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**AIR POWER IN SUPPORT OF  
AIR ASSAULT OPERATIONS**

**BY**

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## **Abstract**

AUTHOR: Byron S. Bagby (LTC), USA

TITLE: Air Power in Support of Air Assault Operations

FORMAT: Strategy Research Project

DATE: 7 April 1997

PAGES: 26

CLASSIFICATION: Unclassified

The thesis of this paper is that air power is the most effective operational fire for support of air assault operations. Specifically, this paper explores the efficacy of air power in support of air assault operations employed as a form of operational maneuver. It begins with a discussion of operational maneuver. Next, the paper describes how operational fires complement the air assault operation. The section on operational fires includes a brief discussion of the doctrinal targeting methodology. Three forms of air power--air interdiction, joint suppression of enemy air defenses, and close air support--are discussed in detail in terms of how they complement the air assault operation.

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The Air Force and armor were the thunder of Desert Storm, while the 101st [Airborne Division (Air Assault)] was the lightning.<sup>1</sup>

--H. Norman Schwarzkopf

## INTRODUCTION

During the period between World Wars I and II, the warfighting methodology of the United States' armed forces grew increasingly asymmetrical. This innovative style of warfighting is directly attributable to technological developments.<sup>2</sup> Our capability to employ air power emerged as a most significant development. As speed, payload, and range increased, our ability to conduct strategic bombing increased proportionately.<sup>3</sup> Our ability to effectively synchronize air missions with ground maneuver became the advent of what we now know as close air support.<sup>4</sup> Thus, the effective utilization of strategic bombing and close air support gives us the ability to avoid costly wars of attrition on the ground.

In the early 1960s, Secretary of Defense McNamara directed Secretary of the Army Stahr to take a "bold new look" at land warfare mobility and examine the Army's warfighting methodology in a context totally separate from traditional policies.<sup>5</sup> The Army formed the Howze Board which designed and experimented with various ways to maximize the potential of rotary-wing aircraft. The Howze Board concluded that ground forces could perform operational and tactical tasks much more efficiently and effectively using Army aviation.<sup>6</sup> As such, the air mobile concept was born allowing the aerial movement of forces, equipment, and supplies over great distances and while bypassing obstacles.

The technological advances in air power from the inter-war years, coupled with the air mobile concept created over a quarter of a century later produces a synergistic increase in operational

capability that gives the joint force commander a decisive advantage. Air power, as a form of operational fires, in support of air assault operations, as a form of operational maneuver, can play a significant role in achieving the joint force's objectives.

## **PURPOSE**

The purpose of this paper is to explore the doctrine of employing operational fires in support of operational maneuver. Specifically, this paper will focus on the efficacy of air power in support of air assault operations employed as a form of operational maneuver. The paper's thesis is that air power is the most effective operational fire for support of air assault operations.

This paper will describe how the various types of air power enhance the success of an air assault operation. It begins with a discussion of operational maneuver, focusing on the air assault operation as an operational level task. The paper next describes how operational fires complement the air assault operation. The section on operational fires includes a description of the doctrinal targeting methodology employed to support the air assault operation. Three forms of air power--air interdiction, joint suppression of enemy air defenses, and close air support--are discussed in terms of how they complement the air assault operation.

## **SECTION I**

### **OPERATIONAL MANEUVER**

Operational maneuver is defined in FM 100-7 as "the means by which the commander sets the terms of battle . . . or acts to take advantage of tactical actions."<sup>7</sup> The joint force commander seeks to gain the initiative by conducting major operations and by exploiting success gained

through other operations at the operational or tactical level. These major operations are intended to have a decisive, positive impact on the joint force's overall campaign.

The most common forms of operational maneuver are airborne, amphibious, and air assault operations. One form of operational maneuver that offers the joint force commander great flexibility and that can have a most significant impact on the overall joint campaign is the air assault operation. A division-level air assault task force can provide the joint force commander with capabilities other conventional forces cannot provide.

Air assault operations are deliberate, precisely planned, and vigorously executed to strike over extended distances and attack the enemy when and where his is most vulnerable. . . .

