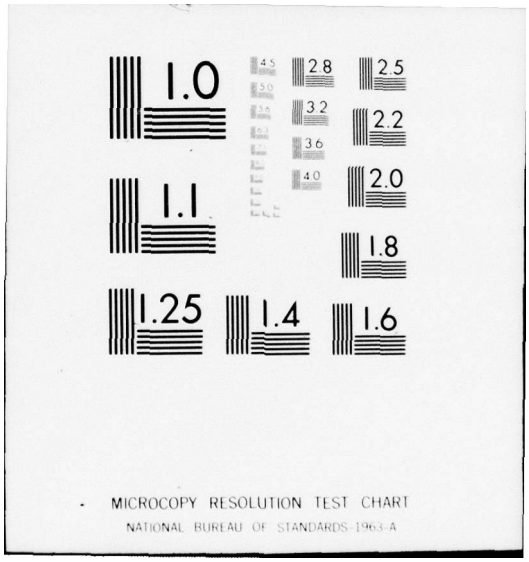
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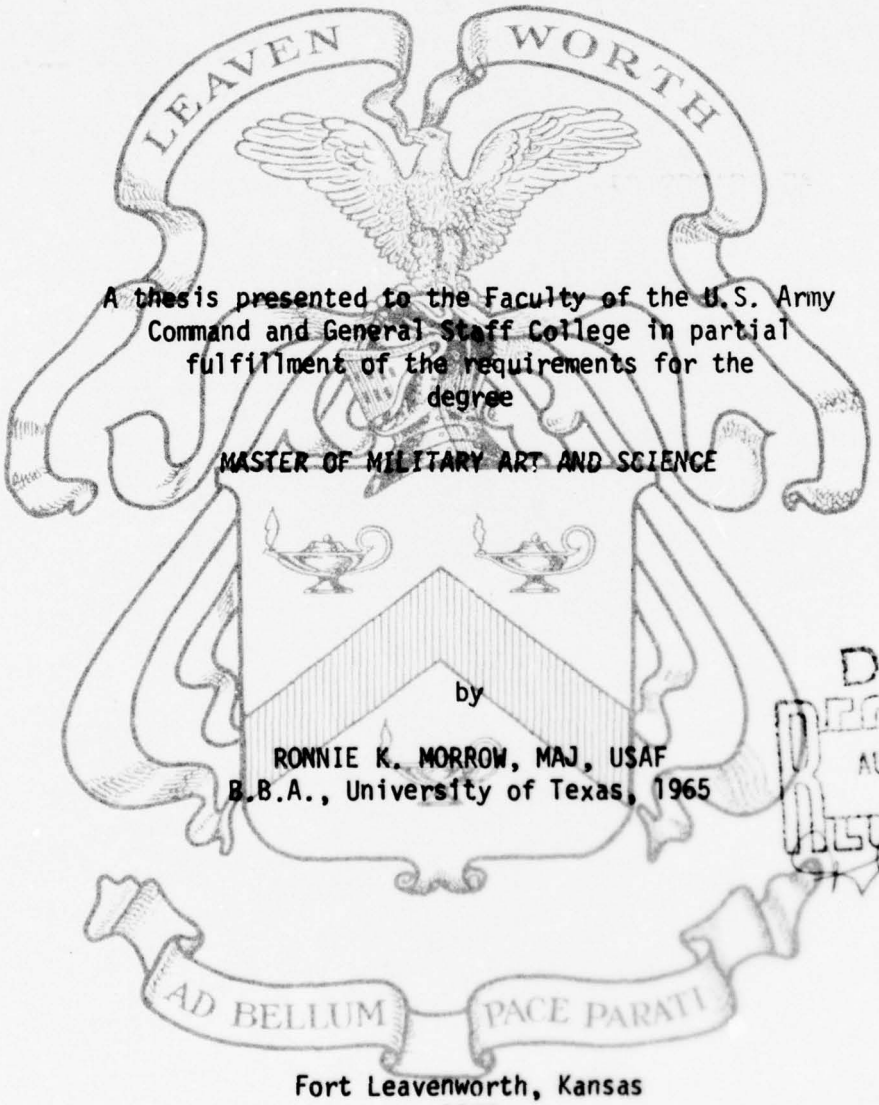
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This study analyzes the effects that two Army organizational changes have upon the Air Force Tactical Air Control System (TACS). It contains a historical review of the TACS's development from World War II to the post Vietnam period.

The study concludes that the Echelons Above Division change by the Army will affect close air coordination when multiple corps are deployed. A change in organizational relationships that will solve the problem is presented.

The study also concludes that the Army's division split command post concept causes problems with manning, equipment and procedures within the TACS. An alternate division tactical air control party configuration is recommended. The recommendation includes close air support request procedure changes.

TACTICAL AIR CONTROL SYSTEM: EFFECTS OF ARMY ORGANIZATIONAL CHANGES ON CLOSE AIR SUPPORT COORDINATION



A thesis presented to the Faculty of the U.S. Army Command and General Staff College in partial fulfillment of the requirements for the degree

MASTER OF MILITARY ART AND SCIENCE

by

RONNIE K. MORROW, MAJ, USAF
B.B.A., University of Texas, 1965

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ABSTRACT

The U.S. Army has made several changes in its command and control structure that affect the interface relationship of the Air-Ground Operations System and thus the efficiency of the Tactical Air Control System (TACS). The study addresses two of these changes, the Echelons Above Division (EAD) change and the split division command post concept, and their effect upon close air support (CAS) coordination.

A review of the development of the TACS from World War II until today provides lessons learned in the development of the TACS and the guiding principles used in its organization. An analysis of U.S. Army organizational changes determined their effects on the U.S. Air Force and U.S. Army interface within the Air-Ground Operations System.

The conclusion was that the EAD change has caused an interface problem that will affect the U.S. Air Force and U.S. Army CAS coordination in a situation where multiple corps are deployed. The change in organizational relationships proposed in this paper will solve this problem.

An analysis of the split command post concept revealed that the concept causes problems in manning, equipment, and procedures within the division Tactical Air Control Party (TACP). An alternate division TACP configuration which includes additional personnel and equipment is

recommended. The recommendation also changes the routing system of the immediate and preplanned CAS requests through the division TACP and split command post.

Finally, based upon the historical review and present problems, it was concluded that the U.S. Air Force places very little priority on development of the TACS between wars. Consequently, the system has deficiencies at the beginning of a conflict.

ACKNOWLEDGMENTS

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LIST OF ACRONYMS

AAGS: Army Air-Ground System

ABCCC: Airborne Command and Control Center

AFCC: Air Force Component Commander

AFM: Air Force Manual

AGOS: Air-Ground Operations System

ALCC: Airlift Control Center

ALCE: Airlift Control Element

ALO: Air Liaison Officer

AOC: Air Operations Center

ARVN: Army of the Republic of Vietnam

ASOC: Air Support Operations Center

ASRT: Airborne Support Radar Team

AWACS: Airborne Warning and Control System

BCE: Battle Coordination Element

CAS: close air support

CCT: Combat Control Team

COC: command operation center

CP: command post

CRC: Control Reporting Center

CRP: Control Reporting Post

CTOC: corps tactical operations center

DASC: Direct Air Support Center

DTOC: division tactical operations center

EAD: Echelons Above Division

FAC: forward air controller

FACP: Forward Area Control Post

FLO: Fighter Liaison Officer

FM (with a number): Field Manual

FSCC: fire support control center

FSE: fire support element

G-2, A-2: unit intelligence officer

G-3, A-3: unit operations officer

JAGOS: Joint Air-Ground Operations System

JCS: Joint Chiefs of Staff

JOC: joint operations center

JTF: Joint Task Force

MACV: Military Assistance Command, Vietnam

MCP: main command post

MMAS: Master of Military Art and Science

NATO: North Atlantic Treaty Organization

OPCEN: operations center

RB: Reference Book

RECON: reconnaissance

ROK: Republic of Korea

SRP: Senser Reporting Posts

TAC: U.S. Air Force Tactical Air Command

TACC: Tactical Air Control Center

TACP: Tactical Air Control Party

TACR: Tactical Air Control Regulation

TACS: Tactical Air Control System

TADC: Tactical Air Direction Center

TASCC: tactical air support coordination center

TASE: tactical air support element

TC: *Training Circular*

TCP: tactical command post

TOC: tactical operations center

TSC: Tactical Support Center

TUOC: Tactical Unit Operations Center

USA: United States Army

USAF: United States Air Force

VNAF: Vietnamese Air Force

CHAPTER I

INTRODUCTION

The U.S. Air Force uses the Tactical Air Control System (TACS) to plan, coordinate, control, and accomplish the tactical missions assigned to it. Direct support of the U.S. Army is accomplished with this system. Through TACS, the Air Force receives the Army's requests for airlift, reconnaissance, and close air support. This is accomplished by Air Force personnel located with the Army in command centers from corps to battalion levels. After determining Army requirements, the TACS provides the communication and coordination channels for processing the information to control centers, where these requests are fulfilled according to the priorities the Army furnishes Air Force units.[1]

Development of Tactical Air Control System

The TACS, presently operating in accordance with Air Force Manual 2-7, Tactical Air Force Operations: Tactical Air Control System (TACS), 25 June 1973, has gone through several changes since the Army Air Corps first attempted to support Army ground forces in World War I.

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[1] Department of the Air Force, Tactical Air Force Operations: Tactical Air Control System (TACS), AFM 2-7 (25 June 1973), pp. 1-1, 2-2.

These changes resulted from a desire for more efficient operations and from developments in technology. In some cases the system was altered by interservice rivalry and the desire to control the employment of air power.[2] The most important catalysts in development of the TACS, however, have been the major conflicts in which the United States has been involved.

The development of the present TACS began in World War II. During that war the Army Air Corps tried many different techniques to control the execution of its missions to support the ground forces. Effective systems were developed, and the War Department summarized lessons learned in Field Manual 31-35, Air-Ground Operations (August 1946). Because of the different levels of technology, the Korean War and the war in Southeast Asia also caused significant changes in the TACS. The present TACS is the result of Air Force experiences from these three major conflicts. It has not been changed since Air Force Manual 2-7 was published in June 1973.

U.S. Army Organizational Structure Changes

The Army has made several changes in its structure for command and control of maneuver units since the Southeast Asian War. These changes are important because, while they are designed to give the Army a more effective and efficient control of its units, they also affect

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[2]Department of the Air Force, Office of Air Force History, Evolution of Command and Control Doctrine for Close Air Support, by Riley Sunderland (March 1973), p. 48.

the Air Force interface with the Army through the TACS. The effectiveness of the Air Force support is dependent to a significant degree upon the effectiveness of the TACS, and several of the Army changes have created problem areas for the TACS.

The first change, the Echelons Above Division (EAD) concept, eliminated the field army command and control structure from the Army. The operational chain of command now goes from the joint or combined commander directly to the corps commander. This organizational concept has created interface problems between the Air Force and the Army because the TACS is designed to centrally manage and coordinate the Air Force effort at the field army or the Army Component commander level.[3]

Organizational changes at the division level have also created problems. Army Training Circular 101-5, Control and Coordination of Division Operations (April 1976), presents a new concept in the division command post operations. To reduce the size of the electronic signature and to increase mobility and survivability, the command post has been divided into three elements. These three elements are located separately in the division area so that they can more effectively fulfill their separate command and control functions. The tactical command post is well forward and close to the maneuver units it is to control.

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[3]Alman I. Butler, "US Army/US Air Force Command and Systems Interface in Echelons Above Division Environment" (Student Report #5546, Air War College, April 1975), p. 23.

The main command post is located about thirty kilometers behind the battle lines to coordinate the combat support and combat service support functions. The division support area is well toward the rear, where the maximum amount of service support can be organized and controlled.

Although this concept increases the Army's command post effectiveness, it has fragmented the Tactical Air Control Party (TACP). Originally, the three tactical air functions--reconnaissance, airlift, and close air support--were planned at one location in the division command post. In the new concept, airlift support will be planned in the division support area, reconnaissance support will be planned in the main command post, and close air support will be planned in the main command post (although the fighter liaison officer has been moved to the tactical command post).[4] Under present Air Force doctrine and manning, however, the TACP does not have the personnel or the equipment to effectively fulfill its functions from the separate locations.

