

AD-A059 806

ARMY WAR COLL CARLISLE BARRACKS PA

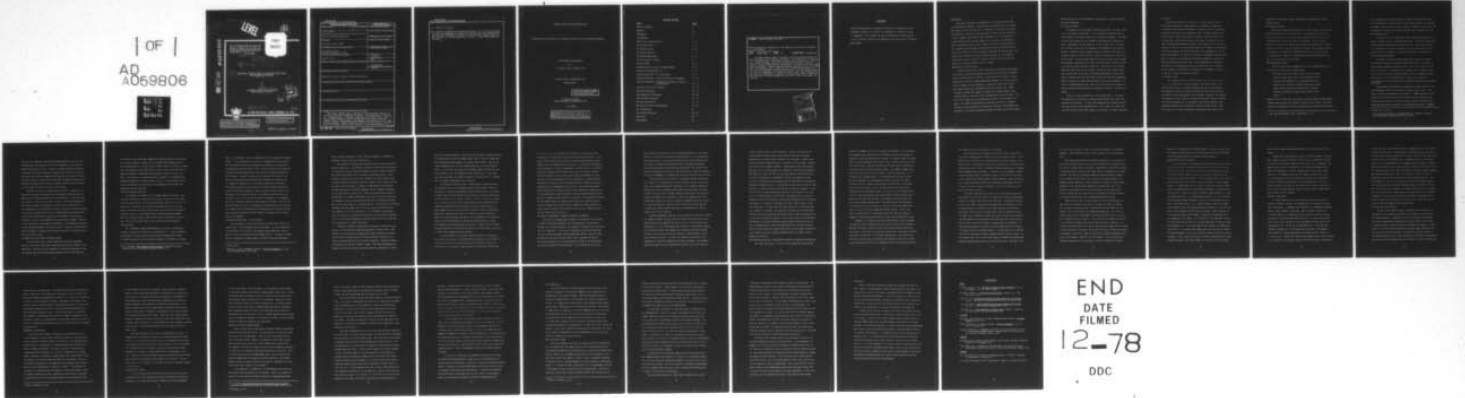
F/6 15/7

RETHINKING THE APPLICATION OF THE ARMY-AIR FORCE TEAM ON THE MO--ETC(U)  
MAY 78 J M REEVES

UNCLASSIFIED

NL

| OF |  
AD  
A059806



**LEVEL II**

②

AD A059806



The views expressed in this paper are those of the author and do not necessarily reflect the views of the Department of Defense or any of its agencies. This document may not be released for open publication until it has been cleared by the appropriate military service or government agency.

11 12 MAY 1978

12 35p

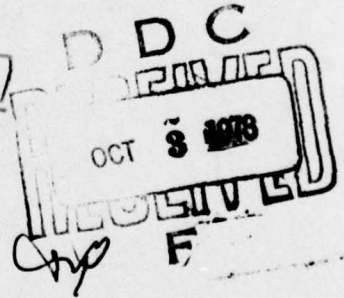
⑨ Individual study project

⑥ RETHINKING THE APPLICATION OF THE ARMY-AIR FORCE TEAM ON THE MODERN BATTLEFIELD

by

⑩

Lieutenant Colonel John M. Reeves  
United States Air Force



403 565

JOB

US ARMY WAR COLLEGE, CARLISLE BARRACKS, PA 17013



The views expressed in this paper are those of the author and do not necessarily reflect the views of the Department of Defense or any of its agencies. This document may not be released for open publication until it has been cleared by the appropriate military service or government agency.

Approved for public release; distribution unlimited.

COPY No. \_\_\_\_\_ OF \_\_\_\_\_ COPIES

78 09 15 008

DDC FILE COPY

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Rethinking the Application of the Army-Air Force Team on the Modern Battlefield		5. TYPE OF REPORT & PERIOD COVERED
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) LTC John M. Reeves, USAF		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS US Army War College Carlisle Barracks, PA 17013		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS Same as Item 9.		12. REPORT DATE 12 May 78
		13. NUMBER OF PAGES 29
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		15. SECURITY CLASS. (of this report)  UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)  Approved for public release; distribution unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)  This paper examines some of the major interrelationships between air and ground forces on the modern battlefield. The examination is conducted at a conceptual level. The paper structures the air-land battle, looks at some possible problems in the Air Ground Operations System, proposes a scheme of target prioritization, and suggests a reorientation of our target planning approach. Subjects addressed include airstrike control, the Corps Direct Air Support Center, target selection, limited breakthroughs, and		

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

20. ABSTRACT (Continued)

the requisite conditions for battlefield success. The conclusion stresses the value of reexamining our target selection process, and recommends that the Army institutionalize a tactical air support staff element, manned by Army officers, at various headquarters involved in combat development and training.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)



USAWC MILITARY STUDIES PROGRAM PAPER

RETHINKING THE APPLICATION OF THE ARMY-AIR FORCE TEAM ON THE MODERN BATTLEFIELD

AN INDIVIDUAL STUDY PROJECT

by

Lt. Colonel John M. Reeves, USAF

Colonel John J. Benacquista, USA

Study Advisor

Approved for public release;  
distribution unlimited.

US Army War College  
Carlisle Barracks, Pennsylvania 17013

12 May 1978

The views expressed in this paper are those of the author and do not necessarily reflect the views of the Department of Defense or any of its agencies. This document may not be released for open publication until it has been cleared by the appropriate military service or government agency.