. . . air assault forces can be employed almost anywhere within the JFC's battlespace. They can extend the depth of the battlefield by attacking deep to achieve operational-level objectives (airfields, bridges, or other key terrain) that are linked to the commander's concept of the operation.<sup>8</sup>

An air assault task force provides the joint force commander with the following capabilities: delay a much larger force without becoming decisively engaged; overfly barriers and obstacles and strike objectives in otherwise inaccessible areas; conduct deep attacks out to 150 kilometers beyond the forward line of own troops; rapidly react to operational opportunities and necessities; and quickly place forces at operationally decisive points in the battle area.<sup>9</sup> This capability was demonstrated during Operation Desert Storm when the 101st Airborne Division (Air Assault) conducted a two-phased air assault operation by moving mounted and dismounted soldiers over 155 miles into Iraq to block the operational withdrawal of the Iraqi Army along Highway 8. Their mission was to achieve the joint force commander's objectives of interdicting the enemy lines of communication in the Euphrates River Valley region, preventing Iraqi reinforcements

from entering the battle area, and preventing Iraqi forces from escaping westward from the Basra area.<sup>10</sup>

Air assault operations are always joint and combined arms operations, i.e., involve other services as well as all branches of the Army.<sup>11</sup> Detailed planning must be conducted to ensure that the conditions are set to conduct the air assault operation. The conditions setting process ensures that the enemy force combat effectiveness has been adequately reduced to permit a successful the air assault operation.<sup>12</sup> The conditions must be stated in terms of enemy capabilities and must be verifiable.

Intelligence planners at all levels, particularly at division and higher, play a vital role in identifying these enemy forces, their locations, and their combat effectiveness through a continuous, focused intelligence preparation of the battlefield process.<sup>13</sup> This process is the nucleus of the mechanism that directs the operational fires that sets the conditions for air assault operations.

The exact conditions to be set vary depending on the mission to be accomplished by the air assault task force and the composition of the enemy forces that can affect the air assault operation. Some examples of the condition setting requirements are: all mobile reserves that can attack the landing zone area within 12 hours be reduced in combat effectiveness by 50% or greater; all enemy air defense systems that can affect the helicopter flight routes be suppressed; and the tube strength of all enemy indirect fire assets that can range the landing zone area be reduced in combat effectiveness by at least 50%.



## SECTION II

### OPERATIONAL FIRES

To ensure that the conditions are adequately set for air assault operations, operational fires, known as pre-assault fires for air assault operations, are planned, coordinated, and executed against the targets generated by the intelligence preparation of the battlefield process.

Operational fires are multi-service actions designed to enhance the success of the joint force commander's campaign or major operation.<sup>14</sup> The macro objectives of operational fires include delaying, disrupting, and limiting key enemy functions which enhance the opportunities for success of the air assault operation.

The doctrinal targeting process, a key part of which is intelligence preparation of the battlefield, is used to ensure that the conditions are set for an air assault operation. For an air assault operation, the targeting process takes place at division level and above. In preparation for an air assault operation, the preponderance of the targeting effort takes place at division level. The doctrinal targeting process consists of four steps, *decide*, *detect*, *deliver*, and *assess*.<sup>15</sup>

The first step, *decide*, establishes the overall focus and sets priorities for intelligence collection and the selection of attack systems. The three main products of this step are: a high payoff target list which lists those targets whose loss to the enemy forces will enhance the success of the air assault operation; the intelligence collection plan which directs how the targets are to be located and tracked; and attack guidance which addresses what asset will attack each target and the destruction criteria.<sup>16</sup>

The second step, *detect*, is the execution of the collection plan produced in the first step. The intelligence officer at division level makes maximum use of available collection assets to locate and track the targets prioritized in the *decide* step.<sup>17</sup> The information collected in this step is rapidly passed to commanders to assist in their decision making and to the agencies that will execute the actual attack of the targets.<sup>18</sup> Emphasis must be placed on tracking the targets. Intelligence planners at all levels must coordinate and execute a collection plan that tracks the location of each high payoff target. Target location changes are passed through the appropriate channels to the assets that will engage the targets.<sup>19</sup>

In the third step, *deliver*, operational fires are employed against the targets prioritized in the first step. The attack systems used can be lethal or non-lethal. Based upon the information collected in the previous step, a final decision is made on what attack asset to employ against each target.<sup>20</sup>

The final step, *assess*, determines the effectiveness of the third step, *deliver*. For an air assault operation, the *assess* step is composed of two main elements, combat assessment and re-attack recommendation. Combat assessment seeks to ascertain if the desired destruction criteria were met on the targets for the conditions to be set in order to conduct the air assault operation. This assessment must be as objective as possible. As much as time permits, the intelligence planners at all levels must verify the conclusions reported in the combat assessments. The fire support coordinator and the intelligence officer make a joint recommendation to the commander on the necessity to re-attack selected targets to achieve the desired destruction criteria.<sup>21</sup>

Due to the distances from friendly elements air assault operations take place, there are few collection and attack systems capable of ranging the entire flight route and the landing zone area.

