
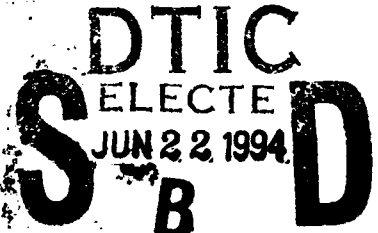


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**JOINT AIR OPERATIONS**  
**Integration of MAGTF Aviation into the Theater Air War**

by

**John D. Woods**  
Lieutenant Colonel, USMC

A RESEARCH REPORT SUBMITTED TO THE FACULTY

IN

FULFILLMENT OF THE CURRICULUM

REQUIREMENT

Advisor: Colonel Eric Hastings

MAXWELL AIR FORCE BASE, ALABAMA

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## ABSTRACT

**TITLE:** Joint Air Operations: The Integration of MAGTF Aviation into the Theater Air War.

**AUTHOR:** John D. Woods, Lieutenant Colonel, USMC

The lessons of modern joint warfare were tested and validated in Desert Storm. These lessons are being incorporated into new joint doctrine being developed at the direction of the Joint Staff. However, conflict and misunderstandings remain, especially as the roles and missions of the armed forces are debated.

The purpose of this paper is to:

- (1) guide joint warfighters in the process of the integration of MAGTF aviation into the mature theater air war.
- (2) where appropriate, correct the emerging body of historical record relating to the involvement of USMC tactical aviation in certain aspects of Desert Storm.

This paper will:

- (1) explain the views of the USMC on the authority of the JFACC.
- (2) explain three keys to joint warfighting.
- (3) discuss the role of the MAGTF Coordination Element (MCE).
- (4) offer thoughts on the implications for joint warfighting in future conflicts and suggest changes that still must be made.

## BIOGRAPHICAL SKETCH

Lieutenant Colonel John D. Woods is a Naval Aviator with experience flying the A-6E Intruder, all weather attack aircraft. He is a Weapons and Tactics Instructor and a graduate of the U. S. Navy's Strike Leader Attack Training Syllabus. His background includes tours in squadrons in all three Marine Aircraft Wings. During Operations Desert Shield and Desert Storm, LtCol Woods served as the U. S. Marine Corps Liaison, Aviation Branch Head, on the USCENTAF staff in Riyadh, Saudi Arabia. LtCol Woods' next assignment will be as the Director of Joint and Combined Doctrinal Development at the Naval Doctrine Command in Norfolk, Virginia.

## JOINT AIR OPERATIONS

### Integration of MAGTF Aviation into the Theater Air War

For the previous three years, since the overwhelming allied victory in Operation Desert Storm, a great many changes have taken place through the implementation of joint warfighting initiatives across all of the armed services of the United States. Much of this has admittedly been prompted by congressional mandate; however, the continued emphasis on the development of joint doctrine and the training for joint task force operations can only be considered to be in the best interest of an American military in transition.

In a recent interview, General Charles A. Horner, the former Commander of U. S. Central Air Forces (COMUSCENTAF), remarked that he did not know whether the Persian Gulf War was the final war of a previous age or the initial war of a future one.<sup>1</sup> The best answer to this rhetorical question is that it was both. It was the turning point of individual service domination of campaigning, and it was the first look at the new age of joint warfighting in which the strongest characteristics of each of the individual military services was optimized. It is this lesson learned from Desert Storm that will allow the military services to survive the current period of fiscal austerity and be successfully integrated in the next major conflict.

In short, the Gulf War precipitated a effort to develop a doctrine of joint warfighting. In this effort, one must certainly heed the ageless warning of not preparing to fight the last war, while at the same time not overlooking the important lessons that were learned from it. The current initiatives being explored by the various service doctrine centers, as well as the Joint Doctrine

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<sup>1</sup> Gen Charles Horner, "Offensive Air Operations: Lessons for the Future," Royal United Services Institute Journal 138 (December 1993): 19.

Division of the Joint Staff, are examples of successful efforts to capture the important lessons of the Persian Gulf War.

The issue that this paper addresses is what are the important lessons of the Persian Gulf War that can be applied to integrating U. S. Marine Corps (USMC) tactical aviation into a theater air war. The author will discuss some of the critical factors affecting the integration and employment of the Marine Air Ground Task Force (MAGTF) Commander's Air Combat Element (ACE), from the viewpoint of his experience as a liaison officer assigned to the CENTAF staff in Riyadh, during both Operation Desert Shield and Desert Storm. In this position as Aviation Branch Head, U. S. Marine Liaison to COMUSCENTAF, the author was directly involved in the resolution of many of the key issues that arose in CENTAF headquarters, related to the employment of USMC tactical aviation. In an attempt to fully explore these issues as they arose in during this period the author feels that it is especially important to critically examine certain events that occurred during the Gulf War, as they have been portrayed in popular press and other publications, so as to provide balance to those writings. In this regard, the author agrees fully with General Horner, when in the same interview, he stated: "I don't always find that it (the Gulf War) receives the historical, honest perspective that it should. In fact, it tends to be a gold mine that people go to, to extract particular points they want to make and then justify, based on that war."<sup>2</sup>

The purpose of this paper is to assist future joint warfighters in the process of integrating MAGTF aviation into a theater air war. Where appropriate, the author will attempt to correct parts of the historical record relating to the involvement of U. S. Marine Corps (USMC) tactical aviation in certain phases of Desert Storm. The methodology will include an explanation of the views of the

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<sup>2</sup> Ibid.



USMC on the authority of the JFACC, a discussion of three keys to joint warfighting, and a description of the functioning of the MAGTF Coordination Element (MCE). Finally, the author will offer thoughts on joint warfare in future conflicts and suggest changes to joint warfighting procedures that still must be made.