78 09 15 0081

TABLE OF CONTENTS

<u>TOPIC</u>	<u>PAGES</u>
Table of contents	i
Abstract	ii
Disclaimer	iii
Introduction	1
Modern Force Characteristics	1 - 2
The Air-Land Battle	2 - 3
The Theater System	3 - 4
Operational Doctrine	4
The Breakthrough Tactic	4 - 5
The Covering Force Contact	5
The Corps DASC	5 - 6
Forward Close Air Support Planning Element	6 - 7
Doing the Covering Force Job	7 - 8
Required Conditions - Air Superiority	8 - 11
Required Conditions - Effective Control of Firepower	11 - 13
Required Conditions - Suppression of Enemy Air Defenses and Artillery	13 - 17
Selecting Units for Air Attack	17 - 18
Beating a Dead Horse	18 - 19
A New Approach to Targeting	19 - 20
Battlefield Interdiction	20 - 21
The Main Force Battle	21 - 22
Dealing With Limited Breakthroughs	22 - 24
Air Interdiction	25
The Distributed Attack	25 - 27
Conclusion	28
Bibliography	29

**AUTHOR(S):** John M. Reeves, LTC, USAF

**TITLE:** Rethinking the Application of the Army-Air Force Team on the Modern Battlefield

**FORMAT:** Individual Study Project

**DATE:** 12 May 1978

**PAGES:** 29

**CLASSIFICATION:** Unclassified

This paper examines some of the major interrelationships between air and ground forces on the modern battlefield. The examination is conducted at a conceptual level. The paper structures the air-land battle, looks at some possible problems in the Air Ground Operations System, proposes a scheme of target prioritization, and suggests a reorientation of our target planning approach. Subjects addressed include airstrike control, the Corps Direct Air Support Center, target selection, limited breakthroughs, and the requisite conditions for battlefield success. The conclusion stresses the value of reexamining our target selection process, and recommends that the Army institutionalize a tactical air support staff element, manned by Army officers, at various headquarters involved in combat development and training.

ACCESSION for	
NTIS	White Section <input checked="" type="checkbox"/>
DDC	Buff Section <input type="checkbox"/>
UNANNOUNCED	<input type="checkbox"/>
JUSTIFICATION	
BY	
DISTRIBUTION/AVAILABILITY CODES	
	and/or SPECIAL
A	

DISCLAIMER

The views expressed in this paper are those of the author and do not necessarily reflect the views of the Department of Defense or any of its agencies. This document may not be released for open publication until it has been cleared by the appropriate military service or government agency.



## INTRODUCTION

This paper discusses the application of the Army-Air Force team on the modern battlefield. The discussion is conducted upon the conceptual plane, and for the most part is restricted to the level of employment doctrine. The body of the paper deals briefly with the characteristics of modern combat forces, and then moves on to a description of current United States military doctrine as it applies to a European-style battlefield, some pertinent aspects of Soviet military doctrine, and a number of conclusions and assertions the author derives from the interplay of forces on the battlefield. The paper was written while the author was a student at the U.S. Army War College, but the opinions expressed herein are solely the author's and do not reflect official positions of either the Army or the Air Force.

## MODERN FORCE CHARACTERISTICS

Modern combat forces possess two characteristics which distinguish them clearly from their ancestors: high mobility and massive firepower. These characteristics are present in both land and air forces. Modern ground units tend to be highly mechanized, armored, and they are equipped with weapons of high lethality. Modern air forces tend to have high speed, long range, and accurate delivery capabilities. Mobile firepower confronts the general of today with a higher degree of uncertainty than he would have had to contend with thirty years ago. The location of enemy units at a given point in time is less likely to be known. The probable enemy objectives are more difficult to discern because his speed and mobility broadens his options. The warning time available to a defender has shrunk because the enemy's ability to rapidly

mass firepower with a minimum amount of preparation is greatly enhanced by modern technology.

#### THE AIR-LAND BATTLE

The characteristics of modern combat forces drive the basic structure of the modern battlefield. It is a battlefield characterized by a high degree of fluidity. Change can be rapid and dramatic. Air forces of both sides operate over and beyond the battlefield to considerable depth. Helicopters operate along the line of contact and in the rear. Anti aircraft systems dot the landscape, some hand-held, some vehicle mounted. Some electronic equipment jams the airwaves; other electronic equipment listens to radio traffic. Guided and unguided anti tank missiles abound. Precision guided bombs are directed against point targets. Reconnaissance platforms of all shapes and descriptions record and pass on information about battlefield activity. Artillery fire is intense. Smoke and flame cloud the battlefield. Tanks and other armored fighting vehicles weave in and out of the smoke exchanging fire with other tanks in defilade and anti tank teams firing from cover and concealment. Radars of many types search the battlefield and the sky overhead. The lines of communication on both sides of the battlefield are choked with men and supplies urgently moving to designated locations. Confusion is common.

That is a brief description of the air-land battle. It is not, unfortunately, a sufficiently definitive description to be useful for purposes of discussion. It lacks both dimensions and a grossly quantified description of the opposing forces. Even further, it lacks a description of what either side thought it was going to do when it entered

the battle.

The air-land battle as I will use it in this paper is one of several battles going on simultaneously in a theater of operations. It involves forces roughly equivalent to a corps on the U.S. side, and a combined arms army on the Warsaw Pact side. The battle may not involve a single corps, it may involve elements of more than one. The air-land battle is roughly cylindrical in shape. The base of the cylinder extends slightly beyond the corps rear boundary on the U.S. side, slightly to the rear of those ground combat units capable of influencing the battle outcome on the Warsaw Pact side, and encompasses all of the local combat front. The top of the cylinder is congruent with the base, and it is fixed at an altitude which slightly exceeds the highest air traffic transiting the battle area. The air-land battle discussed in this paper is a conventional battle, not because the use of tactical nuclear weapons is infeasible, but because it so changes the nature of the battle it requires separate treatment.

#### THE THEATER SYSTEM

The air-land battle is a discrete entity as I have described it, but it is a component of a larger system. The larger system is the theater battle, and it interacts strongly with the air-land battle. The channels of direct interaction between the theater battle and the air-land battle are principally air and logistic channels. The theater air defense activity, offensive counter-air activity, and air interdiction activity meshes with the cylinder of the air-land battle. The logistics channels are the life-blood of the air-land battle. Other less direct, or at least non-physical interactions take place in the

exchange of intelligence, combat information, and command and control communications.