Some of the collection assets are in the form of human intelligence such as special operations forces, long range surveillance units, and military intelligence interrogation teams. Others are satellite imagery, unmanned aerial vehicles and voice intercept systems.<sup>22</sup>

Some of the attack systems capable of providing operational fires in support of operational maneuver, in this scenario, an air assault operation, are: attack helicopters; Army tactical missile systems; naval gunfire; and air power in the forms of air interdiction, joint suppression of enemy air defenses, and close air support.<sup>23</sup> Air power is the system of choice because the attack helicopters are normally committed performing their maneuver role, there are insufficient quantities of Army tactical missiles, and naval gunfire has limited range. The focus of the remainder of this paper will be on the three forms of air power.

### **SECTION III**

#### **THE EMPLOYMENT OF AIR POWER**

The landing zone area for an air assault operation is normally 125-150 kilometers from friendly forces. This significant distance increases the complexity of the planning, coordination, and execution of operational fires. The resources capable of providing fires to effectively set the conditions for an air assault operation are limited. Air power is the most effective system available to the air assault task force to adequately set the conditions with pre-assault fires immediately before and upon arrival in the landing zone area.<sup>24</sup> An assumption is made that at least air superiority has been achieved before air power is employed in support of an air assault operation.

The three types of air power normally employed are air interdiction, joint suppression of enemy air defenses, and close air support. Air interdiction is air operations to destroy, neutralize, or delay the enemy's potential before it can be effectively brought to bear against friendly forces. Joint suppression of enemy air defenses are those lethal and non-lethal actions requiring joint interaction to suppress enemy surface to air defenses. Close air support is air power used against targets which are in close proximity to friendly forces.<sup>25</sup>

An air assault operation is one of the few forms of operational maneuver where the joint forces air component commander and the ground component commander can be both supported and supporting commanders.<sup>26</sup> During the air interdiction phase, the joint forces air component commander conducts the main effort as the supported commander, while the ground component commander is the supporting commander. During the joint suppression of enemy air defenses and close air support phases, the ground component commander conducts the main effort as the supported commander, while the joint forces air component commander becomes the supporting commander.

The air assault operation complemented by air power accommodates the five basic tenets of Army operations. The Army's success on the battlefield is directly related to its ability to effectively execute the five tenets--*initiative, agility, depth, synchronization, and versatility*.<sup>27</sup> More than any other forms of operational maneuver and fires, well-synchronized and effectively executed air assault operations and air power missions set the conditions for the joint force commander's campaign to be successful.

*Initiative* creates an offensive spirit in the conduct of combat operations and changes or sets the terms of battle.<sup>28</sup> One of the primary objectives of an air assault operation, as a form of

operational maneuver, is to rapidly concentrate combat power over extended distances to seize the *initiative* from the enemy. The joint forces air component commander should be given mission-type target nominations, such as prevent motorized forces from moving closer than 10 kilometers from the landing zone. The air interdiction operation engages enemy targets before they can be brought to bear on friendly forces, thereby seizing the *initiative* from the enemy forces.<sup>29</sup>

*Agility* requires fast action to respond to situations quicker than the enemy. The ground component and joint forces air component commanders must design plans for air assault force and air power employment that allow maximum flexibility.<sup>30</sup> The joint forces air component commander must understand the ground operation and be flexible enough to apply air power where and when it is most beneficial to operational success. The ground component commander in general, and the air assault task force commander in particular, must remain flexible enough to adjust the tactical plan to react to changes in the enemy situation and unplanned opportunities to exploit enemy vulnerabilities.

*Depth* is extending combat operations in terms of space, resources, and time.<sup>31</sup> The employment of air power and an air assault task force are deep operations. Both seek to attack the enemy where he is most vulnerable and before he can bring combat power to bear against friendly forces. Air power and air assault operations cause the enemy to commit resources in reaction. These forms of operational fires and operational maneuver, respectively, allow the joint force commander to attack the enemy at locations all over the battlefield.

The main objective of *synchronization* is to mass combat power at the decisive point by arranging combat activities in space and time.<sup>32</sup> Close coordination between the air assault task

force and the joint forces air component commander is imperative. Air power must be keyed to the success of the overall campaign, in general, and the air assault operation, in particular. The current method of ensuring this *synchronization* is the battlefield coordination element [now referred to as battlefield coordination detachment] at the joint forces air component commander's air operations center. This element is composed of Army personnel who provide the interface between the ground component commander and the joint forces air component commander.<sup>33</sup>

*Versatility* is the capability to satisfy various mission requirements.<sup>34</sup> Having almost 300 organic helicopters, the air assault division possesses a *versatility* at all levels of warfare that are unavailable to other conventional forces. The air assault division commander can tailor his forces to meet a wide variety of missions assigned by the joint force commander. The joint forces air component commander has a wide variety of resources that provide a versatile pool of capabilities to the joint force commander. The latter has assets capable of performing air interdiction, joint suppression of enemy air defenses, and close air support.