Thesis Purpose and Organization

The purpose of this thesis is to determine the ability of the Air Force to fulfill its close air support mission effectively with the present TACS in the light of the Army's new organizational changes. This is accomplished in Chapter II through a historical review of the development of the TACS, with emphasis on why different components of

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[4]Department of the Army, Command and Control of Division Operations, TC 101-5 (April 1976), pp. 14-17.

the system were developed and what functions they were designed to fill. The TACS and its interface with the Army Air-Ground System (AAGS) are reviewed in Chapter III. The two organizational problem areas--EAD and division command post changes--are addressed individually in Chapters IV and V. The two concepts are described and the problems they present to the TACS operations are analyzed. Recommendations and solutions are summarized in Chapter VI.

Limitations

The Air Force uses the TACS to control and coordinate the Army's need for reconnaissance, airlift, and close air support. The primary interest of this study is to determine the effectiveness of the TACS to fill this command and control function. To provide for a more detailed study, the scope of this thesis is limited to the effectiveness of the Air Force to supply close air support in view of the TACS problems.

The evolution of close air support can be traced to World War I. However, the first organized effort of the Army Air Corps to support Army ground units appeared in World War II. Therefore, the historical background study starts at that point.

Definition of Terms

Several terms that appear numerous times in this study are pertinent to an understanding of the components and concepts of the TACS. These terms, defined in Air Force Manual 2-7 (25 June 1973) except as noted, are:

Tactical Air Control System (TACS): An Air Force system that is employed to accomplish current planning, force allocation, tasking, and control and to coordinate all Air Force missions with other units in the assigned area of operations.

Tactical Air Control Center (TACC): An air operations element that controls and coordinates missions assigned by the Air Force Component Commander (AFCC).

Direct Air Support Center (DASC): A highly mobile TACS element, subordinate to the TACC, that is designed to coordinate and direct tactical air operations at corps level in support of ground forces. The physical size, configuration, and manning of the DASC depend upon operational requirements.[5]

Tactical Air Control Party (TACP): The personnel, vehicles, and communications equipment to obtain, coordinate, and control tactical air support for ground forces; a TACP is located with Army units from the corps level through the battalion level. The TACP is subordinate to the DASC.

Air Liaison Officer (ALO): The senior Air Force officer located at each ground force echelon to perform the air liaison mission.

close air support (CAS): "Air attacks against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces."[6]

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[5]Department of the Air Force, Tactical Air Control System (TACS): Direct Air Support Center/Tactical Air Control Parties, TACR 55-46 (TEST) (August 1976), p. 2-2.

[6]Department of Defense, Dictionary of Military and Associated Terms, JCS Pub 1 (3 September 1974).

CHAPTER II

HISTORICAL REVIEW

The Army Air Corps entered World War II with a doctrine that allowed its air resources to be divided among the ground commanders it supported. This system did not provide for flexible massing of air power during a battle, and there was no control organization for coordination and control of close air support (CAS). By the end of World War II the essential elements of the U.S. Air Force (USAF) doctrine on close air support and the basic framework for the Tactical Air Control System (TACS) had been developed.

World War II Influence on TACS

The organization of the Allied Forces that carried out Operation Torch in North Africa in 1942 divided available air resources so that British airpower supported British ground forces and American airpower supported American ground forces. Although both major air support forces were under General Dwight David Eisenhower, there was no immediate, common air commander to assure coordinated efforts. In a further decentralization of control, air support units were assigned directly to the ground division commander they were supporting.[1] This policy did

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[1] J. H. Dickinson and R. H. Kaufman, "Airpower Doctrine: A Case

not facilitate coordinated planning between divisions. At a time when the American force was operating with serious problems in air-to-ground communication channels, airfield construction, and transportation, this parceling out of resources resulted in an ineffective air war campaign.[2] The U.S. Forces, in following this doctrine, failed to observe the lessons learned about coordinating air-ground warfare that the Germans had demonstrated to the world during their invasion of Poland in September 1939. There the Germans centralized control of their air fleets to accomplish air superiority and interdiction, but they decentralized control for close air support. In this manner the air commander could mass his forces to support the army commander.[3]

The British had successfully followed a similar doctrine in Western Africa. The U.S. Army Air Corps, however, was operating in accordance with its own regulations. Field Manual 31-35, Aviation in Support of Ground Forces (9 April 1942), stated that the air units would be allocated to specific ground forces and that the air commander would be subordinate to the ground commander. Field Manual 31-35 provided for a system that placed "air support parties" at division level and below. Requests for support went through the army command channels to the

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Study on Close Air Support" (Student Report #5888, Air War College, April 1976), p. 26.

[2]Francis A. Ianni, "Close Air Support for the Field Army" (MMAS thesis, U.S. Army Command and General Staff College, 1964), p. 37.

[3]Dickinson and Kaufman, p. 20.

ground force commander, who decided whether or not to use an air sortie. The air support officers were available for advice only. If the ground commander approved the sortie, the order went to "air support control," which was usually located at the corps.[4] This dedication of air resources to corps did not allow for the shifting of resources to units that needed them, and the system did not have the organization to determine priorities between units. Besides the inability to shift air support between the ground units, the split allied air forces did not have the flexibility to shift their air resources between missions. On the other hand, the centrally controlled German Forces could maintain air superiority and effective close air support.

When the inefficiency of the Allies' system became apparent, General Eisenhower appointed General Carl Spaatz as the single commander of United States air units. General Spaatz established the doctrine of centralized command and control of all aircraft. He worked in close coordination with all ground commanders. Besides centralized control of the U.S. Air Corps, Air Marshal Sir Arthur Tedder was established as the overall air commander. Thus the control of British and United States air units was centralized. The result was air superiority in Africa and the subsequent destruction of the German lines of communication to Africa.[5]

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[4]Department of the Air Force, Office of Air Force History, Evolution of Command and Control Doctrine for Close Air Support, by Riley Sunderland (March 1973), p. 8.

[5]Air Historical Group, Europe: Torch to Point Blank, Vol. II of

Although centralization was a significant change in doctrine and did indeed provide a more efficient use of resources, the Air Corps still had a problem in actually controlling CAS missions. This is not to say, however, that closely coordinated air and ground operations never occurred. For example, at Mareth, on 26 March 1943, waves of fighters and fighter bombers were followed by a ground assault, and that attack broke the German defenses. Other successes like it were the result of extensive planning and did not represent the capability to provide close air support in a changing battle situation. The Allies recognized this need and, in planning for Operation Husky, the campaign in Sicily, attempted to provide improved coordination between air and ground forces through liaison personnel and identification of friendly troops. Although II Corps experimented with fighter control from jeeps equipped with UHF radios, the fighters were based too far away from the battlefield and could not react quickly enough to the needs of the ground forces.[6]

Preparation for the invasion of Italy included the lessons learned from Africa and Sicily. The XII Air Support Command was reorganized so that ground units could request air support through the divisions. The location of air support parties at the division level provided a coordinating link between the maneuver units that needed air

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The Army Air Forces in World War II (Chicago: University of Chicago Press, 1949), pp. 60-65.

[6]Air Historical Group, pp. 160 & 484-86.

support through the division commander to the tactical air support units. The placement of this coordination link with division commanders was an important organizational change.

To fill the requests as quickly as possible, the fighters would fly patrols and receive requests for direct support while airborne. In case no target was received, the fighters had a prebriefed alternate target for their ordnance. In this way the support requests would be filled in ten to thirty minutes. This system was hampered by the long flights and poor communication when the fighters were flying out of Sicily, but it became very effective as soon as the fighters could fly out of bases in Italy.[7]

Another significant change occurred in Italy, when the forward air controller was initially used in the system. The air support party had a ground officer and an air officer. They operated from a jeep with ground-to-air radio capability. When a unit request was received, the ground officer decided on priorities and the air officer decided if the Air Corps could effectively attack. If approved, the air controller briefed a flight on the target and then marked the target to be struck. These forward controller teams were called "Rover Joes." Their ability to coordinate air strikes and to focus firepower where it was most needed was apparent. When the battle situation required more immediate air response, these controllers were allocated a flight of four fighters

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[7]Air Historical Group, p. 499.

every thirty minutes.[8] At times the terrain was such that the controllers had to operate out of army observation aircraft. This Rover Joe system was continued in the European Theater. In the Pacific, the Army Air Corps and the Marine Corps were also developing tactical air control systems.[9] These systems, similar but not identical, developed separately and at different times because the War Department did not issue guidance but left each theater commander to develop his own procedure.[10]

Air-Ground Operations

The War Department formalized lessons learned from World War II by issuing Field Manual 35-13, Air-Ground Operations in August 1946.[11] This manual described in detail the organizational structure and procedure to provide support of the ground forces. It preserved the doctrine of centralized air resources under a single air force commander. The terms used in this manual are very similar to those used today. The functions described in the manual are still accomplished by essentially the same type of organization. Examples of these terms and functions are:

> Tactical Air Control Center (TACC)--Focal point for the tactical air force's control and warning activity.

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[8] Dickinson and Kaufman, p. 31.

[9] Department of the Air Force, p. 20.

[10] R. F. Futrell, Ideas, Concepts, Doctrine: A History of Basic Thinking in the USAF, 1907-1964 (Maxwell Air Force Base, Ala.: Air University, Aerospace Studies Institute, 1971), p. 126.

[11] Ibid.

Tactical Air Direction Center (TADC)--A subordinate air control installation directing aircraft and air warning operations in a restricted area.

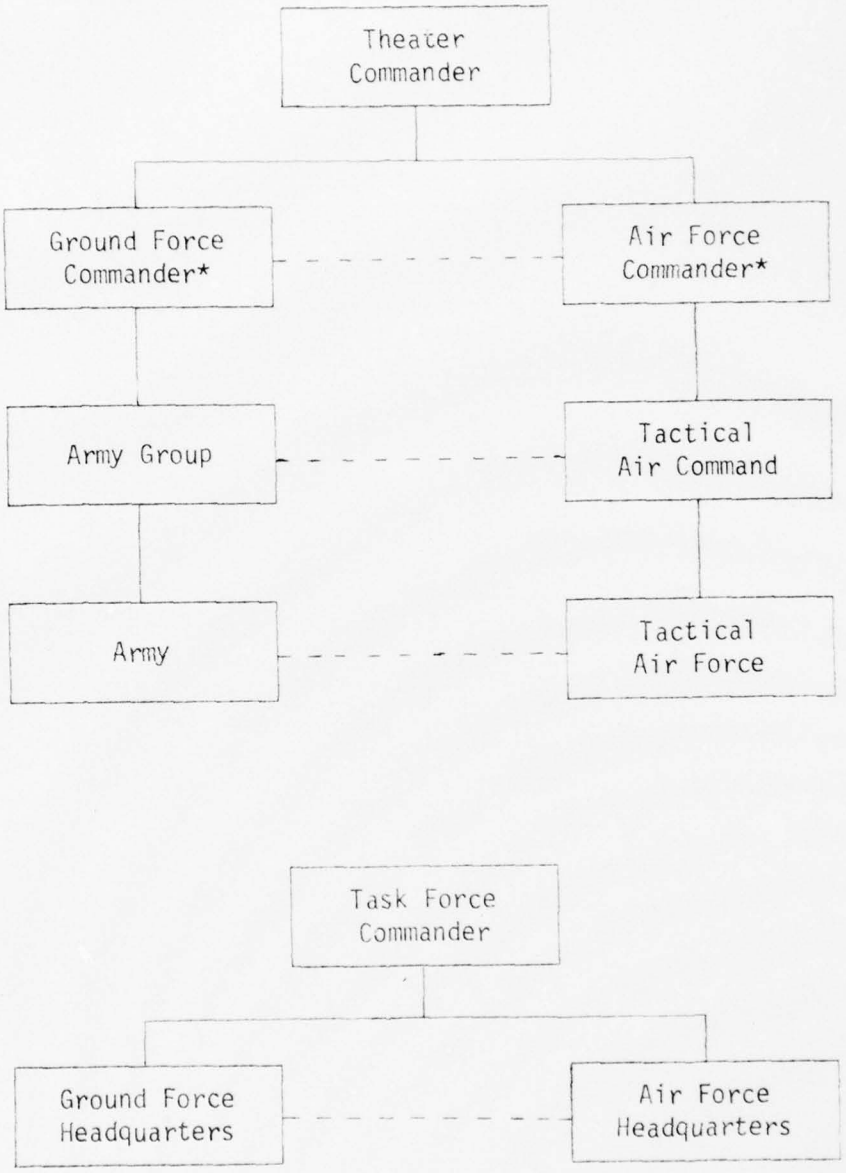
Tactical Air Control Party (TACP)--A Forward Air Controller with assistants, as needed, who operate under a TACC or TADC.