## The Central Issues

Too much has already been made of the classic debate over the tasking authority of the U. S. Air Force (USAF) component commander over U. S. Navy, U. S. Army, and U. S. Marine Corps aviation. The fact of the matter was that during Desert Storm, all of the air arms of each of the services were allowed to perform their respective missions as part of the individual service teams. Additionally, in response to the apportionment decision made by the Commander-in-Chief, U. S. Central Command (CINCCENT), each U. S. military service provided sorties for tasking by the Joint Forces Air Component Commander (JFACC). The arguments over the role of the JFACC ended when the operation order (OPORD) for Desert Shield/Storm was published. (Then) LtGen Horner was designated the JFACC, the Airspace Coordination Authority (ACA), and the Area Air Defense Commander (AADC).<sup>3</sup> His responsibilities included operational control (OPCON) of those aviation assets allocated to the JFACC for tasking. Additionally, he exercised coordination authority for those sorties that were employed beyond the land force commanders' fire support coordination lines (FSCL). This distinction of OPCON of joint aviation assets, and the coordination authority to manage the overall flow of airborne aircraft and weapons, is very important. It is the key to understanding the role of the JFACC in a joint air operation. In this same regard, there is another important distinction between joint aviation assets and excess sorties as described in the Omnibus Agreement. In February 1986, the Joint Chiefs of Staff (JCS) approved the Omnibus Agreement which clarified the issue of command and control of USMC tactical aviation during sustained operations ashore. The Omnibus Agreement states, in part:

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<sup>3</sup> LtGen Horner's duties, during Desert Storm, are described in an official USAF publication (*JFACC Primer*, p. 6) as JFACC, ACA, AADC, and Coordinator for Interdiction. While Joint Pub 3.0 makes reference to the JFACC "plan(ning) and executing the theater-wide interdiction effort, it makes no provision for this responsibility as an assigned duty.

“The Marine Air-Ground Task Force (MAGTF) commander will retain operational control of his organic air assets. The primary mission of the MAGTF air combat element (ACE) is the support of the MAGTF ground element. During joint operations, the MAGTF commander will make joint sorties available to the joint force commander, for tasking through his air component commander for air defense, long-range interdiction, and long-range reconnaissance. Sorties in excess of MAGTF direct support requirements will be provided to the joint force commander for tasking through the air component commander for the support of other components of the joint force, or of the joint force as a whole.” (emphasis added)

These provisions guided the integration of USMC tactical aviation during the planning and execution phases of Desert Shield and Desert Storm.

In addition to understanding the role of the JFACC, joint military warfighters must also pay particular attention to the process of apportionment and targeting. These two issues, perhaps more than any others, caused the greatest misunderstandings and residual resentments among the services after the Gulf War. It is important to remember that both of these functions are the purview of the Joint (Task) Force Commander [J (T) FC]. In the Gulf War, the responsibility for targeting oversight was delegated to the JFACC.<sup>4</sup> While this was clearly within the authority of the JFC (CINCCENT), it resulted in disagreements between the component commanders over targeting priorities.<sup>5</sup> Apportionment, likewise was a critical aspect of the joint air operations in the Gulf War. This process decided the weight of aviation effort that was to be employed in the phases of the overall theater campaign plan. Conflicts and misunderstandings among the armed services

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<sup>4</sup> In his book, *Crusade*, Rick Atkinson states: “yet in the gulf war (Generals) Horner and Glosson - with (General) Schwarzkopf’s blessing - controlled all targeting beyond the Saudi border.”

<sup>5</sup> References to the misunderstandings between component commanders over targeting is contained in *Crusade* (Atkinson), *Storm Over Iraq* (Hallion), and the *Conduct of the Persian Gulf War: The Final Report to Congress*, published by the Department of Defense.

about this issue remain today, partly framed in the continuing debate over the roles and missions of the respective military branches.

What is important now, however, is the positive impact of the joint warfare initiatives that are taking place at the direction of the Joint Staff. The former Chairman of the JCS, General Powell, summed up this new direction in *A Doctrinal Statement of Selected Joint Operational Concepts*, which contains the following wording: "In such (joint) operations, it is difficult to view the contributions of air, land, sea, space, and special operations forces in isolation. Each is critical to the success of the joint force, and each has certain unique capabilities (emphasis added) that cannot be duplicated by other types of forces."<sup>6</sup>

#### Employment of the MAGTF

The United States Marine Corps is often referred to as the world's finest combined arms team. The philosophy of employing combined arms in battle is central to the Marine Corps' organization for combat. To quote FMFM - 1, *Warfighting*:

"In order to maximize firepower, we must use all the available resources to best advantage. To do so, we must follow a doctrine of combined arms. Combined arms is the full integration of arms in such a way that in order to counteract one, the enemy must make himself more vulnerable to another. We pose the enemy not just with a problem, but with a dilemma - a no-win situation."<sup>7</sup>

To Marines, all available resources include not only artillery and rocket systems, but also MAGTF aviation.

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<sup>6</sup> "A Doctrinal Statement of Selected Joint Operational Concepts", 23 November 1992, 1.

<sup>7</sup> FMFM 1, *Warfighting*, 6 March 1989, 75.

MAGTF aviation, however, is not "flying artillery." It is a weapons system that provides the MAGTF commander with the ability to quickly mass overwhelming combat power over large portions of the battlefield, throughout the entire area of the MAGTF commander's area of operations (AO). "Aviation is the a key element in the MAGTF's ability to fight maneuver warfare."<sup>8</sup> Maneuver warfare seeks to shatter the enemy's cohesion through a series of rapid, violent, and unexpected actions.<sup>9</sup> The contribution of air power to achieve these objectives is universally recognized, and is also reflected in Air Force Manual 1-1, *Basic Aerospace Doctrine of the United States Air Force*. Under the chapter titled, "The Nature of Aerospace Power", the following statements appear:

- (1) "Aerospace power can quickly concentrate on or above any point on the earth's surface."
- (2) "Aerospace power can apply force against any facet of enemy power."
- (3) "The inherent speed, range, and flexibility of aerospace power combine to make it the most versatile component of military power."<sup>10</sup>

There is no difference in the recognition of what air power brings to the battlefield, between either the USMC or the USAF. It would be difficult to minimize the role of MAGTF aviation and not also attack the contribution that aerospace power makes to the JFC commander's theater campaign. Air power is, therefore, a powerful supporting arm in both the JFC and MAGTF commander's entire range of combat power. The key point is: "Marine aviation is organized, equipped, and trained to be the aviation combat element (ACE) of a MAGTF that is immediately responsive to the needs of the ground combat element commander (GCE)."<sup>11</sup>

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<sup>8</sup> "USMC and USAF Doctrine Compared", a briefing paper provided to Marine class members of the Air War College.