## **Air Interdiction**

When an air assault task force air assaults deep into enemy territory, it is most vulnerable when it first lands in the landing zone area. Motorized and indirect fire systems pose the greatest threat.<sup>35</sup> A key part of the conditions setting process begins well before the actual air assault operation takes place when targets in the vicinity of the landing zone area are engaged with pre-assault fires. The air power used to provide these pre-assault fires is air interdiction. Air interdiction capable forces consist of land and sea-based air forces.

Air power is ideally suited for pre-assault fires because of its intrinsic speed, maneuverability, range, versatility, and lethality.<sup>36</sup> Air interdiction is the joint force commander's primary means

of destroying or neutralizing those enemy forces beyond the range of friendly surface weapons that can have an effect on the air assault task force in the landing zone area. The ground maneuver and air interdiction must be synchronized by the joint force commander so that each reinforces and complements the other.<sup>37</sup> Effectively planned, coordinated, and executed air interdiction can destroy or neutralize those enemy forces posing the greatest threat to the air assault task force shortly after its arrival in the landing zone area.

Even though air interdiction is conducted to set the conditions for an air assault operation, it can be part of the joint force commander's overall interdiction campaign. In addition to land and sea-based air forces, other interdiction capable forces available to the joint force commander are: ships and submarines employing missiles, torpedoes, and naval gunfire; land forces employing attack helicopters, and airborne and amphibious forces; and special operations forces conducting direct action and terminal guidance for precision-guided munitions.<sup>38</sup>

When aerospace forces compose the majority of the interdiction capability, the joint force commander normally makes the joint forces air component commander responsible for planning and executing the interdiction effort.<sup>39</sup> The commander having responsibility for the interdiction operation must plan symmetrical and asymmetrical actions to maximize exploitation of friendly strengths and enemy weaknesses.<sup>40</sup> This will enhance the probability of success for future operations, including the air assault operation.

As the supported commander for interdiction missions, the joint forces air component air component commander can request that the joint force J3 task other components for various resources. The ground component commander can be tasked for the Army tactical missile system to attack enemy air defenses that could hamper the air interdiction effort. The joint

special operations task force can be tasked to provide terminal strike control for air-delivered precision-guided munitions. The naval component commander can be tasked for a Tomahawk land attack missile to provide a redundant strike capability if the air interdiction effort fails to achieve the desired destruction criteria on the high payoff targets.<sup>41</sup>

Air interdiction employment in the landing zone area may begin several days before the actual air assault begins. The exact duration and magnitude of the air interdiction campaign depends on two factors: first, the size and composition of enemy forces to be destroyed or neutralized, and also whether targets need to be re-attacked before the air assault operation begins.<sup>42</sup>

The exact targets to be destroyed or neutralized by air interdiction are determined during the *decide* phase of the targeting process. The targets to be engaged are those that can have an effect on the air assault task force within the first 12-24 hours it is in the landing zone area.

Consideration is given to enemy and friendly vulnerabilities and time windows when these vulnerabilities are most and least likely, respectively.<sup>43</sup> The three most common target types engaged with air interdiction in support of an air assault operation are air defense systems, indirect fire systems, and armored/mechanized forces. These three types of enemy forces pose the greatest threat to the air assault task force.

The target list that supports the air assault operation is passed from division to corps for review. Targets are added and deleted based on the information available. The list is then sent to ground component level for further review and refinement, as necessary. The target list is then sent from ground component level to joint force level.<sup>44</sup> At each level, target systems and individual targets are identified and prioritized. This process is continuous and there is coordination between levels and among components.



At the joint force level, the joint targeting coordination board produces a joint integrated prioritized target list. This list consists of a prioritized list of the targets submitted by the components. The ground component commander's representative at the Air Operations Center, the battlefield coordination element, is responsible for articulating to the joint targeting coordination board the importance of the high payoff targets that support the air assault operation. This element ensures that these high payoff targets are high on the joint integrated prioritized target list.

The joint targeting coordination board determines the component commander best suited to attack each target based on asset capability and availability. The list is then presented to the joint force commander for approval. Once approved, the list is sent to the component commanders in the form of taskings for execution.<sup>45</sup>

The targets that are passed to the joint forces air component commander are converted into an air tasking order. An air tasking order is the primary vehicle to execute joint targeting for air operations and is the mechanism that allows tasked air units to conduct preparations for missions.<sup>46</sup>

The entire air interdiction campaign takes place before the air assault task force lifts off for their flight from the pick up zone to the landing zone. Once the air assault task force commander is satisfied that the conditions have been set in the landing zone area, the decision for the air assault task force to lift off is made based on an adequate reduction in the enemy force's combat effectiveness.