The system operated under the direction of a tactical Air Force commander who was coequal to the Army commander, and both served under the theater commander. Coordination between the two was accomplished in the Joint Operations Center (JOC). The JOC provided the direct link between liaison from the Army's operations section and the Air Force's operations section. The Tactical Air Direction Center and the Tactical Air Control Party provided liaison below the headquarters level. The relationship of these organizations is shown in Figures 1 and 2.

By 1948 the Army believed that parts of Field Manual 35-15 were outdated because of technological advances. The Air Force believed the Army was trying to dictate doctrine and policy rather than improving organization. An ad hoc committee of Air Force and Army officers who represented Tactical Air Command and Army Field Forces prepared a Joint Training Doctrine for Air-Ground Operations. The provisions of this directive were scheduled for field testing in 1950, but the outbreak of the Korean War caused cancellation of the field exercises and the directive was published on 1 September 1950 without validation.[12]

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[12]Ibid., pp. 338-41.

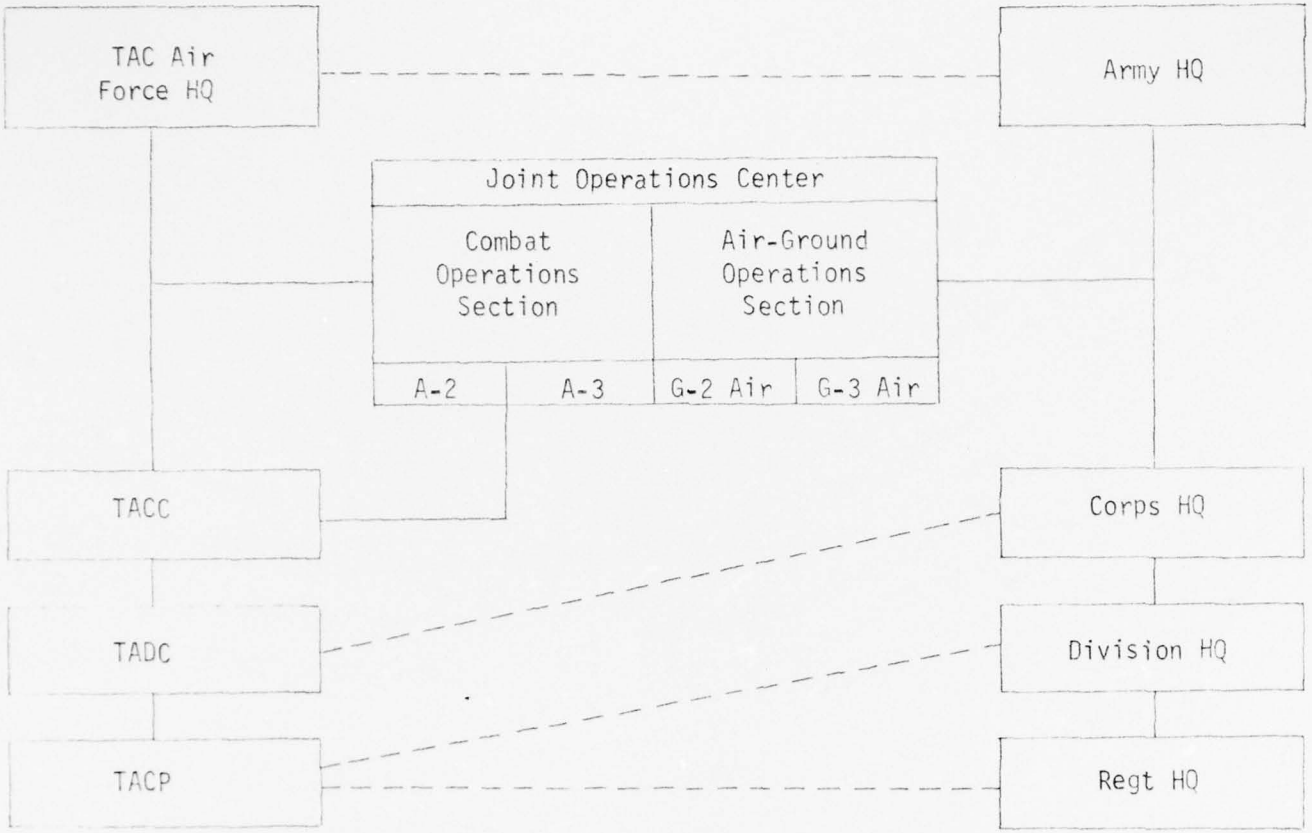


*If designated by theater commander.

Legend: ——Chain of Command; - - - -Joint Planning.

Source: Department of the Air Force, Office of Air Force History, Evolution of Command and Control Doctrine for Close Air Support, by Riley Sunderland (March 1973), p. 2.

Fig. 1. Command Relationships



Legend: ——— Operational Control; - - - - Parallel Air and Ground Units.

Source: Department of the Air Force, Office of Air Force History, Evolution of Command and Control Doctrine for Close Air Support, by Riley Sunderland (March 1973), p. 3.

Fig. 2. Air-Ground Operations System

Korean War Influence on TACS

Field Manual 35-13, as amended by the joint training directive, was the guiding regulation for the TACS throughout the Korean War. At the outbreak of hostilities, the organizational doctrine was present to support a viable TACS but trained personnel were not. The Air Force was maintaining a defensive posture in Japan. Even though two TACPs were organized in Japan, both were made up of personnel who were primarily assigned to other duties, and neither TACP had accomplished realistic training. The only TACP composed of personnel assigned to it for that specific function was stationed at Pope Air Force Base, North Carolina.[13] The Air Force reacted immediately to the North Korean invasion on 25 June 1950 and dispatched the two TACPs to South Korea on 28 June. A JOC was formed in Japan and moved to Taejon on 5 July.[14]

The final system of organization consisted of the JOC, TACC, TADC, and TACP. Fifth Air Force used the JOC to coordinate its activities with Eighth Army. Under the JOC was the TACC, which controlled tactical air missions as directed by the combat operations section. The TACC was usually supported by a TADC; however, because of the lack of enemy air and the very limited front of the Korean War, the TADC's

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[13] U.S. Air Force, Historical Division, United States Air Force Operations in the Korean Conflict, 25 June - 1 Nov 1950, Study #71 (1 October 1952), p. 4.

[14] Roy E. Appleman, South to the Naktong, North to the Yalu (June-November 1950), Series: United States Army in the Korean War (Washington: Office of the Chief of Military History, Department of the Army, 1961), p. 95.

function was eliminated during the first part of the conflict. The next echelon of the system was the TACP, which was assigned to each American division and regiment and to each Republic of Korea (ROK) division or corps. The TACP was a fighter pilot forward air controller (FAC), communication technician, and communications-equipped jeep. Fifth Air Force had eighteen TACPs in the field by 18 August 1950. In addition, an Air Liaison Officer (ALO) was assigned to each United States division and ROK corps. The ALO was to advise the ground commander on any air problem. The rough Korean terrain caused the FACs to turn naturally to the precedent set in World War II by the airborne Rover Joes. The FACs often used the Army L-5g or L-17s to become airborne FACs. Since these aircraft were inadequate, the Air Force initiated the use of the T-6, and the airborne FAC became a vital part of the TACS.[15]

The TACS accomplished its mission satisfactorily in spite of many problems. A lack of training and a lack of the understanding of responsibilities caused the problems. The Army, under the organization in Field Manual 35-13, was supposed to furnish the communications equipment to support the air-ground operations request net. This was to be accomplished by an Army air-ground signal liaison company. Due to the Army's failure to supply the net, this part of the air-ground system was furnished by the TACP's communications net, which was originally intended to control and coordinate strikes. Because a large number of

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[15] Ibid., pp. 22-25 & 28.

division officers did not understand the routing of requests, the JOC received many unapproved requests. In urgent cases the air operation section had to make priority decisions that should have been made within the ground force's chain of command.[16]

A problem of control of resources arose in Korea that the TACS had not been designed to handle. This was the planning for and controlling of joint marine and naval air resources. Besides the obvious problems of poor communications equipment, overloaded radio frequencies, and different technical jargon between the aircrews, there was very little agreement on coordination and control measures among the commanders. For example, the Navy sent its liaison officers directly to Eighth Army headquarters. Lieutenant General Walton H. Walker, Eighth Army commander, sent them to the JOC, where he believed the Air Force, Army, Marines, and Navy should discuss and agree on how each air request should be filled. The Air Force, however, thought the Army should request through the JOC air-ground operations section and then the Air Force commander would decide what resources should be used to fill the requests in the combat operations section. Coordination along Air Force lines was finally settled by agreement between the Air Force and Army commanders. Nevertheless, no regulation or manual change was made. These problems were compounded in that General Douglas MacArthur made several decisions that affected Air Force or Navy air support to the

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[16] Ibid., p. 31.

Army without advising the other services.[17]

Another significant problem arose when the X Corps landed at Inchon. With this operation, Fifth Air Force was supporting two major ground forces. The result was that both ground forces would send requests to the JOC and the combat operations section had to decide which request had priority. This was obviously a theater commander's decision, but he was not represented in this capacity at the JOC.[18]

After Korea, several changes occurred in the TACS, none of which solved the problem that had occurred in control of joint air resources or in support of multiple ground forces. These changes were a result of the increasing numbers and strength of the Army helicopter force. To control this force, the Army developed the Joint Air-Ground Operations System (JAGOS). This system consisted of a Tactical Support Center (TSC) at the corps and subordinate agencies down to battalion level. The TSC was the air-ground operations section that had been previously located in the TACS JOC. The TSC then controlled Army aviation and handled air support requests. The JOC became an all-Air Force facility and was renamed Air Operations Center (AOC). The TSC and AOC exchanged liaison officers but were not necessarily collocated. These system changes were set forth in TACM 55-3/CONARCTT 110-100-1, Joint Air-Ground Operations (JAGOD), 1 September 1957.[19]

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[17] Ibid., pp. 28 & 30-31. [18] Ibid., p. 78.

[19] Dickinson and Kaufman, pp. 33-35.

Influence of Southeast Asian War on TACS

When Air Force personnel were first deployed to South Vietnam, one of their primary objectives was to assist the South Vietnamese as advisors and to train their new air force. In 1962 the advisors developed a TACS based upon the system in TACM 55-3/CONARCTT 110-100-1.[20] This system, however, was not compatible with the situation in South Vietnam, and its services were inefficient.

There were several reasons for the problems. In JAGOS, the Army provided the communications net for the TACS; therefore, in the initial set-up, the Army of the Republic of Vietnam (ARVN) controlled the request net. The communications equipment was limited, and the ARVN included both military and civilians as intermediate levels in the request net. To expedite air requests, a Vietnamese Air Force (VNAF) Request Net that paralleled the ARVN system was established. Both systems initiated requests simultaneously, with the battalion TACP being the lowest level of request initiation. The requests went directly to the Air Support Operations Center (ASOC), which then initiated action to fulfill the requirements. If, within five minutes, no disapproval was received to cancel a request from any of the intermediate levels of the ARVN system, the ASOC considered the request approved.[21]

The next change in the system was that with the increased

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[20] Dickinson and Kaufman, pp. 63-64.