#### OPERATIONAL DOCTRINE

Before our hypothetical air-land battle began, each of the participants had some sort of a plan in mind. In a generalized sense, that plan can be regarded as the operational doctrine which articulates the recommended behaviour for battlefield commanders. For U.S. ground forces, that doctrine is spelled out in Army Field Manual 100-5, "Operations". (FM 100-5) For U.S. tactical air forces, the emerging doctrine is spelled out in Tactical Air Command Manual 2-1 (Draft), "Tactical Air Operations". (TACM 2-1) Those manuals are the starting point for much of the discussion in this paper.

#### THE BREAKTHROUGH TACTIC

FM 100-5 assumes that a Warsaw Pact attack in Europe would be in the form of a classic Soviet breakthrough.

"The Soviet Army, for example, attacks on very narrow fronts in great depth, with artillery massed at 70 to 100 tubes per kilometer in the breakthrough sector. Against a U.S. division in Europe, Warsaw Pact forces might throw as many as 600 tanks into the leading echelon, followed by an equal number shortly thereafter."<sup>1</sup>

Against such an attack, FM 100-5 suggests that the defender might deploy a heavy covering force well forward of the main battle area. The covering force is assigned the tasks of determining the strength and location

---

<sup>1</sup> U.S. Army Field Manual 100-5, "Operations", p. 5-2



of the enemy main attack, preventing the enemy from learning friendly force dispositions in the main battle area, degrading enemy air defenses, and buying time for the main body to adjust its defense. Eventually, the covering force closes on the main battle area and is absorbed into the defending main force.<sup>2</sup>

It would be naive to assume that there is total agreement that an attack in Europe would be a breakthrough attack. There are increasingly strong arguments suggesting that it will not be. But, for the moment, let us explore the kinds of air-ground interaction that would be most beneficial to the defender if a breakthrough attack is encountered.

#### THE COVERING FORCE CONTACT

Obviously, the initial ground combat would take place between the covering force and the attacking Warsaw Pact units. Two items of joint interest immediately come to mind. First, if any close air support is required, it is needed by the covering force. Second, if anyone is likely to know with precision where close in enemy ground units are located, it is the covering force. Herein lies a problem.

#### THE UTILITY OF THE CORPS DIRECT AIR SUPPORT CENTER DURING COVERING FORCE OPERATIONS

The planning and coordination necessary to satisfy close air support requests is done by the Direct Air Support Center (DASC). The DASC is normally co-located with the Corps.<sup>3</sup> Remembering back to the description of the activity in the air-land battle on page two, how likely do you suppose it is that the Corps, and hence the DASC, has a real-time grasp on the situation in the covering force area? Remember

---

<sup>2</sup> Ibid. Pp. 5-10, 5-11

<sup>3</sup> U.S. Air Force Tactical Air Command Manual 2-1 (Draft), "Tactical Air Operations", October 1977, Pp. 3-14, 4-42

also that the enemy has a substantial jamming capability and that the covering force initially may be 30 or 40 kilometers, or even further beyond the main battle area. I believe a prudent man would think that a combination of normal confusion, jamming, and destruction of equipment would make reliable communications between the Corps and the covering force unlikely. That may well mean that the agency responsible for planning the application of close air support lacks the data necessary to do the job, and that is the nub of the problem.

The DASC is billed as a mobile facility, and to a degree, it is. The mobility of the DASC however, does not compare favorably with the mobility of the major elements in the covering force. If the DASC were more mobile, it might be possible to locate it with the covering force. That would alleviate the problem, provided the DASC could survive in the environment of the covering force area. Clearly, the massive amounts of artillery associated with a Soviet breakthrough attack suggest that a lot of high explosives are going to be detonating in the covering force area. That in turn suggests that any facility designed to operate in the covering force area should be hardened. Since hardness and mobility are both requirements, and since the DASC is usually a large facility (over 100 people) it simply does not appear practical to locate the DASC with the covering force.

#### A FORWARD CLOSE AIR SUPPORT PLANNING ELEMENT

A better answer than a forward DASC might well be an expanded Tactical Air Control Party (TACP) operating from armored vehicles. The functions of the TACP could be expanded to include the planning of close air support, and in situations where communications with the DASC are

not practical, the TACP could assume DASC responsibilities as they apply to close air support. Whether or not the TACP could communicate with other agencies such as the Tactical Air Control Center is subject to doubt. But, the expansion of the TACP charter would at least allow the TACP to explore alternative communication links when it could not talk to the DASC. The capability to plan might well be helpful in a communications jamming environment for another reason as well. It could reduce the volume of information that would have to be exchanged with the DASC when communications were possible.

#### DOING THE COVERING FORCE JOB

For purposes of discussion, let's assume away for the moment any problems that may exist because of the physical separation of the Corps and the covering force. What would the defender really like to do? He would like to carry out the four tasks mentioned earlier, and in the course of carrying out those tasks he would like to inflict the heaviest possible attrition on the enemy without becoming decisively engaged. How can the Army and the Air Force work together efficiently to do the job? First let's look at some Soviet views on operations against a covering force.