<sup>9</sup> FMFM 5-1, *Organization and Function of Marine Aviation*, 16 October 1991, 1-2.

<sup>10</sup> Air Force Manual 1-1, Volume 1, *Basic Aerospace Doctrine of the United States Air Force*, March 1992, 5.

<sup>11</sup> Maj Dwight R. Motz, "JFACC: The Joint Air Control 'Cold War' Continues...", *Marine Corps Gazette*, January 1993, 66.

Air power alone doesn't win wars. It is used as part of an overall strategy to ensure freedom of action on the battlefield; focus destructive combat power on enemy centers of gravity; deny enemy forces freedom of movement; and concentrate devastating firepower in front of friendly forces to blunt enemy attacks and exploit enemy weaknesses. There is no disagreement over the concept of a coordinated air operations plan to accomplish these objectives; however, unity of effort does not depend on the unity of command by the JFACC. Unity of effort is accomplished through the formulation and execution of an overall theater campaign plan that synchronizes and optimizes that unique contributions of each of the military services involved.

#### The Authority of the JFACC

The authority to coordinate the air operation carried out in support of the JFC's theater campaign plan is normally vested in a JFACC. Joint Pub 3-56 states:

"The JFACC responsibilities will normally be assigned to the service component commander having the preponderance of air assets and the best capability to command and control joint air operations. This provision places responsibility for joint planning, coordinating, allocating, tasking, and executing the joint air operations with the Service component commander with the preponderance of the responsibilities."<sup>12</sup>

The duties of the JFACC are therefore assigned by the JFC. The JFACC does not command other service forces as the name implies. The full definition of the JFACC's authority is contained in the operations order published by the JFC. The following functions are normally the responsibility of the JFACC:

- a. Advise the JFC on the conduct of the joint air effort.

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<sup>12</sup> Joint Pub 3-56.1, *Command and Control for Joint Air Operations* (second draft), 15 August 1993, II-1.

- b. Develop a joint air operations plan based on the JFC's campaign objectives.
- c. Recommend apportionment of the theater air effort to the JFC.
- d. Execute the JFC's apportionment decision.
- e. Allocate sorties to missions based on the JFC's apportionment decision.
- f. Task excess sorties made available to the JFC by the component commanders.

The following responsibilities may be assigned to the JFACC.

- a. Carry out the duties of Area Air Defense Commander (AADC).
- b. Carry out the duties of Airspace Coordination Authority (ACA).<sup>13</sup>

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<sup>13</sup> These two lists are based on information contained in a point paper, "MAGTF Aviation in Joint Operations" provided by the MAGTF instruction team assigned to MCCDC Quantico, VA.

## Keys to Joint Warfighting

### Apportionment

The process of integrating joint force aviation assets begins with the apportionment decision. Apportionment is defined in Joint Pub 3-0 as, "the determination and assignment of the total expected effort by percentage and/or priority that should be devoted to the various air operations and/or geographic areas for a given period of time."<sup>14</sup> Apportionment is one of the most critical aspects of the JFC's campaign planning process. During this process, component commanders are given the opportunity to surface their requirements for joint aviation support to facilitate the component campaign plans. Land force commanders typically can expect the JFC's theater campaign plan to be executed in phases, occurring sequentially or in parallel. The JFC's campaign plan is initially focused on gaining air superiority and conducting strategic attacks against enemy centers of gravity. The land force commanders campaigns will normally follow these initial phases with requirements to shape the battlefield, to conduct long range interdiction (outside of AOs), to conduct interdiction inside of AOs, and to conduct close air support in consonance with ground force maneuver. Clearly, in a phased campaign plan the number of joint aviation assets provided to the JFC for tasking through the JFACC would vary as the initial phases of the air battle transition to direct support of the Army or Marine component commanders. During this later phase, organic aviation assets would be retained by the component commanders to conduct direct air support within their respective AOs. During the execution of these direct support air operations component commanders could make additional excess sorties available, on a daily basis, to the JFC

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<sup>14</sup> Joint Publication 3-0, *Doctrine for Joint Operations*, 9 September 1993, III-36.



for tasking. This is the distinction between USMC aviation assets temporarily made available to the JFC for tasking and sorties that are excess to the direct support of the MAGTF commander.

During the apportionment process it is the responsibility of the JFACC to make a recommendation to the JFC as to the apportionment of joint aviation assets. This recommendation should be made only after consultation with the respective component commanders. Because the apportionment decision might be changed or modified depending upon the progress of the theater campaign, USMC liaison officers assigned to the JFACC staff must receive clear and definitive guidance from the Marine forces commander with regard to apportionment process. A clear understanding of the Marine forces commander's intent will provide a maximum degree of latitude for the USMC liaison team in carrying out their duties in operational planning.

