Pub 3-09, which was in coordination between 1994 and 1998. It was published last year, but the lengthy coordination is indicative of the joint fires controversy and illustrates the complexity of the problem of joint fires and the conflict among the services.

Another indicator of the importance of this issue is revealed in the JULLs database. Cross-boundary joint fire was identified by U.S. Pacific, U.S. Central, and U.S. Atlantic Commands as well as CFC in exercises and real operations. For example, a Marine unit in Unified Endeavor '95 highlighted the need to integrate joint fire support efficiently and effectively to support joint forces. The boundary between a MAGTF air wing and JFACC assets in Cobra Gold '94, and the unified use of joint service assets to reach JFC objectives, caused major problems for planners. Difficulty during Ulchi Focus Lens '94 in coordinating joint fires beyond FSCL resulted in ATO production problems for JFACC and an increased likelihood of fratricide. Finally, the 82d Airborne Division identified FSCL placement problems during Gallant Eagle

Figure 3. Static and Mobile Battlefields



55th Signal Company (Russell J. Good)

High mobility artillery rocket system.

'88. In short, maneuvering airspace for organic Army aviation assets was too small to provide adequate close air support for ground units because of the confined space between FLOT and FSCL and because FSCL changes were not coordinated with other component commanders.

with ever increasing weapon capabilities, the cross-boundary problem is now acute

The Combined Forces Command solution. In Korea, CFC addressed this problem by appointing JFACC as the "coordinating authority" for operational fires between FSCL and DBSL. Moreover, he said that in combat JFLCC can still attack time-sensitive targets between FSCL and the forward boundary without informing JFACC. However, "such attacks should be the exception rather than the rule," according to the *Deep Operations Primer-Korea*.

In the Korean theater CFC efforts to resolve the problem have not been totally successful. For example, synchronization problems identified during joint and combined command and control exercises (Ulchi Focus) involved direct support missions beyond FSCL. However, incorporating direct fire beyond FSCL was relatively easy to coordinate between supported commanders because of short flight times of direct fire assets.

Desert Storm. Some critics may argue that exercises and simulations are not suitable test cases to claim that a cross-boundary problem is significant—possibly arguing that exercises are not robust enough or that operational leaders will resolve this real war challenge. One need only look at JULLs from Desert Storm to realize that this is untrue. During that real-war operation, the Army and Marine Corps applied different rules for cross-boundary fires. The former service thought that it could provide both direct and indirect fires in deep battlespace while the latter treated FSCL as the boundary. The Joint Staff recommendation was to redefine the term. The new definition found in the *DOD Dictionary of Military and Associated Terms* describes a boundary as a line delineating *areas* to allow coordination and deconfliction between *units, formations, or areas*. Unfortunately, it does not solve the problem of joint fires coordination across intra-theater boundaries.

Implications of the Challenge

This topic is controversial because it transcends the joint services and involves issues at the core of service functional specialties. With ever-increasing weapon capabilities to simultaneously and precisely attack targets throughout close and deep battlespaces, coupled with a trend toward near-real time information, the cross-boundary problem is now acute. In the near future, it may become overwhelming for operational commanders unless joint doctrine is crafted to address it adequately. Additionally, the issue will affect many JFCs executing their war plans. However, the problem is beyond the sight of many commanders in less developed theaters. In small-scale contingencies, establishing appropriate missions and tasks, tailoring forces, and organizing command structures may be overriding goals during planning phases. This operational challenge has immediate and future importance to joint operations.

Despite a lack of attention in joint pubs, the area between the JFLCC forward boundary and FSCL is critical when synchronizing actions among joint forces, achieving economy of force, and establishing an optimal time-space-force relationship. Synchronization of actions beyond FSCL is key for operational momentum and integrated operational maneuvers focused on JFC objectives. Interdiction missions, for example, should aim at enemy forces that affect operational maneuvers; those not closely connected with operational maneuvers are irrelevant to ground commanders (and possibly have adverse effects on offensive operations and operational momentum). When JFLCC must attack a high priority target beyond FSCL with direct fire or deep supporting fire, joint fire support can reduce the vulnerability of some assets. JFACC can reprioritize or divert counter air or other deep battle missions to provide joint fire support. In

Multiple launch rocket system, Korea.

1st Combat Camera Squadron (Jim Varhegyi)

Korea, the synchronization of actions in the area between FSCL and the forward boundary is handled by two working groups, the JFLCC deep operations coordination cell and the JFACC synchronization cell. Both ensure operational maneuvers are complemented with deep battlespace missions.

In addition, synchronizing JFACC and MAGTF actions can enhance the economy of force as interdiction, counter-air, and close air support missions among services become complementary (rather than deconflicted) and support JFC campaign objectives with a unified effort. The isolation of a MAGTF in its AO after disestablishing an AOA allows it unity of command and independent operations; however, joint fire support and coordination problems are intensified while unity of effort may be degraded.

Finally, the optimal relationship among space, time, and forces fits neatly with operational designs that emphasize the synchronization of joint actions around FSCL. For example, as shown in figure 3, FSCL placement becomes farther removed from FLOT during rapidly moving battles. This increased space requires more forces for close air support in front of FSCL and interdiction beyond it. In sum, rapidly moving battles attempt to minimize time and capture objectives quickly at the cost of requiring greater space and more forces. The synchronization of joint fires is critical for greater unity of effort, economy of force, and achievement of objectives.

Joint fires coordination among supported commanders is a complex issue with significant implications. Individual service specialties, including doctrine and weapon systems, as well as the cross-boundary challenge to realize economy of force and unity of effort, must be addressed when campaigns are being planned. The solution rests in the heart of operational synchronization which, according to Joint Pub 3-0, is the essence of campaign planning and execution. Problems affecting both supporting and supported commanders exist. Currently the solution often lies in flexible and innovative operational leadership. But joint doctrine must be expanded to cope with this challenge because senior leaders depend on the Armed Forces to effectively provide the means to achieve the desired political ends with the greatest success at the least cost. Smaller budgets and realigned roles and missions will make the cross-boundary problem more important to solve.

M–109 firing live round during Joint Guard.

55th Signal Company (Joel C. Miller)

In this post-Cold War period, we need to continuously improve campaign planning and work through valid command and control issues.

Intra-theater, cross-boundary coordination is critical for JFCs in achieving objectives with the greatest unity of effort and economy of force. Synchronized joint fires in the deep battlespace contribute to a soundly executed campaign plan. Thus joint doctrine should be modified to resolve this challenge. Solutions range from organizational structural changes to increased command and control to include:

- providing JFLCCs enough maneuvering area beyond FSCL to independently shape the deep battlespace—allowing for unity of command and centralized control
- synchronizing air interdiction missions with ground operational maneuvers
- creating liaison elements within both JFLCC and JFACC staffs to focus on close and deep battlespace maneuvers; communication between supported commanders is key
- appointing JFACC as the coordination authority for operational fires beyond FSCL to ensure unity of effort and avoid duplication and fratricide
- minimizing uncoordinated cross-boundary joint fires and limiting them to time-sensitive and emerging critical targets
- valuing cost-effective joint fires; cross-boundary joint fires should not occur as a matter of convenience
- keeping egos out of the solution—lives are at stake.

Most importantly, commanders, staffs, and combatant units must focus on objectives and find the best options to achieve them. Solutions based on service biases or special agenda only complicate a joint force commander's mission. **JFQ**