A.A. Sidorenko assigns reconnaissance a key role in enabling the attacker to deal effectively with a covering force.<sup>4</sup> He also advocates encirclement of strong points coupled with rapid penetration of gaps to capture defensive positions before covering force elements can occupy

---

<sup>4</sup> A.A. Sidorenko, The Offensive (A Soviet View), translated and published by the U.S. Air Force, Moscow, 1970, p. 141



them. In Sidorenko's view, this combat activity is conducted by mounted troops.<sup>5</sup> The disposition of forces in a breakthrough sector is such that the Warsaw Pact can add considerable firepower to the problem of overcoming the covering force at will. Massive amounts of artillery are available, and additional combat units can be sent into the fray with little delay. In order to carry out the covering force tasks in the face of Soviet doctrine and Warsaw Pact firepower, the defender must do a number of things well, but two basic things stand out sharply. The defender must use his firepower to maximum advantage, and he must retain his freedom of maneuver. Certain conditions must be met if the defender is to do those two things. The defender must have local air superiority if he is to retain his freedom of maneuver. The defender must have a workable system for controlling his firepower, both air and ground delivered, if he is to maximize the effectiveness of his weapons. The defender must suppress enemy air defenses and artillery both to maximize his own firepower and retain freedom of maneuver for his forces, both air and ground.

#### THE REQUIRED CONDITIONS - AIR SUPERIORITY

Air superiority in the context of the air-land battle takes on a local flavor. That perception can be misleading. Air Force experience in North Africa in World War II was dismal when aircraft were parcelled out to fly air defense cap over friendly units.<sup>6</sup> The way to achieve local air superiority clearly seems to be most effectively approached

---

<sup>5</sup> Ibid. p. 140

<sup>6</sup> Laurence S. Kuter, "Goddamit Georgie!", Air Force Magazine, Vol. 56, No. 2, February 1973, Pp. 51-56.



from a theater perspective. From a theater viewpoint, a counter-air campaign is waged to gain air superiority.

The counter-air campaign has two major aspects: defensive and offensive counter-air. The defensive counter-air operations are designed to protect our critical rear area targets and also to keep the Warsaw Pact tactical aircraft off of the backs of our ground units. Since defensive counter-air aircraft will generally intercept inbound enemy aircraft as early as possible, they will appear in the airspace over the air-land battle frequently. Obviously a high degree of coordination between the theater air defense commander and the commander fighting the air-land battle is called for. There are a considerable number of ground-based air defense systems under the control of the air-land battle commander, and our joint doctrine calls for the integrated employment of our ground and air air defense assets. It will give us a marvelous advantage over the enemy if we can put our doctrine into practice in the confusion of the air-land battle. It is certainly an advantage worth striving for, and perhaps the acquisition of the newer technology like the E-3A Airborne Warning and Control System (AWACS) will make our doctrine practical as well as desirable.

Offensive counter-air operations are designed to destroy the opposing air forces and the supporting apparatus of those forces. When offensive air operations are coordinated properly between the theater battle and the air-land battle, they can contribute directly to the local air superiority which is so vitally important. Offensive counter-air operations do this in a number of ways. They can attack enemy air forces over their own territory and deny them the opportunity to inter-

fere in the air-land battle. They can time the attack of enemy airfields in a given sector so that the enemy cannot react in force to repel massive air-ground attacks against his ground combat forces. They can interpose themselves as a barrier between enemy air forces and friendly forces. In the short run, they can intimidate enemy air forces so they are reluctant to fly, and ineffective when they do fly. In the long run, they can destroy the enemy air force to a degree where it is incapable of playing a meaningful role in the war.

One thing seems crystal clear. Defensive and offensive counter-air operations will have a profound impact on the conduct of the air-land battle. They will not achieve instant success, and it is too much to expect that the large Warsaw Pact tactical air forces will disappear from the battlefield in a matter of days. Some of our rear area targets will be struck, and some of our ground forces in the forward area will experience enemy air attacks for the first time in several wars. It seems probable to me that we will move a step at a time. Theater-wide counter-air operations will have to be aimed at the total enemy air force, but such operations will have to be coordinated with the participants in the air-land battle to achieve the maximum amount of local air superiority at critical places and times. Without local air superiority, aircraft such as the A-10 and the A-7 will face serious risk, both to their effectiveness and their survival.

One final aspect of counter-air operations requires discussion. If we can do a good job of coordinating the activities of the theater war and the air-land battle, we may realize some additional benefits not discussed up to this point. Army firepower and electronic warfare cap-

abilities can be used to enhance the survival of Air Force aircraft operating in or transiting through the air-land battle cylinder. Such support could increase the number of successful penetrations to deeper targets, such as airbases, and could result in a measurable speeding up of the campaign to gain air superiority. In some cases, it is possible that Army firepower could substitute for certain Air Force sorties. Surface-to-surface missiles with cluster bomb unit warheads and variable delay fused sub-munitions could be launched at a number of enemy airbases in a certain sector a few minutes before a massive air-ground attack mission is launched by the Air Force. The surface-to-surface missile attack with the limited objective of denying the enemy the use of his airfields for a short period of time may be quite cost-effective. The use of manned aircraft for such a mission is still feasible of course, but the enemy's heavy air defenses could make such a mission costly. Given the Warsaw Pact aircraft shelter program and recent advances in runway repair techniques, the return on such a raid by manned aircraft may not always justify the cost.

#### THE REQUIRED CONDITIONS - EFFECTIVE CONTROL OF FIREPOWER

The type of firepower most pertinent to the purpose of this paper is aurally delivered firepower, and the discussion in this section focuses on air strike control. The problem of effective air strike control is a tough one. I am not now returning to the problem involving close air support planning which was mentioned earlier. This is a new problem area, and one that would exist even if command and control functioned perfectly up to the point where a flight of strike aircraft arrived at the edge of the battle area. In the recent past, the air-



borne Forward Air Controller (A-FAC) figured prominently in air strike control. He was the link between the supported unit on the ground and the strike flight. He could see the battle area, he was familiar with the tactical situation on the ground, and he thoroughly understood aircraft and ordnance capabilities and limitations. The A-FAC's aircraft was equipped with all of the radios necessary to work the problem, and A-FAC performance in Southeast Asia was both efficient and effective.