The apportionment decision is solely the purview the JFC. . . clear communication of this decision to all component commanders will prevent any misunderstanding as joint aviation assets are tasked in support of the theater air war. The Aviation Branch Head of the USMC liaison team should be prepared to monitor the JFACC's allocation (tasking) of the joint aviation assets. As a case in point, the issue of apportionment and allocation during Desert Storm was a major concern according to LtCol Richard Lewis, Special Assistant to the CENTAF Director of Campaign Plans, (then) Brigadier General Glosson. He states, "Having 50 percent of the Marine air withheld from JFACC's control only exacerbated the strategic bombing problem."<sup>15</sup> Commenting further he adds, "If each corps commander had been given control of a similar number of sorties throughout the war, the strategic campaign would have been months in duration, versus weeks."<sup>16</sup>

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<sup>15</sup> LtCol Richard B. Lewis, "Desert Storm - JFACC Problems Associated with Battlefield Preparation" (Individual study project, U. S. Army War College, 1993),

<sup>16</sup> Ibid., 10.

Such comments are not only contrary to the nature of the superb working relationship established by General Horner, Commander USCENTAF, and General Boomer, Commander USMACENT, but they also fail to acknowledge the fact that the apportionment decision was the responsibility of CINCCENT at the time. What is clear from the varying accounts of the apportionment of USMC and USN aviation assets to the JFC (CINCCENT) for tasking through COMUSCENTAF during Desert Storm, is that in the next major regional conflict, attention to, and wide dissemination of, the JFC's apportionment guidelines are critical steps in the integration of joint/combined aviation assets into the theater air war.

#### **Integration of Command, Control, and Communication (C3)**

Normally the JFACC will also be designated the AADC and the ACA. The authority of the ACA carries with it the responsibility to create the structure of orbit points, air refueling tracks, combat air patrol stations, and the airspace control architecture within the theater battlespace. Service component liaison officers normally will have the responsibility to coordinate the components' requirements for control points, orbits, and tracks with the JFACC staff officer serving as the Airspace Control Officer. These requirements are normally submitted to the ACA and promulgated as a part of the Airspace Control Plan (ACP), an annex to the Airspace Control Order (ACO) published by the JFACC. The ACO may also designate the sectors of airspace in which a service component is assigned the responsibility for air defense. MAGTFs will normally deploy with organic command and control/air defense personnel and equipment. After control of the battlespace is passed ashore to the landing force commander, these units will perform the functions of control of USMC aviation and missiles. The organizational structure of the Marine Air Command and Control System (MACCS) is fully described in FMFM 5-1, *Organization and*

*Function of Marine Aviation.* Likewise the procedures used by the Marine ACE Commander to command, coordinate, and control MAGTF air operations are presented in FMFM 5-60, *Control of Aircraft and Missiles*.

The ACA, however, retains full authority to establish the control points and procedures within the overall theater to ensure the orderly flow and deconfliction of air traffic within the battlespace. Within this structure, the MACCS expects to be assigned responsibility for airspace control and air defense within a sector of airspace overlying the Marine forces AO. This responsibility is granted/concurred with by the AADC/ACA. There was considerable debate on this issue during Desert Storm. Because of the bewildering array of coalition air defense units and equipment, and because the clear delineation of individual sectors of airspace for air defense was impossible, COMUSCENTAF elected to vest the responsibility for air defense over the land areas of the theater, to allied fighter aircraft assigned the mission of defensive counter air (DCA). This decision had the practical effect of dissolving the sector of airspace overlying the MARCENT positions.

In order to create an area of airspace in which the MACCS could exercise its responsibility for control of MARCENT aviation, the USMC CENTAF liaison, C3 Branch Head, created a number of airspace "sectors" through the use of an air traffic control measure called the High Density Aircraft Control Zone (HIDACZ). These HIDACZs were structured to cover the MARCENT AO in the same manner as an air defense sector would. There was continuing disagreement, however, as to the vertical dimension of the various HIDACZs throughout the duration of Desert Shield and Desert Storm. The lesson from this experience was that using an air

traffic control airspace structure to coordinate tactical aviation operations over the battlefield was a poor substitute for a sector of airspace in which the MACCS could carry out its assigned mission.

Responsibility for the control of MARCENT aviation within the MARCENT Commander's battlespace was also a hotly debated topic between USMC CENTAF liaison officers and the CENTAF staff. The USAF position was that the Fire Support Coordination Line (FSCL) was a restrictive, not a permissive, fire control measure. This meant the all sorties flying missions beyond the land force commanders' (Army and Marine) FSCLs had to be coordinated with CENTAF. The Department of Defense Dictionary of Military and Associated Terms defines *coordinating authority* as: "A commander or individual assigned responsibility for coordinating specific functions or activities involving forces of two or more Services . . . . The commander or individual has the authority to require consultation between the agencies involved, but does not have the authority to compel agreement."<sup>17</sup> This arrangement for the coordination and deconfliction of air traffic beyond the FSCL was a logical extension of the ACA responsibility of the JFACC. However, the fact was there was the perception that the JFACC authority might be somehow extended to include the responsibility to divert sorties flown in support of one component commander to another target. The debate over the limits of coordination authority has been an issue in previous theater air operations (e.g. Korea and Vietnam). Finally, however, the issue now seems to have been settled. Joint Pub 3-0 mandates that it is now the responsibility of the land force commander to coordinate attacks within the boundaries of his assigned AO.

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<sup>17</sup> JCS Pub 1-02, *Department of Defense Dictionary of Military and Associated Terms*, 1 December 1989, 91.

## Targeting

There is no more contentious issue surviving from Desert Storm than the issue of targeting and associated with that, the role of the Joint Targeting Coordination Board (JTCB). The functions of targeting are a challenge in a fast paced theater campaign during which thousands of aircraft strike widely dispersed targets arrayed over a large battlefield. Tactical reconnaissance aircraft are being replaced by promises of new levels of responsiveness and fidelity through the use of space based platforms. Moreover, effective kill criteria for the destruction of tactical level target arrays (e.g. artillery) is still difficult to define for intelligence collection managers. This fact, and the lack of responsive battle damage assessment capability, may present the greatest challenges to the targeting process.