## **Joint Suppression of Enemy Air Defenses**

The air assault task force is transported to the landing zone area via rotary wing aircraft. These aircraft are vulnerable to enemy air defense systems because of slow speed, low altitude, and the large signature produced by the number of aircraft required to transport the air assault task force. During the assault, 75 helicopters may be airborne simultaneously. The enemy air defense systems most dangerous to an in-flight air assault task force are those that are part of integrated air defense systems, encompassing both fixed and mobile elements. These integrated air defense systems rely on command and control centers and radar guidance systems.<sup>47</sup>

These integrated air defense systems must be temporarily or permanently degraded. Two assets employed against the command and control centers and radar guidance systems of the integrated air defense systems, and visual enemy air defense systems are suppression of enemy air defenses and joint suppression of enemy air defenses. Suppression of enemy air defenses are disruptive and destructive measures that destroy, neutralize, or temporarily degrade enemy air defenses. Joint suppression of enemy air defenses pertains to all suppression of enemy air defense means provided by all components of a joint force.<sup>48</sup> Due the distance traveled from friendly elements, joint suppression of enemy air defenses for the air assault operation must take advantage of the capabilities of the assets of all components.

Planning for joint suppression of enemy air defenses operations in support of air assault operations is a three step process. First, a detailed assessment is made of the enemy air defenses and their ability to hinder the air assault operation. Second, the joint force commander must decide on the duration, magnitude, and scope of the suppression mission that is necessary to reduce the enemy air defense risk to an air assault task force in-flight. Third, a careful review is

made of the capabilities of available suppression resources and competing requirements for these assets.<sup>49</sup>

Each service component possesses unique capabilities to suppress enemy air defense systems. Therefore, commanders are normally able to select the best system or combination of systems to conduct a particular joint suppression of enemy air defense mission.<sup>50</sup> Due to the distance traveled by the air assault task force and its vulnerability while in-flight, the need to rely on the assets of other services is great. In providing joint suppression of enemy air defenses for an air assault operation, the most effective means are airborne suppression platforms.

There are three categories of joint suppression of enemy air defenses. Joint area of operations air defense suppression seeks to support the macro joint force campaign objectives by destroying or degrading the effectiveness of selected enemy air defense systems throughout the joint area of operations. Opportune suppression is normally unplanned due to time constraints and includes engaging targets of opportunity and air crew self protection. Localized suppression are conducted to support specific missions and are usually conducted within selected areas and during selected time periods.<sup>51</sup>

An air assault operation is conducted during a specified time period and along a specified route structure. Therefore, localized suppression is most applicable to air assault operations to protect the air assault task force in-flight as it transits the route to the landing zone. The air assault operation receives residual benefit from the joint area of operations air defense suppression and opportune suppression.

Air assault operations require localized suppression, in general, and corridor suppression, in particular.<sup>52</sup> Corridor suppression planning for an air assault operation begins at the air assault

division where an assessment is made of the availability of organic assets. Next, the air assault flight route structure and known or suspected enemy air defense targets that exceed the capability of organic assets are forwarded through channels to the joint force staff. At the joint force staff, the route structure and targets are reviewed by the joint targeting coordination board for prioritization and tasking.

Due the nature of the air assault operation, airborne suppression capabilities are the systems of choice. The Air Force, Navy, and Marines have platforms for the purpose of executing joint suppression of enemy air defense missions with the primary mission of suppressing the enemy's integrated air defense structure. The targeting cells at corps-level and above must ensure that electronic coverage encompasses the areas where the enemy air defense systems are located and the coverage is timed to provide protection when the air assault task force is most vulnerable, while in-flight.

The joint forces air component commander is responsible for coordinating the planning and execution of airborne suppression missions. The joint forces air component commander produces a prioritized threat list. This list is generated after carefully considering the flight profiles and self defense capabilities of the friendly aircraft, and the order of battle of the enemy air defenses and their capabilities.<sup>53</sup>

Careful coordination must take place to ensure that mutual interference is avoided, since the effects of airborne electronic suppression activities can potentially degrade friendly operations by jamming friendly communications, collection, and radar systems. This coordination and deconfliction is conducted by the component liaison officers positioned at the joint air operations center.