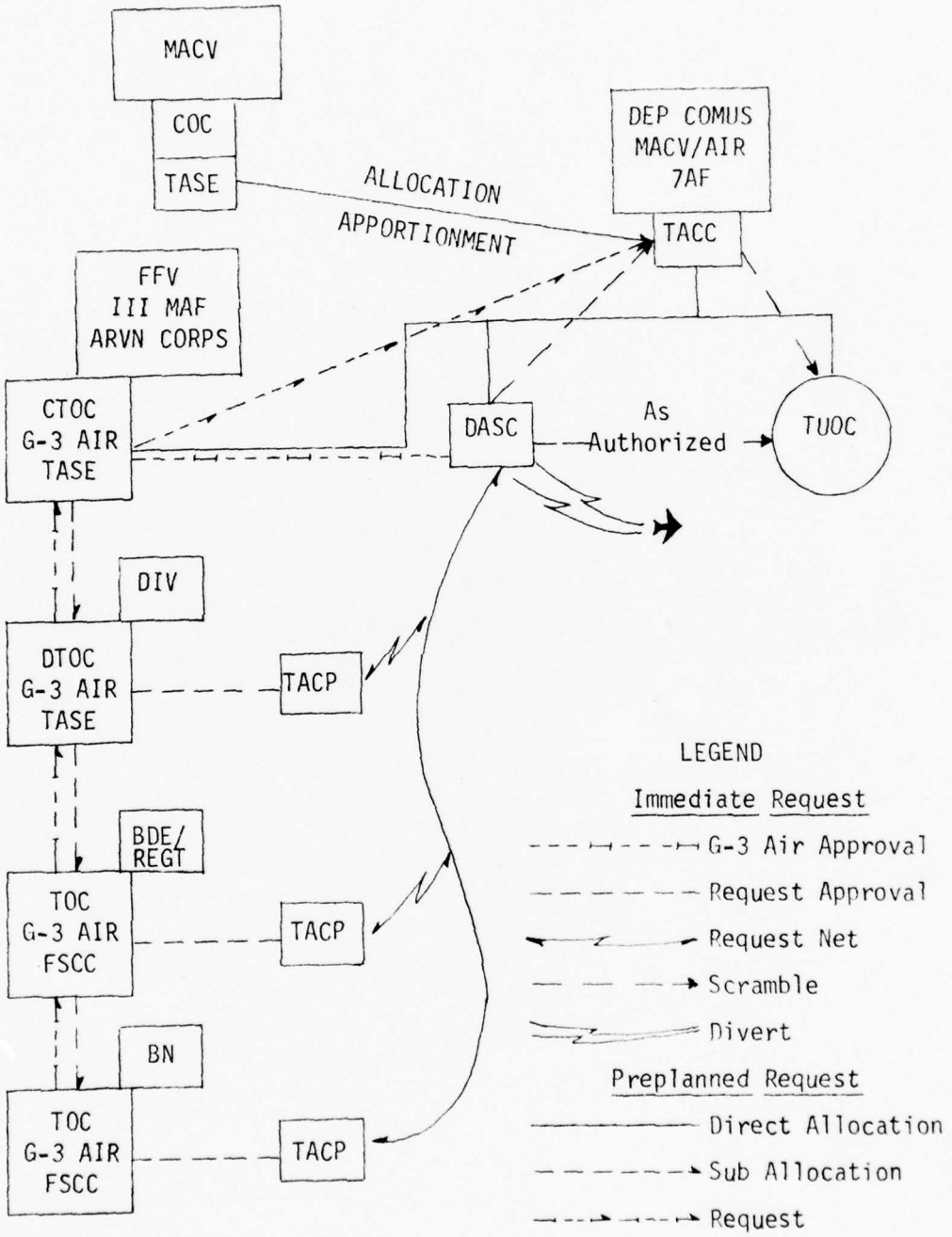
[21] Department of the Air Force, pp. 38-39.

buildup of United States military personnel and equipment, the U.S. Air Force assumed responsibility for the request net.[22] This request net organization paralleled the system that the U.S. Air Force and U.S. Army had found most efficient in Exercise Gold Fire 1 during the fall of 1964 in the United States. It is interesting to note that the Ninth Air Force had used this same system during World War II, but the procedure had not been incorporated into Field Manual 35-13 after the war.[23] One of the other outcomes from Exercise Gold Fire 1 was the addition of the Direct Air Support Center (DASC). It fulfilled the same function as the old JOC but was located at corps level rather than at headquarters, and it handled immediate air support requests.

Figure 3 illustrates the final TACS organizational structure. In this system the immediate requests were transmitted through the U.S. Air Force net. All levels of Air Force and Army units monitored and acknowledged each request, and any level above the requester could cancel it. The requests went directly to the DASC, which filled them by scrambling fighters or, if approved by the unit operations officer (G-3, A-3), by diverting inflight sorties. The preplanned requests were transmitted up the Army Air-Ground System (AAGS). These requests originated in the fire support coordination centers and were passed up through each succeeding Army level. They were arranged in the priorities established by the commander of the Military Assistance Command,

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[22]Department of the Air Force, p. 42. [23]Futrell, p. 754.



Source: Department of the Air Force, Office of Air Force History, Evolution of Command and Control Doctrine for Close Air Support, by Riley Sunderland (March 1973), pp. 6-7.

Fig. 3. Close Air Support Request System

Vietnam (MACV). The final approval was made by the tactical air support element (TASE) and sent to the TACC, which executed the mission if resources were available.[24]

The next significant problem with the TACS occurred as a result of the massive military buildup and the resulting influx of a variety of air resources. As in Korea, there was no central control of this mixture of resources. In Southeast Asia, the problem was even greater. The Air Force had resources available in tactical air wings and in strategic bomber squadrons. The Marines had dedicated marine aviation, and the Navy had significant air power in its carrier aviation. The Army had a large fleet of attack helicopters. For control purposes, the Air Force had the TACS, the Army had its AAGS, and the Marines had their DASC.[25] The answer to the problem of controlling and coordinating these different air resources was finally forced upon the United States military command when the North Vietnamese initiated the Tet offensive in 1968 and the subsequent battle of Khe Sanh was fought. The need for a single coordinating authority was recognized, and the MACV commander appointed the Deputy Commander for Air Operations as his single manager for air operations.[26] This change in procedure improved operations and centralized control. However, it was a procedure designed to improve

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[24]Dickinson and Kaufman, pp. 76-78.

[25]Department of the Air Force, p. 48.

[26]Dickinson and Kaufman, pp. 78-80.

the system in South Vietnam and, like the system in Korea, it was not reflected in a change in Air Force, Army, or joint publications.

This chapter has reviewed the historical development of the Tactical Air Control System (TACS). Reasons for the development of the different elements of the system have been pointed out. Chapter III reviews the present TACS and its interface with the Army through the Army Air-Ground System (AAGS).

CHAPTER III

PRESENT TACTICAL AIR CONTROL SYSTEM

The Tactical Air Control System (TACS) is only one-half of the Air-Ground Operations System (AGOS). The other half of AGOS is the Army-Air-Ground System (AAGS).[1] Both systems are essentially the same as they were at the end of the war in Southeast Asia. The only changes have been those made to take advantage of technological improvements in weapons systems, sensors, and intelligence gathering methods. The functional requirements, however, are still fulfilled by the same elements, and with only a few exceptions the interface relationships have not changed. This chapter focuses on the organization of the present system and how it reflects the doctrine and functions developed in Chapter II.

Tactical Air Control System

Under the present Air Force concept, the TACS is a modular system that is made up of basic building block elements. The system can be expanded to accommodate the operational requirement. Its purpose, as stated in AFM 2-1, Tactical Air Operations: Counter Air, Close Air

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[1] Department of the Army, The Air-Ground Operations System (AGOS), FM 100-26 (March 1973), p. 5-1.

Support, and Air Interdiction (May 1969), is to provide the Air Force Component Commander (AFCC) with the ability to control all air operations for which he has responsibility. The TACS has four functional parts.

The first functional part of the TACS relates to air surveillance and air space control, which controls all movement. It consists of control facilities and radar traffic control agencies. These agencies are the Tactical Air Control Center (TACC), the Control Reporting Center (CRC), the Control Reporting Post (CRP), the Forward Area Control Post (FACP), and the Airborne Support Radar Team (ASRT). The second function encompasses ground sensor operations. This consists of the intelligence gathering sensors and collection agencies--the Sensor Reporting Posts (SRP) and the TACC. The third function includes air support coordination and control. This supplies tactical air support through the TACC, the Direct Air Support Center (DASC), the Tactical Air Control Party (TACP), and the forward air controller (FAC), and it supplies airlift support through the TACC, the Airlift Control Center (ALCC), the Airlift Control Element (ALCE), and the Combat Control Team (CCT). The fourth function of the TACS concerns airborne surveillance and control. This is fulfilled by the Airborne Command and Control Center (ABCCC) and the Airborne Warning and Control System (AWACS).[2] The function this study focuses upon is the tactical air support

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[2]Department of the Air Force, Tactical Air Force Operations: Tactical Air Control System (TACS), AFM 2-7 (25 June 1973), p. 2-2.

function and, more specifically, the coordination and control of close air support.

The amount of close air support to be available to ground forces is decided by the commander of the Joint Task Force (JTF). Using the recommendations from the Air Force and Army Component Commanders, he apportions the percentage of air resources to be used for the functions of close air support, interdiction, and air superiority. Based upon the JTF's apportionment, the AFCC determines the number of sorties that will be allocated to the Army for close air support.[3] The Army, with Air Force recommendations, decides what sorties it requires. The Air Force, through the TACS, fills these requirements from sorties available. This highest echelon of the system is designed to fulfill requirements for centralized control of air assets, as the campaign in North Africa indicated was necessary.

The close air support sorties are flown in response to either preplanned or immediate requests. Preplanned requests may originate at any level of the Army organization. The requests are processed through the AAGS until a consolidated list of targets is produced by the highest level tactical air support element (TASE) in the system. This list becomes an Army requirement that is submitted to the TACC.[4] The TACC,

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[3]Department of the Air Force, Tactical Air Operations: Counter Air, Close Air Support, and Air Interdiction, AFM 2-1 (May 1969), p. 2-3.