Accounts of the CENTAF air operation, now appearing in the books being written about Desert Storm, allege that there was disagreement between the service component commanders over the issue of targeting. Some of the concerns of the component commanders were no doubt attributable to the fog of war (i.e. problems in communication). However, it is clear that the land force commanders (i.e. COMARCENT and COMMARCENT) had a abiding interest in reducing the combat capability of the Iraqi defensive forces arrayed before their lines of advance into the KTO and Iraq. General Schwarzkopf had delegated the de facto authority for the planning and execution of targeting to the CENTAF commander. This was within his authority, and is currently provided for in the Joint Pub 3-0: "JFCs may establish and task an organization within their staffs to accomplish these broad targeting oversight functions or *may delegate* (italics added) the responsibility to a subordinate commander."<sup>18</sup>

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<sup>18</sup> Targeting functions are defined in the previous paragraph (4) (b) (p. III-35) as targeting and apportionment decisions and conducting execution planning.

The decision to delegate the responsibility for targeting was interpreted as authority to organize a JTCB within CENTAF headquarters.<sup>19</sup> The normal functions of a JTCB were therefore carried out under the direct supervision of the CENTAF operational planning staff. These functions would normally include: "reviewing targeting information, developing targeting guidance and priorities, and preparing and refining joint target lists."<sup>20</sup> An initial joint target list was developed by the CENTCOM staff, and this list served as the basis for the targeting of joint coalition aviation against Iraqi targets determined to be enemy centers of gravity.<sup>21</sup> As more targets were developed the target list grew in length. After initiation of the CENTAF air operation in January, the target list grew daily. This was primarily due to disagreements over the effects of the air attacks on the targets on the list. As the first day of ground force operations approached, the land force commanders begin to feel frustrated with the targeting process. This frustration can be attributed to their perception of the failure of the targeting process to support their requirements to prepare the battlefield.

In his book *Storm Over Iraq*, Richard Hallion states that the ground commanders "continued to demand *unnecessary* (emphasis added) targeting of Iraqi forces and positions directly in front of their sectors."<sup>22</sup> Rick Atkinson also describes the targeting controversy in his history of the war titled *Crusade*, in which he relates a discussion in CENTCOM headquarters between CINCCENT and his deputy in which this perception of the lack of preparation of the battlefield was discussed.<sup>23</sup>

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<sup>19</sup> Col John Schmit and Col Clinton Williams, "Disjointed or Joint Targeting?" *Marine Corps Gazette*, September 1992, 68.

<sup>20</sup> The role of the JTCB was defined by the JFC (CINC).

<sup>21</sup> Centers of gravity that are targeted for strategic attack are generally accepted to be leadership, key production, infrastructure, population, and fielded military forces.

<sup>22</sup> Richard P. Hallion, *Storm Over Iraq* (Washington & London: Smithsonian Institution Press, 1992), 208.

<sup>23</sup> Rick Atkinson, *Crusade: The Untold Story of the Persian Gulf War* (Boston & New York: Houghton Mifflin Company, 1993), 221-223.

The fact that the MARCENT Commander, (then) Lieutenant General Walter Boomer, had a well defined plan to reduce the combat effectiveness of the Iraqi ground forces, which had been developed by his staff, seems to have been overlooked. MARCENT targeteers had done an exhaustive analysis of the Iraqi defensive positions and had proposed a systematic destruction of those forces. The analysis was based on identifying and locating the positions of artillery and mechanized forces. A diagram of the positions of the enemy forces was arranged and presented as a series of target "boxes."<sup>24</sup> A representation of the two types of target boxes is provided in figures 1 and 2.

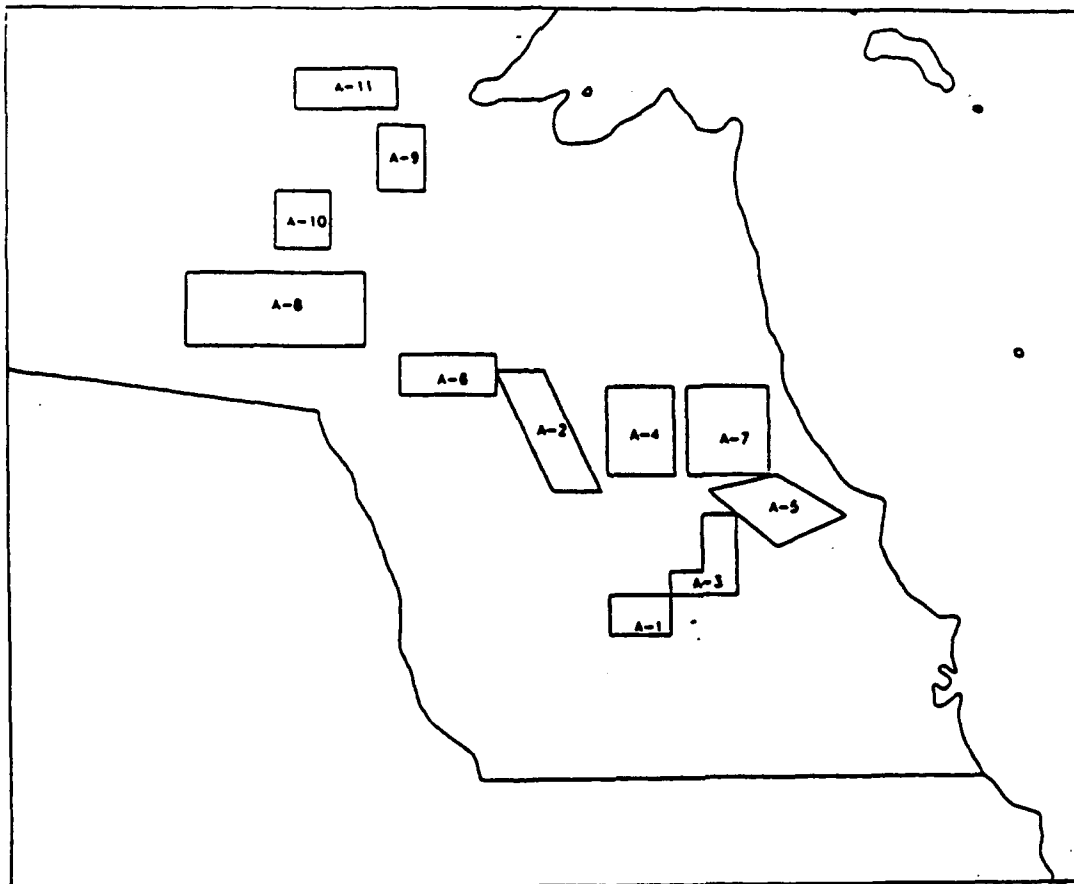


Figure 1. Fire Support Boxes (positions are approximate)

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<sup>24</sup> These target boxes should not be confused with the "kill boxes" that identified the map sectors and used to coordinate the attacks of aircraft conducting interdiction forward of the FSCL.