Two major factors are present in a European scenario which operate to deny us the opportunity to use the A-FAC as we have in the past. First, the enormous Warsaw Pact investment in air defense systems has resulted in an air environment where neither the A-FAC nor the strike aircraft can loiter in the target area while they assess the situation. Second, the Warsaw Pact investment in electronic warfare gives them a substantial capability to deny us effective communications, both air-to-air, and air-to-ground. The fact that the Soviet air forces may opt to attack the A-FAC is also significant, but conceptually it may be lumped with the first factor.

We have responded to the loss of the traditional role for the A-FAC in a number of ways. We have moved the A-FAC to the rear where he can survive, and we have modified his role to one of traffic control and radio relay. We have also upgraded the importance of the ground Forward Air Controller (G-FAC) and expanded the training of artillery forward observers so that they may direct airstrikes. Unfortunately, this is only a partial solution. It solves the vulnerability aspect of the problem, but leaves the communications aspect untouched. The technologists are assaulting the communications problem, and in the long run



I have no doubt they will find a solution. Even so, serious loss of effectiveness in strike control will accrue so long as the sensing apparatus of the strike control system is on the ground. Target acquisition and target designation will be limited to line of sight. Targets over the hill will remain a mystery. Consequently, G-FACs and forward observers will be prioritizing their targets on insufficient information. The inability to see over the hill not only degrades the prioritization of close in targets, but it degrades the close air support planning process and introduces an unpleasant amount of uncertainty in the ground commander's maneuver plans. I believe what we have done is what we should have done to provide an interim solution to a difficult problem. I also believe that the only satisfactory solution to the problem in the long run is the rehabilitation of the A-FAC. The answer may be a high performance aircraft with extensive self-protection capability and jam-resistant radios. It might be a two-place A-10 with 10,000 pounds of self-protection gear. It might even be a small drone with a television camera. However it is done, I am convinced that some sort of aerial platform must see the battlefield and transmit what it sees intelligibly and in real time if close air support is to be truly effective on the modern battlefield. We can do relatively simple things with aircraft when we have no communications with the ground forces, but we cannot fully exploit our high technology capabilities, such as laser target designation, if we cannot talk, and we cannot sensibly select the targets without seeing over the hill.

#### THE REQUIRED CONDITIONS - SUPPRESSION OF ENEMY AIR DEFENSES AND ARTILLERY

The reader may think it odd that I have paired artillery and air

defenses in tandem, but there is a logical relationship. For one thing, left unsuppressed, artillery and air defenses restrict the freedom of maneuver of both our ground and air forces. For another thing, artillery and air defenses suppress our ability to use our ground and aerial firepower effectively. Both the Army and the Air Force have the capability to destroy Armored Fighting Vehicles (AFVs). The enemy's scheme of attack relies heavily on the use of AFVs. If the covering force is to accomplish its assigned tasks, it is necessary that the Army and the Air Force maximize the effectiveness of their respective firepower systems to net the largest possible number of AFV kills. On the face of it that seems simple --- both the Army and the Air Force should concentrate their firepower on AFVs. In fact, it is not simple at all. It is at least possible that some other target selection option could yield a greater net kill of AFVs. The massive Soviet artillery fire will unquestionably suppress some of the Army's AFV killing systems. If the Air Force were to attack, as a matter of priority, enemy artillery, it would free up more Army AFV killing systems. The net kill might be greater than if we both went after AFVs and did nothing to augment the counter battery capability of our own out-gunned artillery.

Likewise, it is possible that the concentration of Army firepower on enemy air defense weapons would give the Air Force greater freedom of movement and permit heavy air attacks with precision guided munitions. Once again, the net AFV kill with such a division of effort may be greater than what we would achieve if we both attacked AFVs. The Army and the Air Force are analyzing such problems, and hopefully there will be some valuable insights to assist the commanders who must make resource alloca-

tion decisions on the battlefield of the future.

Some objections to the kinds of division of effort described in the previous paragraph are couched in roles and missions terms. I will admit that on the face of it, counter-battery fire, for example, is an Army mission. I would simply note that the real value in having explicit roles and missions is that it prevents excessive duplication in research and development and procurement. I believe a little pragmatic bending on the battlefield may be necessary. Again, in the case of artillery, it just happens that factors such as target hardness, target disposition, and a rather doctrinaire Warsaw Pact deployment scheme make artillery a rather attractive target for aircraft. If it will help us win the air-land battle, why not?

A few more words need to be said about air defense suppression. The Warsaw Pact has large numbers of systems, and they are demonstrably effective as shown in the last Middle East war. I made some reference to the use of Army firepower and electronic warfare capability to aid in suppression in the section of the paper dealing with counter-air operations. Every little bit helps, and I think it important enough to repeat here. We need to develop the kind of inter-Service coordination that permits us to help each other deal with these tough threats. The Air Force itself can do much to suppress enemy air defenses. In some cases suppression is achieved by using self-protection equipment in conjunction with specialized tactics. In other cases it is achieved by directly attacking air defense systems whenever they are found. In the extreme case, the Air Force might wage an extensive air defense suppression campaign which might go on for several days. Once again, the



choice of which approach to take to suppression belongs to the Theater Commander. Which approach he will take is going to be situation-dependent.

The basic purpose behind air defense suppression is, of course, to reduce our aircraft losses so that we can fly effective air ground attack missions for as many days as required. Suppression is the direct approach to reducing losses. There are also some indirect approaches to the same problem. The indirect approaches emphasize reducing aircraft exposure to air defense systems rather than taking active efforts against the weapons systems themselves. Simple avoidance is possible in some cases. Avoidance is not possible when dealing with targets near the line of contact, but a combination of good intelligence and judicious use of terrain features can certainly be used to minimize the enroute exposure of aircraft penetrating to and returning from deeper targets.