Hence, air interdiction focuses on defeating those enemy forces in the vicinity of the landing zone before arrival of the air assault task force. Joint suppression of enemy air defenses, in general, and localized suppression, in particular, help protect the air assault task force while it is in-flight. The next mission, close air support, is air power employed against hostile targets which are in close proximity to friendly forces, i.e., used to engage enemy forces that are near the air assault task force after it arrives in the landing zone area.

### **Close Air Support**

Close air support, as a tool of operational fires, is directed against those enemy forces that were not identified during the *decide* phase of targeting or were not destroyed or neutralized by the air interdiction missions. Close air support is the most effective asset available to the air assault task force commander to deliver lethal fires against enemy forces. The only fire support assets in the initial elements of the air assault task force are short range artillery that have an effective range of less than 20 kilometers.<sup>54</sup> Support provided by short range artillery to the air assault task force is limited due to range, mobility, target type, and munition suite. Close air support provides the air assault task force commander with the necessary range, flexibility, speed, and armament needed to engage enemy elements that cannot be effectively engaged by other supporting arms.<sup>55</sup>

The air assault task force commander evaluates his need for close air support against four criteria.<sup>56</sup> First, will close air support enhance the success of his mission and concept of the operation? Next, what enemy air defense threat exists in the vicinity of the landing zone area to hinder close air support operations and what is the joint force's capability to counter that threat? Third, what types of close air support assets are available, what munitions will they carry, and

are the aircraft all weather and night capable? Finally, is it possible to effectively integrate close air support with other supporting arms?<sup>57</sup>

Even though the basic concept of close air support is simple, safe and effective execution requires rigorous training, precise planning, and detailed coordination. The nine conditions or critical factors for effective close air support operations are: air superiority; suppression of enemy air defenses; target marking; favorable weather; prompt response; air crew and terminal controller skill; appropriate ordnance; communications; and command and control.<sup>58</sup>

Air superiority must exist in order for the close air support platforms to operate effectively in the landing zone area, while denying the enemy the same freedom. Enemy air defense systems in the landing zone area must be suppressed before close air support can engage targets. Ordinarily, the joint suppression of enemy air defenses operations conducted for the air assault operation can be planned to cover the landing zone area, thereby protecting the close air support platforms.<sup>59</sup>

The air assault task force commander can increase the effectiveness of the close air support by providing marking for the target. Target marking assists the air crews in identifying the exact target and is accomplished by using laser designators, infrared devices, indirect fire systems firing smoke, and radar beacons.<sup>60</sup> Air crew effectiveness is enhanced with favorable weather. Even though adverse weather capable aircraft may be available to the air assault task force, some of their associated radars, beacons, and acquisition systems are degraded in conditions of heavy precipitation.<sup>61</sup>

For close air support to effectively support the air assault task force commander, it must be responsive. There are three primary techniques the joint forces air component commander can

use to reduce the response time for providing close air support. First, the use of forward operating bases closer to the front lines decreases the distance to the landing zone area. Second, the air crews can be placed on strip or airborne alert status. Finally, the authority to launch or divert air missions can be delegated to subordinate units.

Execution of close air support missions is complex. The air crews and terminal controllers must be highly proficient. In order to maintain a high degree of proficiency, they must practice frequently. Fire support personnel and enlisted or officer forward air controllers assigned or attached to the air assault task force must be proficient in providing terminal control for close air support. The air assault task force commander must know the types of ordnance available to be expended and its associated limitations. For example, cluster munitions should not be employed in densely vegetated areas where friendly forces will maneuver. Hardened or mobile targets are best engaged with laser guided munitions instead of general purpose munitions.<sup>62</sup>

The requesting, planning, and execution of close air support in support of air assault operations relies on interoperable and dependable communications among terminal controllers, air control agencies, and the air crews. These communications links are particularly critical during the execution of close air support missions. A flexible, integrated command and control structure is necessary for close air support to be effective. This structure must allow for proper direction and routing of air crews, deconfliction with other fires, and the adequate air space control measures.<sup>63</sup>

Close air support missions are tactical level operations that are planned and executed to enhance the mission accomplishment of tactical units and task forces, i.e., the air assault task force once it arrives in the landing zone area. Although it is a tactical operation, close air support

is related to the operational level of war by the air apportionment process.<sup>64</sup> The close air support process is initiated by a request from the air assault task force commander. The requests are submitted as either pre-planned or immediate.