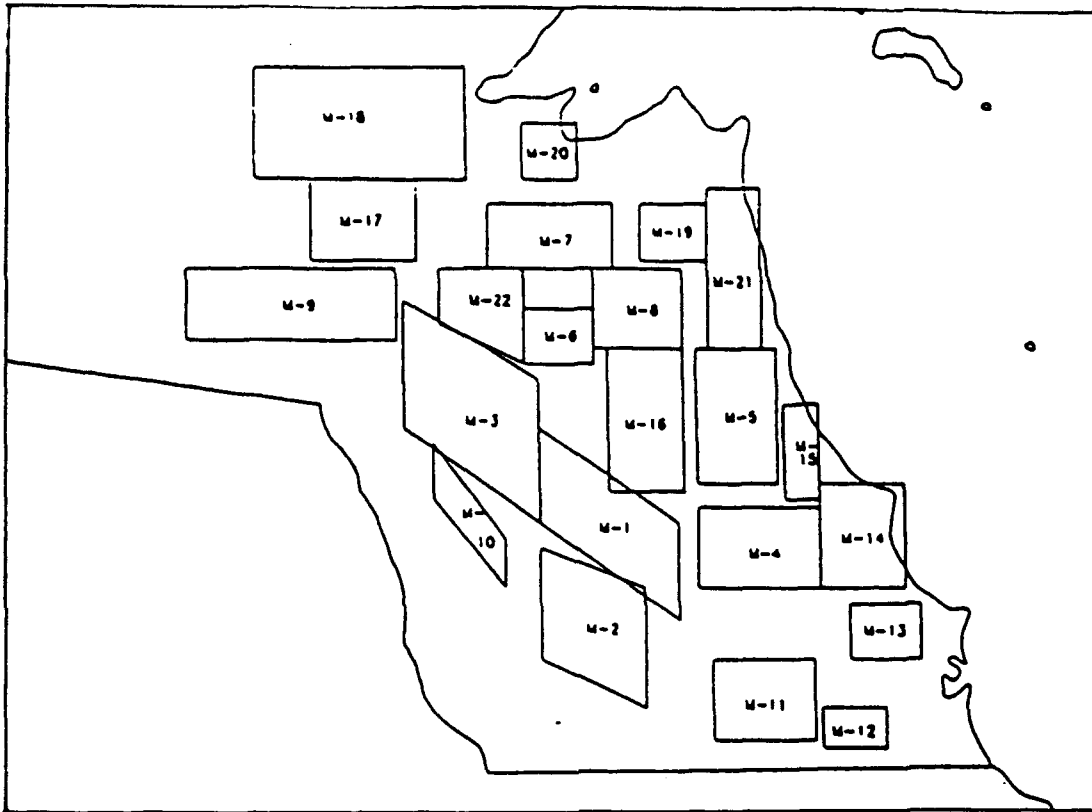


Figure 2. Maneuver Boxes (positions are approximate)

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Joint aviation support was requested from the JFACC to attack these boxes. The attacks were planned to be carried out in a random fashion across the length and breadth of the KTO so as to not reveal the axis of the MARCENT attack towards Kuwait City. Unfortunately, those who were ignorant of the sophisticated nature of the MARCENT plan were too quick to condemn the MARCENT requests for air strikes as “overbombing.”<sup>25</sup> Whatever the root causes for the disagreements were, the real lesson learned from the Desert Storm experience was that the targeting process is extremely important. It is equally important, of course, not to waste aviation assets on targets that might not be critical to the component commanders’ campaign plans. The goal of the air operation should be to ensure that the combat capability of the enemy force is eliminated or reduced as much as possible. Component representatives serving on the JTCB must be fully informed of the component commanders’ operations plans, their intent, and the desired end state of

<sup>25</sup> Hallion, 209.



the operations. Delegation of the targeting oversight responsibility has the effect of fostering disagreements between components over the weight of effort of the joint air attacks. Only the JFC is in a position to adjudicate these disagreements.

## The Role of the MCE

The U. S. Marine liaison team assigned to USCENAF headquarters was formed and led by Colonel Joe Robben, USMC. From a nucleus of three officers the team grew to a total complement of thirty five by the end of Desert Storm. No team like this one had been formed before, and the functions and scope of responsibility of the team was often redefined daily by the issues encountered by the team members. As an example, the targeting representatives on the JTCC grew from request by the JTCC to have a Marine officer present to answer questions on the placement of the MARCENT FSCL.<sup>26</sup> Absent any guidance to the contrary the organization of the team came from the model of the U. S. Army's Battlefield Coordination Element (BCE). While normally the team members referred to themselves as the Marine Liaison to CENTAF, the formal title of MAGTF Coordination Element grew out a requirement to name the team for the purposes of formal documentation of its actions. Various names have been used over the past three years by those referencing the work done by the team. In a recent publication describing the organization of the USAF Tactical Air Control System, no reference is made to a USMC liaison element at all.<sup>27</sup> Because the function of the team closely resembled the U.S. Army's BCE, the title MCE was chosen.