There is also a way to reduce exposure of aircraft working at or near the line of contact, and that is to reduce the number of passes an attacking aircraft must make to achieve the desired results on the target. This is essentially an ordnance-dependent approach. The Air Force presently has a large number of precision guided munitions suitable for attacking hard point targets. These weapons are enormously effective by any previous standards, but they do have a practical drawback. In typical European weather, it is likely that only one target can be attacked on any given pass. This means that an A-10 carrying six Maverick missiles for example, would have to make six passes for a maximum expected missile kill of six targets. That is a lot of exposure. If we had good anti-armor area munitions in the inventory it might be possible to achieve



similar kill expectations with fewer passes. I believe a truly flexible weapons inventory would include both precision guided point munitions and area munitions with various fusing options.

#### SELECTING UNITS FOR AIR ATTACK

If we assume that the conditions set forth above have been satisfied, we still have to grapple with the conceptual problem of who we should attack when. Past wars have tended to demonstrate that close air support against engaged targets is difficult, challenging, and regretfully, rather inefficient. (I note Southeast Asia as an exception.) That does not mean the Air Force cannot or should not attack engaged targets, it simply means that it is more efficient to attack a target before it engages because it ameliorates the problem of target identification and it reduces the risk to friendly troops inherent in close-in ordnance delivery. In a breakthrough scenario, it is quite obvious that destroying targets hundreds of miles in the enemy rear will not have a short-term effect. It is equally obvious, given the forward force concentrations, that catastrophe may overtake us in the air-land battle before long-term effects have any impact. With virtually all of our ground combat power forward, a major unit breakthrough would be disastrous, if not fatal. It is activity in the immediate vicinity of the air-land battle that is of crucial importance in the early days of a European war. If we accept the FM 100-5 premise of breakthrough operations, it is apparent that enemy forces will not only be arrayed in deep echelonment, but they will also be concentrated on very narrow frontages. Thus, there will be one or several concentrations of enemy targets throughout the theater which will be of critical importance.

Those critical enemy concentrations should be the principal Air Force targets.

Within those concentrations, there are forces arranged in echelon. Logic suggests that the Air Force effort in the air-land battle should be focused on the nearest enemy main force units, not yet engaged. Engaged targets should be attacked only as the ground commander deems absolutely necessary. Air Force concentration on the nearest enemy forces not yet engaged should force the enemy to commit more forces to the covering force battle, disrupt the timing of his echeloned assaults, contribute significantly to the covering forces' ability to delay, and sap the strength of the enemy's main forces. Dissipation of Air Force resources against targets not associated with the enemy's main attacks should be avoided.

#### BEATING A DEAD HORSE

A slight digression is in order here to cope with a potential resource allocation problem. The problem might be described as "beating a dead horse". A defender, most especially an outnumbered defender, places a high premium on efficiency. When firepower resources are critically short, it is dangerous folly to use two or more resources to destroy a target when one alone could do it. A given type of Army unit on the line is capable of servicing targets as they arrive up to some maximum rate. Let us say for the moment that a covering force company is engaged with an attacking tank battalion. The company is fully capable of dealing unsupported with target arrival rates up to a certain point. Beyond that point, excess target arrival rate will have to be serviced by non-organic resources such as artillery, attack heli-

copters, and close air support aircraft. Assuming that the total effort is adequate to the task of handling the attacking battalion, and assuming additional Air Force assets are left over, what of the next battalion in line? That is the battalion that I suggested earlier the Air Force ought to be concentrating on, but a nagging question intrudes. How hard should the Air Force work on that battalion? Should the Air Force strive for 10% destruction? 20%? 30%? The answer is important because whenever the required destruction criterion is achieved, it frees Air Force resources to work on the third battalion approaching the battle. The ideal answer is that the Air Force should inflict just enough damage on the second battalion so that the defending company can service the target arrival rate of the residual unit without further close air support. If the Air Force were to spend significant excess effort on the second attacking battalion, we would not only be beating a dead horse, but we may be allowing the units behind to arrive at such a rate that the Air Force and the Army together cannot handle them.

#### A NEW APPROACH TO TARGETING

One way to move toward a greater theoretical efficiency in the employment of the Army-Air Force team is to change the orientation of our targeting system. Instead of letting our airstrike requirements be driven by geographical boundaries and rather general predictions of enemy activity, we should consider a target-driven system. In other words, let the 8th Guards Tank Army or the empty umph battalion drive the air attack sortie requirement in conjunction with the posture of our affected units on line. The ideal would be to evolve a system which specified an Army requirement for the Air Force to inflict an explicitly



stated result on an enemy unit. The desired result could be expressed in terms of some level of destruction by some point in time or before the enemy unit reaches some geographical feature. It could also be expressed in terms of a desired amount of delay. Attainment of the ideal is not likely, however I believe greater efficiency would result if we never got much beyond tasking the Air Force to prevent attacker-defender ratios from exceeding a specified value. Such a system would at least offer the advantage of permitting each Service to do what it knows most about. The Army is expert at estimating what it can handle, and the Air Force is expert at estimating the numbers and types of aircraft required to execute a specific task.

#### BATTLEFIELD INTERDICTION

One of the implications of targeting in the air-land battle as I have proposed it is that targets should be struck in a priority which derives from their potential effect on the battle. This means that the target priority is independent of arbitrary boundaries established for ease of command and control. The target could be at varying depths, depending upon the situation, or it could be straddling unit boundary lines. Sometimes air attacks on enemy ground force units would be close air support, and at other times they might be interdiction. The term "battlefield interdiction" is frequently used to describe such attacks, and the term is acknowledged in TACM 2-1, (Draft).<sup>7</sup> Battlefield interdiction is generally used as a descriptive term to delineate a class of targets, ground force units, regardless of their depth or location, provided such units can be reasonably assumed to have potential effect

---

<sup>7</sup> TACM 2-1 (Draft), p. 4-31



on the outcome of a battle in progress. There are other classes of targets of the types associated with the traditional air interdiction role which are so closely linked with the maneuver or performance of enemy ground force units that they might comfortably fit within the general meaning of the "battlefield interdiction" descriptor. Such target classes might include bridges whose destruction would have immediate effect upon the movement of a ground force unit being treated as a battlefield interdiction target. They might also include forward supply or rearming points whose destruction would have short-term effect on enemy combat capability. I would suggest that such targets be included under the term "battlefield interdiction" even though they are not combat units.