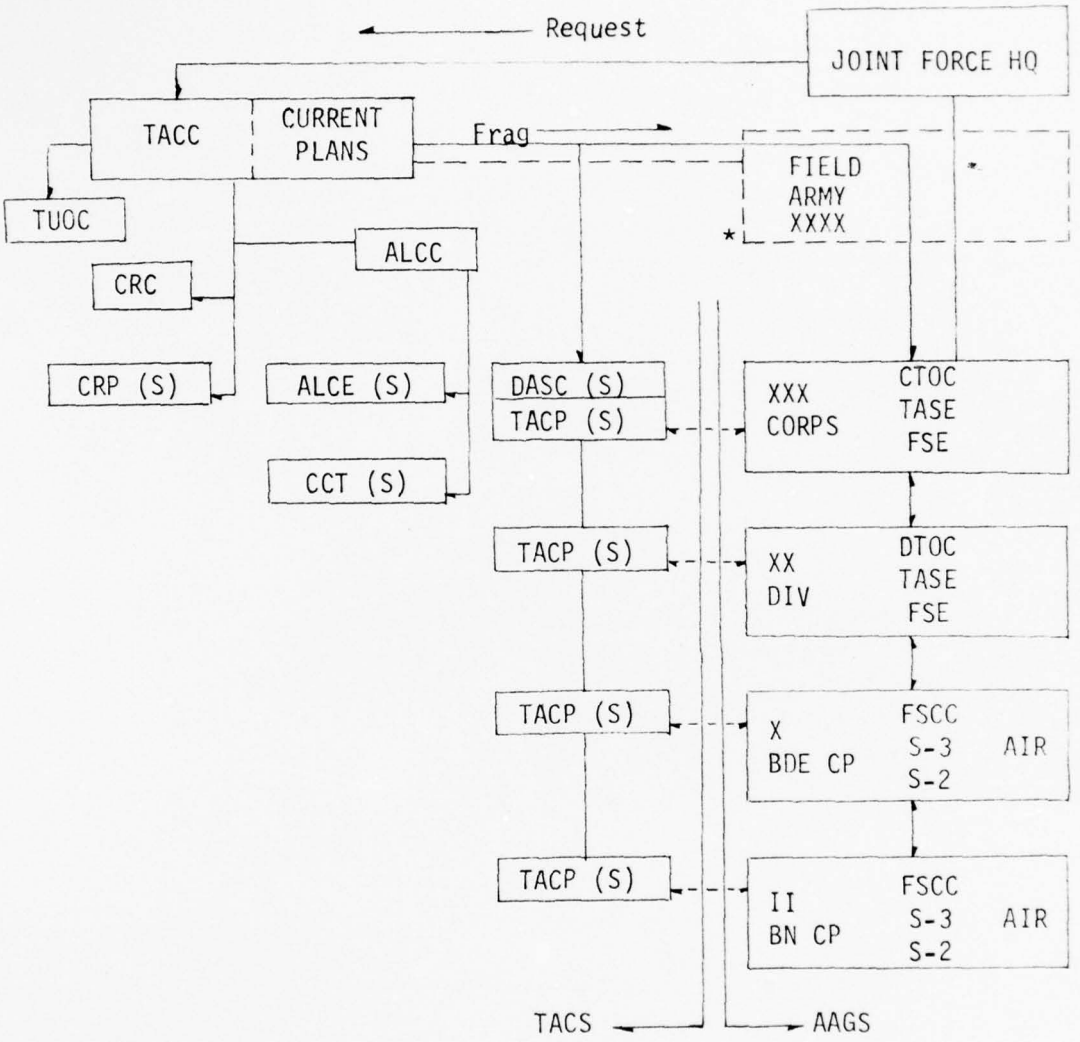
[4]Department of the Army, p. 3-4.

as the highest level of Air Force centralized control, must interface with the highest level of Army decision making. If not, the priorities of the preplanned targets may not be in accordance with those decided by the army field commander. The TACC produces a frag order that fulfills as many of the preplanned requests as sorties are available. This order authorization launches the fighter sortie, which is flight-controlled to a preplanned hand-off point by the Airspace Control System. At the hand-off point, the fighter contacts the TACP or FAC located with the army unit which requested the sortie. The FAC may be airborne. If the combat situation requires it, the FAC may be in a high performance type aircraft. In this situation, he could be a Tactical Area Coordinator (Airborne).[5]

Figure 4 illustrates the present elements of the TACS and visually summarizes the preplanned request system. It should be noted that the TACS was designed to serve a multicorps situation, with priorities between corps decided by the field army. Since the Echelons Above Division (EAD) concept removed the field army, the AAGS request system goes first to the Joint Force headquarters and then to the TACC. Other similarities between the present system and the system prescribed in Field Manual 35-13, which was subsequently used in Korea, are obvious, but the problems caused by the EAD change are addressed in Chapter IV.

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[5]Department of the Air Force, Tactical Air Control System (TACS): Direct Air Support Center/Tactical Air Control Parties, TACR 55-46 (TEST) (August 1976), pp. 4-1 through 4-4.



Legend

Request/Frag (Preplanned)

Coordination

*Level of command removed by "Echelons Above Division" reorganization.

Source: Department of the Air Force, Tactical Air Control System (TACS): Direct Air Support Center/Tactical Air Control Parties, TACR 55-46 (TEST) (August 1976), p. 4-4.

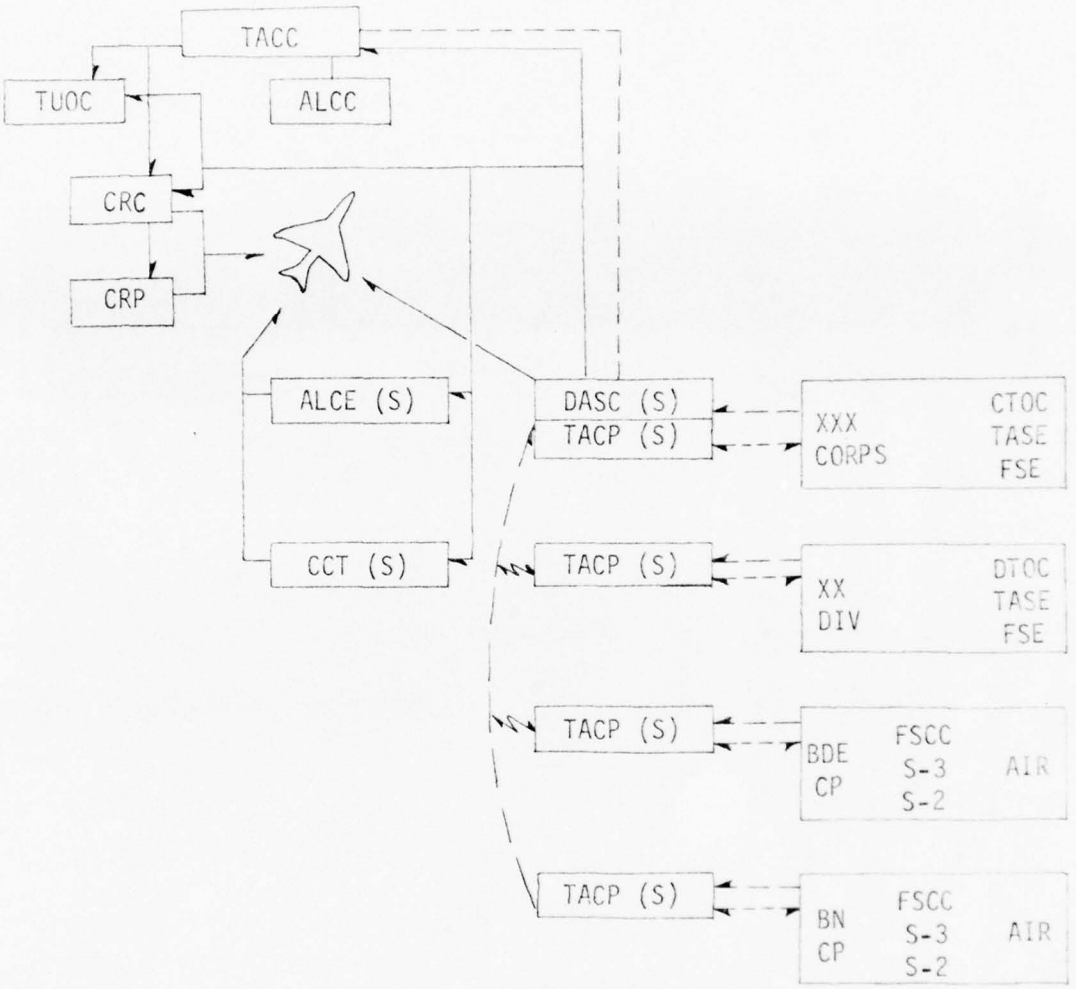
Fig. 4. Preplanned Request

The system for immediate requests is very similar to the system for preplanned requests. A notable difference is the channeling of immediate requests through the Air Force Request Net. An immediate request is initiated from the TACP that is located at battalion level or above and is sent directly to the DASC. As developed in South Vietnam, all intermediate levels acknowledge the request. If the request is not denied in a preset time limit, the DASC considers the request approved. The immediate request is filled from scrambles, airborne alert, or mission diverts. Airborne diverts must be approved by the Army. Airborne flight control of the aircraft, hand-off to the FAC, and flight control of the strike are the same as for preplanned sorties. Figure 5 summarizes the immediate request system. In this case the request goes up the Air Force Request Net and then directly to the TACC; it does not go through the JTF headquarters, as in the preplanned request system.[6] This system is unchanged from the one that was used at the end of the Southeast Asian War.

The TACP at division is an important step in both the preplanned and the immediate close air support subsystems. In the preplanned subsystem, the division TACP has the requirement to advise the division commander or his TASE on the best way air power can successfully assist his mission. The expertise of the Fighter Liaison Officer (FLO) in the TACP is the key to this planning. In the immediate close air support

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[6]Department of the Air Force, TACR 55-46 TEST), pp. 4-5 through 4-9.



Source: Department of the Air Force, Tactical Air Control System (TACS): Direct Air Support Center/Tactical Air Control Parties, TACR 55-46 (TEST) (August 1976), p. 4-8.

Fig. 5. Immediate Request Channel

subsystem, the division TACP monitors the air request net and is the key to the division commander's control of his air resources. Through it, the commander assures that immediate close air support is given to the brigades in accordance with his priorities. As shown in Chapter II, the function of the division's TACP was very similar to this in Italy during World War II.

The division TACP is also the key to the efficient operation of the TACS at division and below. The Air Force gives the Air Liaison Officer (ALO) at division the responsibility to supervise Air Force equipment and personnel within the division. The ALO must insure personnel proficiency, develop operating instructions, construct training programs, and insure logistical support. In short, the ALO is the central manager for the organization that will execute the close air support mission on the battlefield. It is through this compact, centrally controlled division TACP that the Air Force insures the coordination of its air assets with the Army's field maneuver units.[7]

Army Air-Ground Operations System

The AAGS, the Army's half of the AGOS, was developed during the Southeast Asian War to handle command and control of Army aviation resources. It also integrates the preplanning of the close air support sorties into the Army's fire support plans. These preplanned requests

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[7]Department of the Air Force, TACR 55-46 (TEST), pp. 3-2 through 3-5.

are transmitted over the Army's Air-Ground Communications Net.[8] The Army accomplishes the planning at each level through personnel at the fire support coordination center at battalion and brigade and through the fire support elements (FSE) at division and corps. The TACP personnel assigned to these units assist by advising on the effectiveness of tactical air support against chosen targets and on tactical air coordination problems. The planned requests are routed up the Army's chain of command, with each level adding its own targets and arranging the targets according to its own priorities.[9] The corps FSE then transmits the preplanned requests through the TASE to the TACC, as has been previously described. Figure 4 (page 29) has the AAGS system annotated.

Interface of TACS With AAGS

The present TACS is the same system that was used in South Vietnam. Essentially, it is the same as the system that was developed during World War II. The TACS worked well in Korea and South Vietnam after changes were made to fit those particular situations. However, common problems that occurred in both wars have not been addressed by permanent changes in the TACS. Subsequent to South Vietnam, the Army has made organizational changes and is in the process of testing more changes that will challenge the efficiency of the TACS. These problems for the TACS are addressed in the remainder of this study.

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[8]Department of the Army, FM 100-26, p. 5-14.

[9]Department of the Army, FM 100-26, pp. 5-2 through 5-3.

CHAPTER IV

ECHELONS ABOVE DIVISION (EAD)

In 1932, General Douglas MacArthur established the field army in the U.S. Army's chain of command. This change enhanced the control of large formations of troops.[1] The chain of command moved from the theater army commander to field army, to corps, to regiment, and to battalion. As the Tactical Air Control System (TACS) developed, appropriate coordinating agencies were required at each level of command. Modern technology increased the firepower and mobility of ground units and simultaneously improved communication and command means. The Army recognized the chance to modify its large command organization and to improve its reaction capabilities.

In 1973, after several years of studies, General Creighton W. Abrams, Chief of Staff, eliminated the field army from the Army's command structure. This organizational change caused a break in the interface between the TACS and the Army Air-Ground System (AAGS).

This chapter reviews the background for the "Echelons Above Division (EAD)" change, clarifies the interface problems, and

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[1]Alman I. Butler, "US Army/US Air Force Command and Systems Interface in Echelons Above Division Environment" (Student Report #5546, Air War College, April 1975), p. 2.

reconstructs joint efforts of the Army and the Air Force to solve the interface problem. The chapter ends with a summary of conclusions and recommendations.