In its final form, at the end of Desert Storm, the team was organized into functional elements that closely resembled the BCE; however, additional members were added to cover key areas not represented in the BCE. These were the AWACS and ABCCC Liaison Sections. Also,

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<sup>26</sup> LtCol John Priddy, interview by author, 27 December 1993, Quantico, transcript.

<sup>27</sup> LtCol Robert J. Blunden, Jr. Tailoring the Tactical Air Control System for Contingencies (Maxwell AFB: Air University Press, 1992), 2.

the BCE is permanently staffed with a complement of twenty eight personnel, and it includes its own intelligence fusion section (see figure 3).<sup>28</sup>

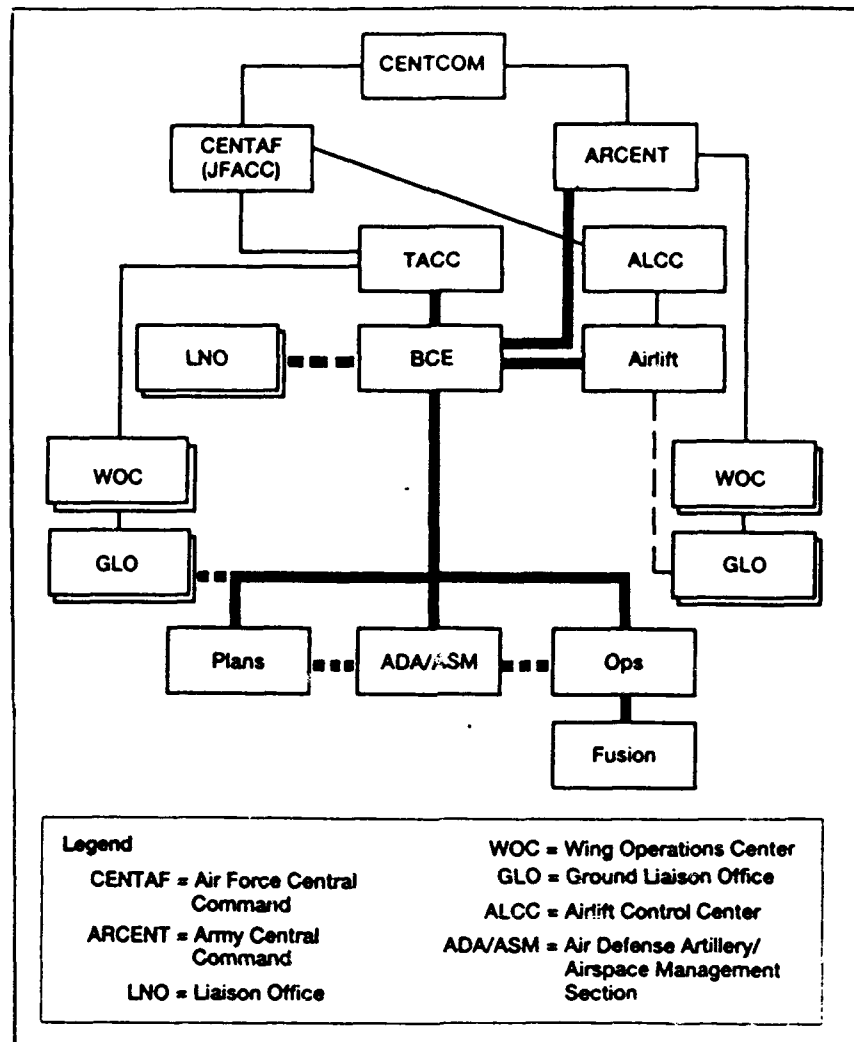


Figure 3. BCE during Desert Storm.

The MCE, on the other hand, had no organic intelligence support section. It was forced to depend on the BCE for assistance.

The MCE is the direct representative of the MAGTF Commander on the JFACC staff. The functioning of the MCE is similar to that the Army's BCE; however, there are some important

<sup>28</sup> LtCol William G. Welch, "Observations on Joint Operations at Echelons Above Corps," *Field Artillery* (June 1992): 16.

differences in the capabilities of the two organizations. Principally the MCE is responsible for the synchronization and coordination of the JFACC's air operation with the MAGTF commander's campaign plan. In addition to this main focus, there are additional functions which the MCE should assume. These additional functions are air defense coordination, airspace planning, operational (Black Hole) planning, and manning of the Joint Rescue Coordination Center (now referred to as the Joint Rescue *Command* Center in some publications). In Desert Storm, the CENTAF Tactical Air Control Center (TACC) USMC Team Leaders were given direct launch authority over a limited number of USAF aircraft via a direct line to the USAF Wing Operations Centers. Additionally, there was tacit, standing permission given for authority to divert coalition air sorties operating under the control of the Airborne Battlefield Command and Control Center (ABCCC) during emergency situations involving Marines in contact. The USMC Team Leader often would find himself in the position of having current and perishable real time intelligence on the location or movement of enemy forces. There was, therefore, the requirement to be constantly aware of what joint sorties might be diverted or launched to attack these fleeting targets.

The MCE was organized around five major sections supervised by a Command Element consisting of the Officer in Charge, the Aviation Branch Officer, and the C3 Branch Officer. The Aviation Branch Officer's main responsibilities included operational planning and development of the daily air tasking order (ATO). The C3 Branch Officer was concerned with airspace coordination and air defense planning. During Desert Storm, the OIC and the Aviation Branch Officer alternated as day and night TACC Team Leaders, responsible to the Director of Operations in the CENTAF TACC for making decisions involving the integration of MARCENT aviation. They also provided the supervision for the TACC Section whose function it was to maintain a

communications link the MARCENT ACE Tactical Air Command Center (TACC). These personnel had the responsibility to monitor the execution of the CENTAF ATO on the Computer Aided Force Management System (CAFMS) computer display and to advise the MARCENT TACC of any important developments in the theater of operations.