The very existence of the term has implications of its own. It suggests that the problem of targeting a heavy concentration of enemy forces is a joint problem, and that all of the components of the enemy concentration should be treated as a single system. This in turn means that the Army and the Air Force in the air-land battle share target planning as it applies to enemy combat units to considerable depth, and it suggests that the air-ground attack prioritization process should take into account the entire threat system as it applies to the air-land battle. It is difficult to see why that is not a sensible approach to the problem.

#### THE MAIN FORCE BATTLE

As the covering force closes with the main battle area, and as the main battle itself develops, the logic for the most efficient application of Air Force strike sorties remains essentially unchanged.

The Air Force should focus the brunt of its air-ground attack efforts on the nearest enemy forces not yet engaged along a major axis of attack. Air-ground attack resources left over, if there are any, should be applied against enemy follow-on units in succession. Keeping the "dead horse" problem in mind, the Air Force should shift its attack efforts from the front to the rear of echeloned attacking forces, abandoning each successive target unit when it has been sufficiently attritted and moving on to the next unit in line. Attacks against engaged targets will be performed as necessary to preserve the defense, but such attacks should be limited to necessity, not preference.

#### DEALING WITH LIMITED BREAKTHROUGHS

There is one terribly significant difference between the covering force battle and the main battle. The main battle in a very real sense is the last line of resistance. There are very few reserves to the rear of the main battle. Hence, if an enemy unit does break through and follow the Soviet doctrine of rapid penetration to great depth, the Army-Air Force team is confronted with a new and dangerous problem.<sup>8</sup> It seems to be a problem not addressed squarely by our doctrine. While FM 100-5 implies that some breakthroughs might occur by stating that support elements must be prepared to defend themselves, even against armored attack, the manual offers little explicit treatment of how the joint force might respond to the problem.<sup>9</sup>

If we consider for a moment that a breakthrough has occurred, we have to deal with two aspects of the problem. There is the aspect related to the unit which has broken through and is heading Lord knows

---

<sup>8</sup> V.Y. Savkin, The Basic Principles of Operational Art and Tactics, translated and published by the U.S. Air Force, Moscow, 1972, p. 170

<sup>9</sup> FM 100-5, p. 5-14

where in our rear. There is also the aspect related to the exploitation force, a relatively fresh and untouched force perhaps, which is poised to move into the breakthrough zone and sweep into our rear.

Of the two forces, the most threatening seems to be the exploitation force. The initial breakthrough force may well be physically and logistically weakened by the effort expended to achieve the penetration. Logically, if we have enough assets to deal simultaneously with both forces we will, but if we do not, it seems to me that the priority should go to restoring the defensive line and disabling the exploitation force. The kinds of things the Air Force and the Army have to do together to do that are very similar in nature to the operations I have described to this point.

The kinds of things we have to do to the unit which has penetrated are less clear. The eyes, ears and guns of our land forces are concentrated well forward in the main battle area. Given that fact and the speed of movement possible with a modern mechanized or armored force, it is not unreasonable to conclude that an enemy unit which achieves a breakthrough might get "lost". If that should happen, who is best equipped to find it and deal with it? Both the Army and the Air Force have systems capable of doing the finding job, but the bulk of the Army's systems may well be busy elsewhere. It is quite likely that some information would surface through civil authorities, support units, or local militia. It seems apparent that the Air Force could provide the most immediate reaction, but at the same time, because of the fleeting and transitory nature of air attacks it is unlikely the Air Force could immobilize the target unit without committing very large numbers of



aircraft --- numbers which the joint force may not be able to afford given problems elsewhere. It may be possible to take a joint task force approach to the problem. Light units, heavy in anti-armor munitions, could be designated as contingency forces to be heli-lifted or air-lifted to a point of engagement with a penetrated force. Such units could be drawn from territorial forces, or possibly support forces. The Air Force could be assigned the responsibility for finding and tracking a penetrated force, and the joint task force Commander could be given the requisite staff to plan and execute the operation.

Since the target unit is operating in some isolation, and since it paid a price in attrition to get where it is, it is likely that the air defenses of the unit are considerably less formidable than those of a similar unit in the main battle area. At least the problem of overlapping air defenses is reduced. That being the case, it is possible that the A-FAC might be able to operate in the vicinity of the target much as he did in Southeast Asia. Other Air Force assets which are probably too vulnerable to survive in the main battle area could be used to work the problem as well --- the AC 130 gunships mounting the 105mm cannon for instance.

It is curious to note that the problem of dealing with an enemy unit which has broken through to depth is not even addressed by our current military definitions. Initially, it may not be engaged by ground forces. Therefore, any airstrikes conducted on the unit are not close air support; neither are they interdiction. I believe a few Army-Air Force round table discussions could be quite useful in developing a body of mini-doctrine to address the attack of penetrated units.



## AIR INTERDICTION

The air interdiction of deep targets has historically been an important component of any theater campaign. Most discussion of a European war in the modern context treats such missions lightly. I believe that makes sense if the perception of a short war proves accurate. In a long war the destruction of deep targets can have great significance. Fortunately, if the Allies are successful in extending the short war to a long war, the Theater Commander will have the time to reassess the value of air interdiction and weigh the opportunity costs deriving from the commitment of air resources to that role. It is important, however, that our peacetime planning include a well reasoned prioritization of deep targets. It does, and I only mention the subject in this paper to make the point that air interdiction will probably increase in importance as the war progresses, and the Air Force retains the capability to carry it out.