Background of EAD

On 22 November 1969, Department of the Army directed the Army Combat Developments Command to undertake a study that would "establish objectives and provide guidance for the formulation of a theater army organizational structure which reduces echelons between the theater army headquarters and divisions."[2] Reduction in command and staff echelons was possible due to greater command and control capabilities. Reaction time of the Army to its commanders' orders would be reduced, thereby taking advantage of increasing mobility, firepower, and flexibility.[3]

Results of the study, "Echelons Above Division," were published in February 1970. Included was a recommendation concerning combination of the field army and corps into one level of command. Many staff organizations were to be combined, and the logistical and support agencies were to be trimmed into smaller and more efficient units. The resulting "small field army" was to be very similar to the independent corps organization. Those conducting the study concluded: "The elimination of an echelon above division is feasible and the corps echelon is

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[2]U.S. Army Combat Developments Command, Institute of Combined Arms and Support [USACDC, ICAS], "Echelons Above Division" (Fort Leavenworth, Kans., February 1970), p. A-5.

[3]Butler, p. 11.

the most logical candidate."[4]

Of particular importance to this research is the thirteenth paragraph of the study. It addresses the joint implications of the EAD change. With implementation of EAD, the Army no longer had a single Army commander with the authority to set priorities on Army requirements for tactical air support and to provide coordination with and guidance to the central manager of tactical air support, the Tactical Air Control Center (TACC). As a result of EAD, the Army eliminated the field army tactical air support element (TASE), which had been the single point of contact between the Army and the TACC. The loss of this tactical air support coordination capability was considered the major joint problem with EAD. The study states, in part:

> b. . . . [O]ne tactical air force will probably support two or more of the small field armies and two or more army commanders will vie for the tactical air support resources available. . . .
>
> c. A possible solution is to place the responsibility for allocation of tactical air support reserves on the next senior tactical command headquarters when more than one small field army is being supported by a tactical air force. . . .[5]

Since resolution of the problem was beyond the study's scope, the recommendation was for a subsequent joint study to analyze the situation. Various commands of the Army were enthusiastic about the subject matter and recommendations of the study.

One problem the Army commanders in Europe noted was that the term field army and the size of the new organization were incongruent

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[4]USACDC, ICAS, p. 44.

[5]USACDC, ICAS, p. 19.

with other organizations of North Atlantic Treaty Organization (NATO) and could cause confusion. America's NATO allies applied the term field army to organizations of much larger size and capabilities than those of the "small field army" designed in the EAD study.

The end result was that General Abrams's implementing memorandum to the Chairman of the Joint Chiefs of Staff referred to the new organization as a corps rather than a field army. Although no joint study was taken to solve the Army/Air Force TACS interface problem, the Air Force notified the Army through a letter that essentially the TACS was a flexible modular system that could be organized to support the "small field army."[6] Figure 4 (page 29) illustrates the gap the EAD change left in the command level interface between the Air Force and the Army.

TACS Interface Problem

The TACC is the nerve center for managing and allocating air resources of the Air Force Component Commander (AFCC). The interface problem between the TACS and the AAGS is that the elimination of the field army and its TASE has separated the TACC from a single overall tactical field commander. How does this interface problem affect the coordination of close air support (CAS) between the Air Force and the Army?

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[6] [U.S. Army Combat Developments Command, Institute of Combined Arms and Support (USACDC, ICAS)], "Department of the Army Staff Analysis of the USACDC Echelons Above Division Study (U)" [Fort Leavenworth, Kans., 1972], incl. 4.

As pointed out in Chapter III, the unified or combined commander will direct the Air Force to provide a certain percentage of its resources for close air support. The AFCC, using guidance provided by the unified or combined commander, determines the number of CAS sorties that will be allocated to satisfy the Army requirement. Prior to EAD, the field army commander, through the TASE, then directed how those sorties were to be divided among corps. If, during the battle, the situation required redistribution, the field army commander would shift air resources between corps through the command and control system of the TACC. The field army commander's TASE accomplished guidance and coordination for initial distribution and redistribution of sorties. Thus, EAD has eliminated the Army's command and control process for providing guidance on the distribution of limited tactical air resources between competing corps commanders in a multicorps situation.

The end result is Army inability to capitalize on airpower's mobility and flexibility. In a multicorps situation during the critical phase of a changing battle, the TACC may have to make a decision without Army guidance on which corps has priority for limited air assets. Although the Army should obviously make the decision, the situation is now similar to what the Fifth Air Force of the United States faced in Korea during 1952. As addressed in Chapter II, the Fifth Air Force had the same decision-making problem when it was supporting both the Eighth Army and the X Corps (after the X Corps landed at Inchon).

The interface problem that exists in the multicorps situation

does not exist in all situations. For example, if a tactical air force is supporting only a single corps, the corps commander and his corps TASE will be the single point of contact for the TACC. The corps commander, through his TASE, will provide all CAS distribution or redistribution decisions. Another situation where the interface problem does not exist is NATO. The problem has been eliminated because a special organization has been developed specifically to fit that theater. An army group above the corps level fills the void left by removal of the field army and provides an interface with the TACC which supplies the Army guidance and direction for CAS priorities.[7]

In summary, in a single corps contingency the TACC will operate in conjunction with the corps TASE and there should be no problem. In NATO a special organization has been constructed with an army group as a level between corps and combined commander. This army group will provide the necessary Army interface with the TACC. The problem remaining is to determine how the TACC should interface with the Army in a multi-corps environment to provide timely and effective close air support.

Tactical Air Support Coordination Center

On 14 April 1976, Department of the Army and Department of the Air Force sent a joint letter to the Army Training and Doctrine Command (TRADOC) and the Air Force Tactical Air Command (TAC) directing that a

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[7]Department of the Air Force, Tactical Air Command Liaison Office/United States Army Combined Arms Center, Letter ATCALO-TAC to CFD, Subject: NATO Air Forces Command & Control Organization and Functions (Fort Leavenworth, Kans., 5 December 1975).

joint evaluation of the concept of the tactical air support coordination center (TASCC) be conducted. This concept was an organization the Army and Air Force developed to eliminate the interface problem created by EAD.[8] The TASCC organization was to be an army unit specifically designed to fill those functions of the field army TASE that were lost by the EAD change and would interface with the TACC as shown in Figure 6.

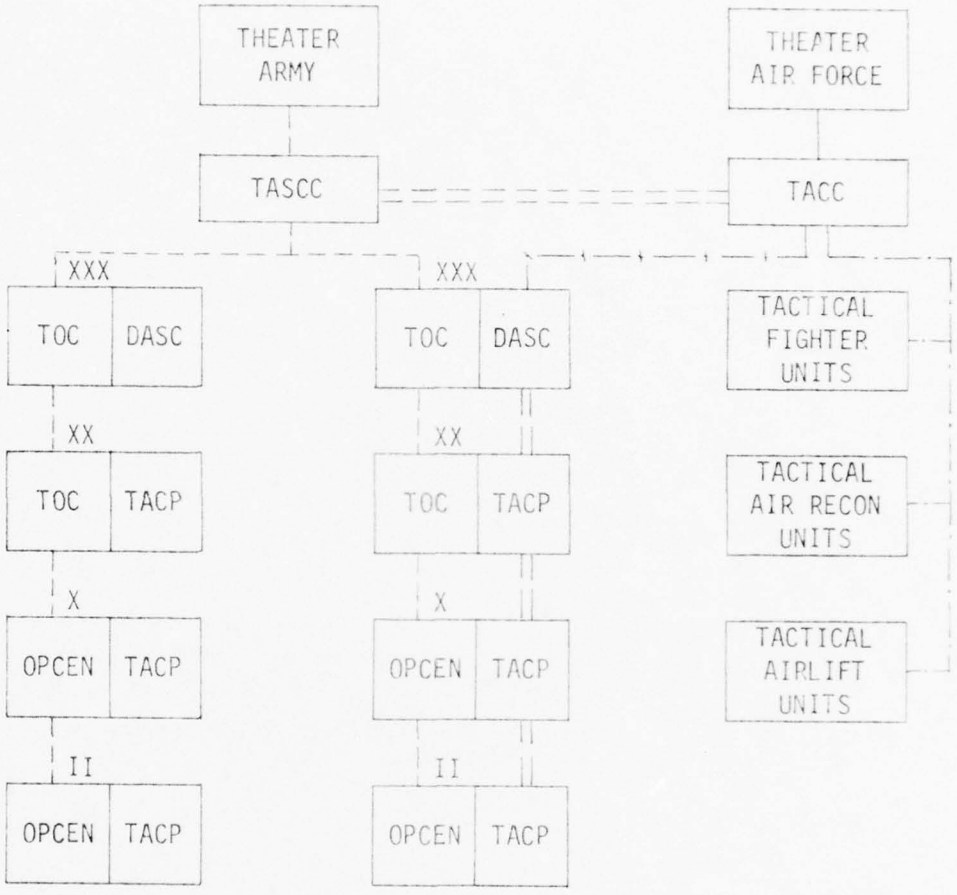
The Army Combined Arms Center developed the organization to fill the TASCC concept. Comments from the 9th Air Force, the 12th Air Force, and the Army Forces Command were considered in the structuring. The organization was to be commanded by a colonel and collocated with the TACC if possible. It was envisioned as the focal point of Army requirements in the TACC. The unified/joint would make the apportionment decision for the corps involved. The TASCC, the AFCC, and corps commanders were to make recommendations for the decision.

In a situation where the battle required reallocation of sorties, the TASCC would recommend the shift of forces to the joint operations center.[9] The key point is that the TASCC could not make reallocation decisions as the field army commander had. The TASCC was to be

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[8]Department of the Army/Department of the Air Force, "Army/Air Force Interfacing in the Echelons Above Division (EAD) Environment," Joint letter to Commander, US Army Training and Doctrine Command/Commander, Tactical Air Command (Washington, 14 April 1975).

[9][Department of the Army, Combined Arms Center], "Proposed TASCC Organization, Functions, Procedures, and Communications" [Fort Leavenworth, Kans., 4 August 1975], pp. 2-3.



Legend:

———— Command

—·—·— Control

- - - - - - Coordination and Requirements

— · — · — Tasking

= = = = = Coordination and Requests

Source: Department of the Army/Department of the Air Force, "Army/Air Force Interfacing in the Echelons Above Division (EAD) Environment," Joint letter to Commander, US Army Training and Doctrine Command/Commander, Tactical Air Command (Washington, 14 April 1975).

Fig. 6. Tactical Air Support Coordination Center (TASCC) Concept

limited to recommendations, and the unified/joint commander was to retain reallocation authority in the joint operations center.

The Air Force Air-Ground Operations School evaluated the TASCC concept in Exercise Sea Hunter, and a joint TRADOC/TAC team evaluated it during Exercise Coronet Command II. The conclusions from Exercise Sea Hunter were:

> The TASCC can provide interface necessary for the coordination of tactical air support in a multi-corps environment provided it is given the authority from an appropriate source, its coordination procedures are developed and refined, and, finally its information requirements are identified.[10]

The TASCC concept was somewhat different when evaluated in Coronet Command II. During this evaluation the TASCC coordinated tactical air support, and its authority came from the force commander. After the apportionment/allocation process had produced a number of tactical air sorties, the TASCC distributed them to the various corps. If, during the battle, the sorties needed to be redistributed, the TASCC had authority to redistribute. The joint operations center monitored all decisions.[11] If sufficient air resources were available, the system worked; however, when the battle required the redistribution of sorties

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[10] U.S. Army Training and Doctrine Command/U.S. Air Force Tactical Air Command, "Army/Air Force Interfacing in the Echelons Above Division (EAD) Environment," Joint Letter ATCD-DJ to Department of the Army/Department of the Air Force (26 April 1976), [p. 1].

[11] Ad Hoc TASCC Joint Evaluation Team, "Joint Evaluation of TASCC in CORONET COMMAND II," Joint letter to Commander, U.S. Army Training and Doctrine Command/Headquarters, Tactical Air Command (Fort Leavenworth, Kans., March 1976), Attachment 1, Annex A, pp. 1-2.

and the corps commanders began to lose sorties, the commanders by-passed the TASCC and argued their case before the joint/unified commander.