Pre-planned requests are those that are projected far enough in advance to be included in the air tasking order. Pre-planned requests are forwarded through fire support elements at each echelon. Pre-planned requests can be either on-call or scheduled. On-call requests are submitted to satisfy an anticipated requirement for close air support; however, the exact time and location will be finalized as the operation develops. On-call requests can be supported by either airborne or strip alert, which are most commonly requested by the air assault task force. Scheduled requests are forwarded when the supported unit can identify the target location and desired time on target well in advance. On-call requests offer the maneuver force the most flexibility. However, scheduled requests provide the opportunity for more in depth coordination.<sup>65</sup>

Immediate close air support requests are generated from situations that develop once the battle has begun. These situations are not identified in sufficient time to allow for detailed planning and coordination. The joint forces air component commander may be required to divert pre-planned air missions to support higher priority immediate close air support requests. Immediate close air support requests are forwarded to the appropriate command post through the most expeditious means, which is through Air Force channels.<sup>66</sup>

Close air support is most effective when it is integrated with other supporting fires. One of the most challenging tasks for fire support elements is to integrate close air support with surface fire support assets. One of the key challenges lies in being able to achieve the desired effect by attacking the same target or target group simultaneously, if possible, with close air support and



other surface systems. Another challenge is to deconflict the airspace usage to protect the air crews.<sup>67</sup> The airspace in the landing zone area will have rotary wing aircraft entering and exiting, indirect fire systems engaging targets, and close air support platforms transiting.

The three types of air power employed in support of air assault operations are air interdiction, joint suppression of enemy air defenses, and close air support. Effectively planned, coordinated, and synchronized with maneuver, these types of air power greatly increase friendly probability of success.

## **SECTION IV**

### **CONCLUSION**

United States armed forces have made great progress technologically and doctrinally during the 20th Century. The prominence gained by air power between World Wars I and II and the Howze Board's creation of an air assault concept in the early 1960s represent some of the most significant capabilities available to the late 20th Century joint force commander.

Air assault forces are specifically designed, equipped, and trained to perform operational maneuver tasks, the most common of which is the air assault operation. The nation depends on them as a strategic and operational "trump card." The joint force commander relies on these forces to achieve operational-level objectives. As demonstrated during Operation Desert Storm, these forces are capable of achieving theater campaign objectives. The opportunities for success are greatly enhanced when well-planned, coordinated, and executed operational fires, particularly air power, are synchronized with the air assault operation.

The forms of air power best capable of supporting the air assault operation are air interdiction, joint suppression of enemy air defenses, and close air support. These capabilities are ideally suited to assist in setting the conditions for the air assault operation and in protecting the air assault task force while in-flight and when it initially arrives in the landing zone area. Air power is a combat multiplier for the air assault task force and is frequently the only effective operational fire support available.

## End Notes

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- <sup>1</sup> Thomas Taylor, Lightning in the Storm: the 101st Air Assault Division in the Gulf War (New York: Hippocrene, 1994), 5.
- <sup>2</sup> Williamson Murray and Allan R. Millet, Military Innovation in the Inter-war Period (Cambridge: Cambridge University Press, 1996), 1.
- <sup>3</sup> *Ibid.*, 98.
- <sup>4</sup> *Ibid.*, 144.
- <sup>5</sup> Hamilton H. Howze, A Cavalryman's Story: Memoirs of a Twentieth Century Army General (Washington: Smithsonian Institution, 1996), 236.
- <sup>6</sup> *Ibid.*, 253.
- <sup>7</sup> Department of the Army, Decisive Force: The Army in Theater Operations, Field Manual 100-7 (Washington: U.S. Department of the Army, 31 May 1995), 5-1.
- <sup>8</sup> Joint Chiefs of Staff, Joint Doctrine for Airborne and Air Assault Operations, Joint Pub 3-18.1 (Final Coordinating Draft) (Washington: U.S. Joint Chiefs of Staff), II-2.
- <sup>9</sup> Department of the Army, Tactical Standard Operating Procedures, with changes 1 and 2 (Fort Campbell: 101st Airborne Division (Air Assault), 1 May 1994), I-A-1.
- <sup>10</sup> Michael R. Gordon and Bernard E. Trainor, The General's War: The Inside Story of the Conflict in the Gulf (Boston: Little, Brown, and Co., 1995), 386.
- <sup>11</sup> Joint Pub 3-18.1, I-4.
- <sup>12</sup> 101st Airborne Division, I-A-1-4.
- <sup>13</sup> John J. Cushman, Thoughts for Joint Commanders (Annapolis: Whitmore Printing, 1993), 9.
- <sup>14</sup> Field Manual 100-7, 5-3.
- <sup>15</sup> Department of the Army, The Targeting Process, Field Manual 6-20-10 (Washington: U.S. Department of the Army, 8 May 1996), 1-5.
- <sup>16</sup> *Ibid.*, 2-1.
- <sup>17</sup> *Ibid.*, 2-10.
- <sup>18</sup> Joint Pub 3-18.1, A-3.
- <sup>19</sup> Field Manual 6-20-10, 2-11.
- <sup>20</sup> *Ibid.*, 2-12.
- <sup>21</sup> *Ibid.*, 2-14.
- <sup>22</sup> Field Manual 6-20-10, B-5.
- <sup>23</sup> Field Manual 100-7, 5-5.
- <sup>24</sup> Joint Pub 3-18.1, A-2.
- <sup>25</sup> Joint Chiefs of Staff, Doctrine for Joint Fire Support, Joint Pub 3-09 (Final Coordinating Draft) (Washington: U.S. Joint Chiefs of Staff, 18 April 1996), GL-4.
- <sup>26</sup> Joint Chiefs of Staff, Doctrine for Joint Operations, Joint Pub 3-0 (Washington: U.S. Joint Chiefs of Staff, 1 February 1995), III-14.
- <sup>27</sup> Department of the Army, Operations, Field Manual 100-5 (Washington: U.S. Department of the Army, 14 June 1993), 2-6.
- <sup>28</sup> *Ibid.*
- <sup>29</sup> Department of the Air Force, Basic Aerospace Doctrine of the United States Air Force, Air Force Manual 1-1, volume II (Washington: U.S. Department of the Air Force, March 1992), 271.
- <sup>30</sup> Field Manual 100-5, 2-7.
- <sup>31</sup> *Ibid.*
- <sup>32</sup> *Ibid.*, 2-8.
- <sup>33</sup> Dennis J. Reimer and Ronald R. Fogleman, "Joint Warfare and the Army-Air Force Team." Joint Forces Quarterly 11 (Spring 1996): 12.
- <sup>34</sup> Field Manual 100-5, 2-9.
- <sup>35</sup> Joint Pub 3-18.1, II-5.
- <sup>36</sup> Air Force Manual 1-1, volume II, 79.