## THE DISTRIBUTED ATTACK

The entire paper to this point has been based on the presumption that the Warsaw Pact will employ classic Soviet breakthrough tactics with deeply echeloned forces concentrating on a very narrow breakthrough sector. Many of my colleagues are uneasy with that presumption, and I note with interest that TACM 2-1 (Draft), which I erroneously expected to mirror FM 100-5, instead emphasizes the short warning or unreinforced attack.<sup>10</sup> In such an attack, there would still be echelonment, but not to the degree or depth associated with the breakthrough. Such an attack would also be more evenly distributed across the frontage and the

---

<sup>10</sup> TACM 2-1 (Draft), p. 2-13

intense concentrations associated with the breakthrough would be absent, or at least infrequent. Logic suggests that such an attack against a covering force would result in a mixed bag of successes and failures. The battlefield could easily assume a granular characteristic with a fairly wide band of mixed friendly and enemy forces. A granular battlefield devoid of massive concentrations presents a different series of challenges than those posed by the breakthrough.

For one thing, the number of relatively poorly coordinated small unit engagements is likely to be high. This means that the close air support system will have to interoperate effectively with Army units at the lower levels: frequently battalion; occasionally company. That requirement has a Southeast Asia ring to it, but that is the way it is. It is unlikely that any joint air-land battle staff will be able to plan in meticulous detail the close air support requirements of such a battle. The need for an effective replacement for the A-FAC is even more pressing in the case of a granular battlefield than the breakthrough. Reliable and secure communications are an absolute must, and a view of what's over the hill is essential if we are to achieve real efficiency in the close air support process.

The desirability of attacking enemy ground force targets before they engage remains undiminished in the case of the distributed attack. But, the lack of massive concentration makes it more difficult to find and prioritize targets. The use of aircraft in an armed reconnaissance role will probably have more utility over a granular battlefield than it would in the case of a breakthrough.

The distributed attack will place heavier demands on our joint

planning and command and control apparatus than the breakthrough. The breakthrough at least has the virtue of simplifying prioritization and offering concentration in such density that targeting and airstrike control can be effective even with marginal air-ground communications at the line of contact. Even so, there are plusses in our favor should the attack be distributed. For one thing, attacker-defender force ratios are not quite as frightful as they are with the breakthrough. For another thing, the enemy's air defense umbrella may suffer some dilution on a granular battlefield. It is also likely that the enemy's command and control will degenerate significantly in the course of a distributed attack. The Warsaw Pact tactical air forces simply do not appear to have the flexibility to provide effective close support to their forces during such an attack. It seems more plausible that the enemy can be defeated piecemeal, and his isolated units can be subjected to continuous attrition by tactical air forces and attack helicopters.

The key to joint success against the distributed attack will be effective command and control of our resources. In my judgement, the emphasis will switch from careful planning to responsive execution on our side, and I believe our joint Air Ground Operations System will give us a sufficient measure of responsiveness even though degraded by damage and enemy electronic warfare. If we are successful in defeating the distributed attack, and if the enemy does not simply quit, then we will see the prepared attack or breakthrough. That is why the bulk of this paper focuses on the breakthrough attack even though many people feel it will not be the initial Warsaw Pact attack preference. If we do not eventually see the breakthrough tactic, it may mean we have failed.



## CONCLUSION

Much of this paper describes problems and concepts which are not new. Work is proceeding apace in many areas mentioned in the paper. The core of what is new in this paper is centered around the change in orientation of the targeting system. It is in that area that I would like to stir up discussion and debate, and should that debate result in positive conclusions, I would hope that the Army and the Air Force could get together on the development of a detailed system from the ground up.

Finally, while there is nothing in the body of this paper directly related to my closing thought, I would like to end this paper with a plea to the Army. I believe that a simple organizational decision would go a long way toward easing the joint development of solutions to the tough problems of the modern battlefield. I believe that every Army headquarters which deals closely with combat developments or training ought to have an air support staff element --- not manned by blue suiters, but manned by green suiters. I am convinced that the close air support/battlefield interdiction customer has at least as much at stake as the air support supplier. Such staff agencies could review current and evolving Air Force doctrine and tactics and develop Army views. The Air Force would have an Army "Mr. Close Air Support" to work with, and Army Commanders would have independently developed green suit views on what's good and bad about current and projected ways of doing business.



## BIBLIOGRAPHY

### BOOKS

- Douglas, Joseph D. Jr., The Soviet Theater Nuclear Offensive, Vol. 1, Washington: U.S. Air Force, undated
- Garthoff, Raymond L., Soviet Military Doctrine, Glencoe Ill.: The Free Press, 1973
- Savkin, V. Ye., The Basic Principles of Operational Art and Tactics, Moscow: Translated and published by the U.S. Air Force, 1972
- Scott, William F., Soviet Sources of Military Doctrine and Strategy, New York: Crane, Russak & Company, Inc., 1975
- Sidorenko, A. A., The Offensive, (A Soviet View), Moscow: Translated and published by the U.S. Air Force, 1970

### ARTICLES

- Erickson, John, "Trends in the Soviet Combined Arms Concept", Strategic Review, Winter, 1976
- Kuter, Laurence S., "Goddamit Georgie", Air Force Magazine, Vol. 56, No. 2, February 1973
- Turner, Frederick C., "Comments on FM 100-5 from a Soviet Point of View, or (The New Amerikanskiy Manual on Operational Art and Tactics)" U.S. Army War College, March 15, 1978

### REPORTS

- Erickson, John, "Soviet Military Power", United States Strategic Institute Report 73-1, Washington: 1973
- "The Soviet Union in Europe and the Near East: Her Capabilities and Intentions", Royal United Service Institution Whitehall, London: 1970

### MANUALS

- U.S. Air Force, U.S. Tactical Air Command Manual 2-1 (Draft), "Tactical Air Operations", October 1977
- U.S. Army Field Manual 100-5, "Operations", Change 1 included, July 1976