Both TAC and TRADOC agreed that "the ability to place air support when and where needed is as vital as realignment of ground forces between Corps."[12] Whereas TAC thought the TASCC accomplished this goal, TRADOC disagreed and argued that the TASCC simply added staff decision making that the EAD change had eliminated. The recommendation from this joint evaluation was that further study be undertaken.[13]

Since the TASCC evaluation report, the Army has made an additional organizational change that affects the corps-TACC relationship. The Battle Coordination Element (BCE) has been added as a liaison element between corps and the TACC. This channel will allow more detailed coordination between the two for reconnaissance, close air support, electronic warfare, airlift, air space management, suppression of enemy air defense, and so forth. The BCE, however, neither fills the interface gap nor provides a decision-making capability.[14]

Conclusions and Recommendations

The interface problem created by the EAD has a historical precedent. When the X Corps landed at Inchon during the Korean War, the

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[12]U.S. Army Training and Doctrine Command/U.S. Air Force Tactical Air Command, p. 2.

[13]U.S. Army Training and Doctrine Command/U.S. Air Force Tactical Air Command, p. 3.

[14]Department of the Army, Control and Coordination of Corps Operations, TC 100-15 (DRAFT) (November 1976), p. 3-6.

Fifth Air Force of the United States had to support both the X Corps and the Eighth Army without an Army decision maker to provide priorities between the two forces. An in-theater reorganization was necessary. The Army and the Air Force are now seeking to assure that the present TACS/AAGS system, when used in a similar situation, will not have to be jury-rigged again. The major conclusions drawn from this chapter are:

- The ability to move air support "when and where needed" is vital. The TACC accomplishes this from the directions a single Army commander gives.
- The EAD change was made to reduce the command and control layering and to increase the Army's reaction capability. This valid concept cannot be realistically argued.
- In removing the field army, single-source Army guidance and priority for application of close air support are likewise eliminated in a multicorps environment.
- Reintroduction of an organization to fill the role of the field army TASE in providing army interface with the TACC would cause an unnecessary level of command in the Army's command structure.

This writer's opinion is that the best solution is the one suggested in the original EAD study which states:

> A possible solution is to place the responsibility for allocation of tactical air support reserves on the next senior tactical command headquarters when more than one small field army is being supported by a tactical air force.[15]

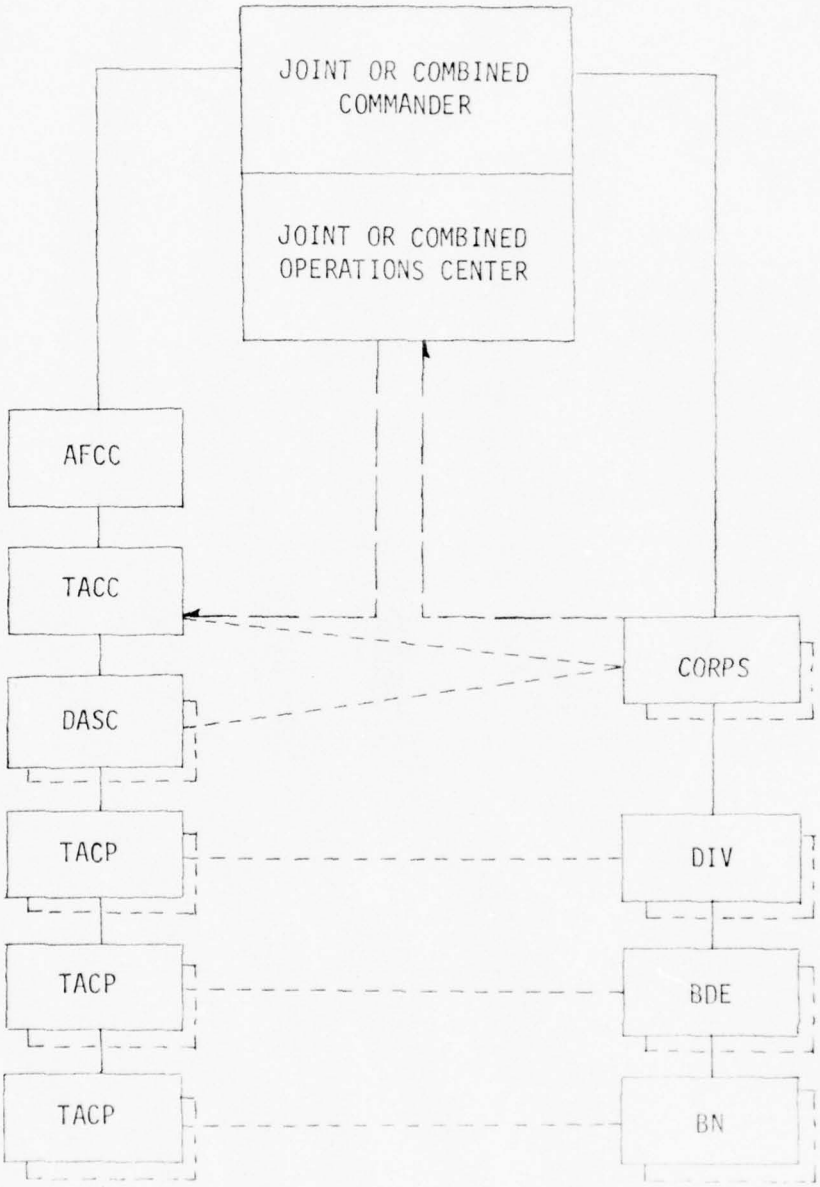
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[15]USACDC, ICAS, "Echelons Above Division," p. 19.

When two or more corps are deployed together, the joint, unified, or combined commander is the senior commander. Therefore, the TACC should interface with this commander's staff to receive central guidance for distribution and redistribution of close air support among the corps. This will solve the TACC interface problem and it complies with the conclusions drawn above to maintain efficiency of both the Army and the Air Force systems. The organization illustrated in Figure 7 is simple in that it uses existing components of the TACS and the joint, unified, or component commander's staff. The lessons learned in a historical review (Chapter II) support this recommendation in that the air force should be centrally controlled from the highest level.

In summary, the TACC must have a single interface with the Army to receive guidance on allocation of close air support sorties. This should occur at the highest command echelon. This writer therefore recommends that:

- The TACC interface should be established with the joint, unified, or combined commander's staff to receive central guidance for distribution or redistribution of close air support among the corps. An organization that will provide this interface is shown in Figure 7.
- Appropriate changes should be made in the TACS and Army air-ground operation publications to implement this change.
- The Joint Chiefs of Staff should insure that the J-3 air operations center provides this interface capability in contingency plans.



Legend:

———— Direct Command
- - - - - - Coordination
◄— — — Redistribution Coordination

Fig. 7. TACS/AAGS in Multicorps Deployment

CHAPTER V

SPLIT COMMAND POST CONCEPT

This chapter presents an analysis of the effect of the split command post concept upon the functioning of the Tactical Air Control System (TACS) at the division level. The purpose of the analysis is to determine if any changes are necessary in the Tactical Air Control Party (TACP) configuration or organization for it to continue to provide close air support (CAS) to the division. First, the historical development of the split command post and its organization are reviewed. This review also includes the U.S. Army's concept of how the division TACP should be organized. Then the division TACP is analyzed. The functions and responsibilities of the officers who enable the TACP to provide close air support to the division are summarized.

The effect of the split command post concept upon the geographical location of the TACP and upon how its officers fulfill their duties is key to this review. The results of interviews with division Air Liaison Officers (ALOs) who have operated with this type command post are integrated into the study. An alternate TACP configuration that allows the U.S. Air Force to fulfill its CAS mission effectively while operating in conjunction with a split command post is presented and analyzed. A basic assumption to this study is that the Air Force

intends to continue to honor the concepts of the 1965 memorandum for improved joint air-ground operations which is the basis for the present TACS configuration.[1] Therefore, the alternate proposal is designed to fit within the constraints of the present system. The chapter ends with conclusions and recommendations.

Changes in U.S. Army's Division Command Post

The division command post has been affected by many factors in its development. As the complexity of controlling and directing division operations has increased, the size and organization of the division command post have changed. The possibility of nuclear war caused the development in 1956 of a command group, main command post (MCP), and an alternate command post as separated command post entities. This concept provided for protection and continuous operations if one part were destroyed. A division tactical operations center (TOC) was added in 1960 to control nuclear offensive operations, and a functional division of duties within the command post followed thereafter.[2] The most recent factor affecting the command post structure was the Vietnam War. In Vietnam, the MCP continued to grow in size and, because of the nature of the war, was permanently located in one position. Occasionally, the

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[1] Harold E. Johnson, General, USA, Chief of Staff, Memorandum For: Chief of Staff, United States Air Force, Subject: Concept for Improved Joint Air-Ground Coordination (28 April 1965).

[2] Department of the Army, Command and Control of Combat Operations, FM 101-5 (DRAFT) (July 1976), p. 1-8.

command post TOC would be temporarily moved to a forward location. By the end of the Vietnam War the command post had become very large and was rarely mobile. In relation to the modern battlefield, it was very vulnerable. The U.S. Army, after evaluating the command and control problems observed in the 1973 Mid-East War, decided to reorganize its division command post.

This reorganization sought to improve survivability and provide a more realistic command capability. To improve survivability, the command post was reduced in size and dispersed into three separate functional components. This decision should improve mobility and reduce physical and electronic signature.[3]

To provide realistic command capabilities, the reorganized command post concept placed the division commander close to the battle so that he could exercise personal control. To support the commander in this forward location, a small, highly trained and complete battle staff was envisioned. In addition, the separate command post entities would be manned to provide a continuous, around-the-clock operation.[4]

These concepts and ideas are contained in the Army's TC 101-5, Control and Coordination of Division Operations (April 1976). In this training circular the command post was split into three parts. The division support area was located well to the rear and contained the

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[3]Department of the Army, Control and Coordination of Division Operations, TC 101-5 (April 1976), p. 3.

[4]Ibid., pp. 4-5.

combat service support and administrative services. The MCP was located about thirty kilometers behind the battle lines. The MCP could sustain the division by controlling the combat support and combat service support functions. The tactical command post (TCP) was well forward, and from it the division commander could control and direct the battle.

Prior to analyzing the division TACP's CAS coordination and control capabilities under the new concept, it is important to understand the division's concept of fire support control and how this function is divided among the separate elements of the command post. From the TCP the division commander will "control and coordinate all immediate and near-immediate fire support means to include tactical air and attack helicopters."[5] To accomplish this, the TCP will contain a fire support coordination element and a TACP element. The MCP will contain the majority of the fire support coordination personnel. It will prepare fire support plans that are directed by the TCP and it will insure coordination of all the division fire support requirements.[6]

Within this split command post concept the Army has also geographically separated the Air Force TACP into three parts. This TACP reorganization is included in the Army's TC 101-5, Control and Coordination of Division Operations (April 1976). In the Army's concept of the TACP organization, the Fighter Liaison Officer will be located in the TCP to provide advice and to coordinate immediate CAS requests. The MCP

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[5] Ibid., p. 15. [6] Ibid., p. 38.

will contain the division Air Liaison Officer and the Reconnaissance Liaison Officer. They will advise and coordinate both reconnaissance and preplanned CAS requests. The Airlift Liaison Officer will be located in the division support area. There he will coordinate airlift requests with the Air Force airlift coordination element and the Army combat service support personnel.[7]

At the present time the Army is studying a concept that will reorganize its division force structure. This concept will be published in Field Manual 71-100, Restructured Division Operations Manual (DRAFT). This manual will guide operations of the new division and will include a second TACP reorganization. In this organizational concept the ALO will be in the TCP to advise the division commander. The remainder of the TACP will be located in the MCP. All immediate and preplanned requests will be routed through the MCP.[8] As of this study the Air Force has not officially addressed either of these Army concepts of the division TACP. A survey by this writer revealed that the Army divisions are experimenting with the split command post doctrine and the Air Force division TACPs are attempting to use the concept described in the Army's TC 101-5 to support Army requirements.

In summary, the Army has made a positive step to improve its

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[7] Ibid., pp. 19 & 39.