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- <sup>37</sup> Price T. Bingham, Ground Maneuver and Air Interdiction in the Operational Art (Maxwell: Air University Press, 1989), 2.
- <sup>38</sup> Joint Chiefs of Staff, Doctrine for Joint Interdiction Operations, Joint Pub 3-03 (Final Coordinating Draft) (Washington: U.S. Joint Chiefs of Staff), V-1.
- <sup>39</sup> Air Force Manual 1-1, volume II, 163.
- <sup>40</sup> Joint Pub 3-03, I-1.
- <sup>41</sup> Field Manual 6-20-10, 3-3.
- <sup>42</sup> *Ibid.*, 2-16.
- <sup>43</sup> Joint Pub 3-03, III-1.
- <sup>44</sup> Field Manual 6-20-10, 3-11.
- <sup>45</sup> Reimer and Fogleman, 12.
- <sup>46</sup> Field Manual 6-20-10, 3-3.
- <sup>47</sup> Joint Chiefs of Staff, Joint Tactics, Techniques, and Procedures for Joint Suppression of Enemy Air Defenses, Joint Pub 3-01.4 (Washington: U.S. Joint Chiefs of Staff, 25 July 1995), I-3.
- <sup>48</sup> *Ibid.*, I-1.
- <sup>49</sup> *Ibid.*, II-1.
- <sup>50</sup> *Ibid.*, I-5.
- <sup>51</sup> *Ibid.*, I-1.
- <sup>52</sup> *Ibid.*, III-9.
- <sup>53</sup> *Ibid.*, III-7.
- <sup>54</sup> *Ibid.*, II-5.
- <sup>55</sup> Joint Chiefs of Staff, Joint Tactics, Techniques, and Procedures for Close Air Support, Joint Pub 3-09.3 (Washington: U.S. Joint Chiefs of Staff, 1 December 1995), III-3.
- <sup>56</sup> John A. Warden, III, The Air Campaign: Planning for Combat (Washington: National Defense University Press, 1988), 103.
- <sup>57</sup> Joint Pub 3-09.3, I-3.
- <sup>58</sup> *Ibid.*, I-5.
- <sup>59</sup> *Ibid.*, I-6.
- <sup>60</sup> *Ibid.*, V-4.
- <sup>61</sup> *Ibid.*, I-6.
- <sup>62</sup> *Ibid.*
- <sup>63</sup> *Ibid.*
- <sup>64</sup> *Ibid.*, I-1.
- <sup>65</sup> *Ibid.*, III-3.
- <sup>66</sup> *Ibid.*
- <sup>67</sup> *Ibid.*, IV-9.

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