The Targets Section provided MARCENT representation on the CENTAF JTCB. Maintenance of the MARCENT target list was a principal function of the Targets personnel. Four officers from this section also manned the Current Operations and Future Plans desks located adjacent to the Army's BCE position in the CENTAF TACC. These two desks were manned twenty four hours per day and had the responsibility for coordination of interdiction beyond the MARCENT FSCL.

The Operations Section had responsibility for the inclusion of MARCENT aviation into the CENTAF ATO. All MARCENT sorties were required to appear on the daily ATO, and there was almost continuous coordination required to carry out this function. During any one day period, one ATO was being executed, one ATO (for the next day) was being checked and distributed, and a third ATO (two days out) was being constructed. Finally, there were two groups of officers assigned as liaison crewmen on the ABCCC and Airborne Warning and Control System (AWACS) aircraft. Every mission crew, therefore, included a USMC liaison officer trained in either air superiority missions (AWACS) or interdiction and close air support missions (ABCCC). These officers provided an important service to the MARCENT ACE, by coordinating MARCENT air support requirements directly with the MARCENT TACC and MARCENT Direct Air Support Center (DASC).

## Implications and Recommendations for Future Warfighters

In future conflicts Naval Expeditionary Forces (NEF) with embarked MAGTFs will be the first to respond with sustainable combat forces capable of conducting a forcible entry on enemy territory. In addition to AV-8 Harrier jets operating from amphibious shipping, the combat power of the NEF's carrier air wing will support USMC forces during the projection of combat power ashore. As the theater matures, the Marine combined arms team will probably be called upon to participate in protracted land operations ashore. NEF carrier and deployed Marine aviation, consisting of F-14 and F/A-18 fighter/attack aircraft and EA-6B electronic warfare platforms will support the early phases of the campaign by establishing air superiority over the battlefield, conducting strategic (long range) interdiction, and long range reconnaissance. The MAGTF will be reinforced by U. S. Air Force aviation and U. S. Army armored and mechanized forces. Joint warfare planners must also consider the contribution of long range, global power projection by U.S. Air Force conventional bomber forces.

Apportionment decisions made by the JFC will be especially critical to the success of landing force operations. The JFACC afloat must remain cognizant of the support requirements of the Commander of the Landing Force, and strike a balance between protection of the NEF and support of the Marines conducting maneuver from the sea. Clearly, the JFACC's role may shift to another component commander within the theater as more C3 capability and aviation assets are deployed. Regardless of which of the service components serve as the JFACC, the key to success on the battlefield is the continued development of integrated C3 systems and joint warfare training which emphasize interoperability.

Careful planning and the judicious use of joint aviation assets will undoubtedly be a critical, and perhaps limiting, factor in the next conflict. The oversight of the apportionment and targeting process should remain, therefore, under the direct supervision of the JFC. Joint warfighters must continue to refine joint doctrine so as to optimize the unique combat capabilities of the individual service components deployed to the battlefield of the future. Land force commanders must emphasize the role of combined arms in campaign planning and integrate aviation assets from all services in interdiction operations conducted within their AOs.

Current plans call for "battlestaffing" the MCE. Failure to permanently man at least one MCE in either MARFORLANT or MARFORPAC headquarters is "penny wise and pound foolish." Joint training in the integration of warfighting components should include the assignment of an MCE to the JFACC staff. Failure to do this now will decrement the warfighting ability of the MEF in future conflicts. Along this same line, a new airspace control structure is needed to accommodate the coordination of air interdiction with the AO of the land force commander. A HIDACZ is not the proper form for this control measure to take. If a component commander is not granted the responsibility for conducting air defense in his sector of the battlespace, a "sub-sector" is needed to allow the component's aviation command and control personnel to carry out their responsibilities. This block of airspace would be delineated by the forward, rear, and lateral boundaries of the AO, from the surface of the ground to an unlimited altitude. Component commanders must refine procedures to control aircraft flying in direct support of the ground combat element commander in this airspace block.

## Conclusion

The proper foundations have been laid in joint doctrine for the effective integration of MAGTF aviation into the theater air war. In the next major regional conflict, now more than ever before, the forward deployed NEF will not only provide a show of force to demonstrate U. S. resolve and conduct non-combatant evacuation operations (NEO) to protect U. S. nationals, but it will also serve as America's only forward deployed force in readiness. Embarked Marine forces will be called upon to project power ashore, supported by embarked Naval and Marine aviation. Rapidly deploying U. S. Air Force aircraft will also make an important contribution to the early stages of the operation by providing a full spectrum of combat power. Centralized coordination of air operations ashore must be effectively and quickly organized by the MAGTF ACE commander. As the theater matures, a JFACC will coordinate joint aviation assets in this theater.

Marine aviation planners will therefore be confronted with the apportionment decision process not only in planning for NEF aviation support of the expeditionary operations of embarked Marine forces, but also for any subsequent land battles supported by USAF aviation. The key to the integrity of the MAGTF as an effective combined arms team will be to thoroughly understand the content of the Omnibus Agreement and diligently participate in the apportionment decision process. Assigned to the JFACC staff, the MCE will synchronize the theater air battle with the campaign plan of the Marine forces commander. Within the boundaries of the Marine Forces AO, the full spectrum of MAGTF aviation and joint air power will be efficiently brought to bear on enemy force, paralyzing his movement and exposing him to rapid, hard hitting, and aggressive maneuver.

Success on the battlefield will be enhanced through joint training. MCEs must be staffed and assigned to the JFACC staff in every joint training opportunity. Training must include



activation of a JTCB and exercise of the joint targeting process. Participation by individual service component, key decision makers on the JTCB is a critical part of this process. Moreover, ATO construction and distribution must be included in the joint training objectives, in order that communications architecture can be validated and exercised. ATO training should include transmission by secure means to a Marine Aircraft Wing headquarters so that assigned units can execute the tasking. Successful integration of the MAGTF combined arms team with U. S. Army, Navy, and Air Force units is the function joint doctrine and the goal of joint training.

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