[8] U.S. Army Combined Arms Center, [Division Restructuring Study Group], Division and Brigade Operations: Restructured Division Operations Manual, RDOM 71-100 (TEST) Coordination DRAFT ([Fort Leavenworth, Kans.,] December 1976), p. 2-16.

division command post structure. The change is intended to reduce size and improve survivability. The division commander will be closer to the battle, which should enhance control. The command post entities will be able to operate continuously for long periods of time. The Army has several concepts of how the Air Force division TACP should be organized; however, the Air Force has not officially addressed these changes in division TACP operations.

Division TACP

The present Air Force division TACP comprises a division ALO and fighter, reconnaissance, and airlift liaison officers. Six enlisted radio communication repairmen and three other enlisted specialists support the division TACP.[9] As stated in Chapter III, the division ALO is responsible for the TACS, from division through subordinate echelons, and is also the senior Air Force advisor to the ground commander. His responsibilities for the TACS include the supervision of personnel and equipment of all subordinate TACPs at brigade and battalion levels. He must insure that either an Air Force or an Army supply system supports the division TACS. The division ALO must also be a qualified forward air controller (FAC). As the senior Air Force advisor to the ground commander, he is responsible for several coordination functions. He

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[9]U.S. Army Forces Command, U.S. Army Training and Doctrine Command, Military Airlift Command, and Tactical Air Command, "Guidance for the Assignment and Duties of Ground Liaison Officers, Air Reconnaissance Liaison Officers, Air Liaison Officers and Tactical Air Control Parties" (19 January 1977), p. 5. (Hereinafter cited as TAC/TRADOC agreement.)

must insure coordination of local antiaircraft defense and intelligence matters. He will assist in developing plans using tactical air support, and he will insure that these plans are coordinated with the appropriate Air Force agency.[10]

The Fighter Liaison Officer (FLO) advises the ALO and ground commander on CAS employment, assists in development of CAS requests and fire support plans, and coordinates CAS missions. The FLO must be FAC qualified. The Reconnaissance Liaison Officer provides the same support to the division in reconnaissance matters. The Airlift Liaison Officer advises and coordinates airlift requests.[11] As a practical matter, in actual operations the Reconnaissance and Airlift Liaison Officers also man the Air Force Request Net station and assist in the administrative part of the preplanned CAS missions if needed.

Prior to the split command post concept, all division TACP personnel were collocated. This facilitated rotation of duties, cross-training of personnel, command and control of the TACS, and continuous operation. An exception to this combined location occurred when the Airlift Liaison Officer was in the rear with the logistics personnel or when the FLO was located in the alternate command post while the MCP moved. During the MCP move, the alternate command post maintained the

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[10] TAC/TRADOC agreement, p. 8.

[11] Department of the Air Force, Tactical Air Control System (TACS): Direct Air Support Center/Tactical Air Control Parties, TACR 55-46 (TEST) (August 1976), p. 3-4 through 3-6.

division request net.[12]

Effects of Splitting the TACP

The geographical separation of the functions, personnel, and equipment of the TACP among several locations causes numerous problems with the operation of the division TACS. The first problem concerns the capability of the division ALO to perform all required duties. The Air Force has assigned the division ALO a variety of responsibilities. These range from management of the entire division TACS to being the senior tactical Air Force advisor to the division commander. With the split of the division command post, the division ALO is required to be in both the TCP and the MCP to fulfill his duties. This is because the division commander is at the TCP while the majority of Army planning functions, such as airspace management and intelligence/reconnaissance planning, are accomplished at the MCP.[13] In addition, the majority of the TACS personnel and the TACS management functions are performed from the MCP.

A second problem is the questionable capability of all elements of the TACP to sustain continuous operation. Previously, with all TACP personnel at one location, continuous operation could be sustained

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[12]Telephone interview with either the Air Liaison Officer or the Fighter Liaison Officer of each U.S. Army division stationed in the United States, 23 February 1977 through 24 March 1977. (Results retained in this writer's personal papers.)

[13]Department of the Army, TC 101-5, pp. 36-38.

through cross-training and shift operation. With the division TACP spread in three locations, only the MCP has sufficient trained personnel available to fulfill this requirement. With the split command post concept the division TACP manning must be augmented.

The third problem concerns communications equipment to support the TACPs. The quantity of equipment must meet initial TACS requirements and must provide adequate backup capability in case of equipment failure or loss during battle. In the past the division TACP was allocated four AN/MRC 107/108 communication centrals (MRC 107/108).[14] With these four MRC 107/108s the division TACP could support the MCP, the alternate command post during a move, and the airlift liaison officer and still have one MRC 107/108 in reserve in case of equipment failure at the division TACP or below.

With the split command post concept, the division TACP must provide equipment for continuous operation of three separate locations: the TCP, the MCP, and the division support area in the rear, where the Airlift Liaison Officer is located. This requires a minimum of three MRC 107/108s. However, a prudent manager would provide some backup communication capability for these locations as well as additional backup capability to support the twelve subordinate division TACPs. The backup equipment should be at least one MRC 107/108 or a trailer with appropriate communications equipment.

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[14]The AN/MRC 107 and AN/MRC 108 are jeeps that carry UHF, VHF, and FM radio transceiver equipment.

The communications equipment problem has been further complicated by a recent agreement between the Air Force and the Army that reduces the MRC 107/108s at the division from four to three and at the brigade from two to one.[15] The effect of this agreement has been to totally eliminate the equipment reserve capability at both division and brigade. The equipment agreement seems to have been made without considering the increased equipment requirements that the split command post concept would levy on the division TACP.

A fourth problem is that of determining the appropriate request channels for immediate and preplanned requests for close air support. Prior to the split command post concept, the MCP was the only division station on the Air Force request net. When the alternate command post was used it was while the MCP was being moved, and during this period the alternate command post became the Air Force request net station. In either case only one station was on the air at one time. Under this new concept of continuous operation, both command posts will be operating. The Air Force and the Army must determine which station has approval authority for immediate CAS requests. Even though the fire support planning personnel at the MCP develop the preplanned request, the routing for it should be such that the request reflects the desires of the commander and his operational decision at the TCP.

Presently the split command post concept states: "Fire support

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[15] TAC/TRADOC agreement, p. 7.

is controlled at both the tactical and main command posts." It further states: "The tactical command post element normally coordinates the use of immediate fighter or other tactical aircraft requests" and "the main CP [command post] assists . . . when required with preplanned close air support requests."[16] The problem with this system is twofold. First, the preplanning of close air support is accomplished at the MCP while the division commander and the FLO are at the TCP. This could cause coordination problems. A more significant problem is that the electronic signature of the TCP will increase if the TCP coordinates all immediate CAS requests. Additionally, both the amount of the signature and the type of transmission will aid the enemy in identifying the TCP. This obviously conflicts with the purpose of improving survivability.

A fifth problem is the lack of directives to the division TACP. Air Force guidance as to the location of the division TACP is that it will be collocated with the tactical air support element (TASE). It further states that the contact point for the coordination and integration of current air operations is the G-3 Air.[17] This guidance is incomplete in consideration of the new split command post concept which divides the location of these functions. Moreover, the Army, in Control and Coordination of Division Operations, TC 101-5 (April 1976), has deleted the TASE and G-3 Air from the division command post.[18] The Army

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[16] Department of the Army, TC 101-5, p. 39.

[17] Department of the Air Force, TACR 55-46, p. 5-3.

[18] Department of the Army, TC 101-5, pp. 24 & 37-38.

removed the TASE as a special entity and the G-3 officer to reduce the personnel in the command post. Their functions have been shifted to other personnel and units within the MCP and the TCP. This lack of standardization of terms in Air Force and Army publications is confusing. In addition, the lack of a definite contact point for the TACP in the split command post concept compounds the confusion.

In summary, the split command post concept has divided the functions and members of the TACP. This causes the division ALO problems with management of the TACS, detracts from the TACP's capability to support continuous operation due to both personnel and equipment problems, and requires reconsideration of the routing and coordination of the CAS requests. Finally, guidance by both the Air Force and the Army is incomplete.

An Alternative Division TACP Configuration

This writer has developed an alternative configuration for the division TACP which reflects a solution to the problems presented above. The alternative TACP configuration presents changes in manning, officer location, equipment levels, and CAS request routing. It is based upon this writer's interviews with either the division ALO or the Fighter Liaison Officer of each of the U.S. Army divisions stationed in the United States. In addition, a questionnaire was sent to the Tactical Air Support Squadron at Bergstrom Air Force Base, Texas. (Matters discussed are shown in Appendixes A and B.) The TACP configuration

recommended here is based upon this writer's desire to change the TACP as little as possible while solving the problems caused by the split command post concept.

The manning of the alternate division TACP should consist of the division ALO and the Reconnaissance and Airlift Liaison Officers at the MCP, with the division Fighter Liaison Officer augmented by another Fighter Liaison Officer at the TCP. This manning will enable the MCP and the TCP to operate continuously for long periods of time.

Selection of officers to be assigned to the MCP and TCP was made on the basis of functions performed. The Airlift and Reconnaissance Liaison Officers must be at the MCP because the command post elements with which they coordinate are located there. The Airlift Liaison Officer may, however, periodically make trips to the division rear to coordinate with Air Force and Army logistics personnel. The Fighter Liaison Officer or the division ALO must also be at the MCP since all immediate CAS requests will be routed through the MCP. The reason for this routing is explained later.

The key issue in personnel location is the best location of the Fighter Liaison Officer and the division ALO. Both officers are charged with the responsibility of advising the ground commander concerning the capabilities, limitations, and employment of CAS resources.[19] The division ALO, however, is also charged with responsibility for the

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[19]Department of the Air Force, TACR 55-46, pp. 3-3 & 3-5.

management of the entire division TACS. His responsibilities to the Army go beyond advising on CAS and include such matters as coordination of airspace management, antiaircraft defense, and suppression of enemy air defenses. Because of these additional responsibilities, the division ALO should be at the MCP. In addition, in almost all cases the Fighter Liaison Officer has the most recent fighter experience and should be the most knowledgeable in the latest delivery tactics. He should be fully qualified to advise the division commander.

Because of the above reasoning, the TCP should be manned by the division Fighter Liaison Officer. He must be augmented with an additional Fighter Liaison Officer to provide a continuously operating capability. A suggestion heard regularly in the field is that the Fighter Liaison Officer could be augmented by extra enlisted radio operators. This solution would provide for continuous operation of the Air Force Request Net; however, the Fighter Liaison Officer should be available for advice and assistance on a 24-hour basis. This, therefore, is not an acceptable solution to the problem. Another Fighter Liaison Officer is required.

The problem of continuous operation requires extra equipment as well as manpower. To assure continuous operation, the division TACP must have four MRC 107/108s. One will be located at the TCP and three at the MCP. One unit at the MCP is for the airlift officer, when he must leave, and one unit is for the division MCP itself. The third unit is for reserve to support subordinate units experiencing equipment

failure. In this writer's opinion and based upon his interviews, the possibility of having to provide an equipment reserve is a legitimate concern.

To improve survivability of the TCP, all immediate CAS requests will be coordinated through the MCP. To assure that the division commander is aware of the CAS employment, the TCP will monitor the Air Force Request Net. If the division commander decides the request should be denied, he may break the listening silence. To prevent breaking the silence, the division commander might use other communication nets to the MCP. All preplanned requests will be coordinated through the MCP. The division commander will be kept informed of the preplanned requests and will direct the priorities through his fire support coordination element at the TCP. The advantages of this system are:

- It provides the TCP with knowledge and command but does not give away its position.
- It routes both immediate and preplanned requests through the main command post, thus reducing potential confusion.
- It is not a significant change from the present procedure and will not require elaborate retraining or reorganizing.

Conclusions and Recommendations

For the division, the Army has adopted a split command post concept that is designed to improve survivability, provide continuous operation, and place the division commander close to the front. Army

divisions are now practicing this concept.

The split command post concept has caused problems within the division TACP. The conclusions of this study are:

- The split command post concept geographically separates the division TACP, which:

  a. Fragments the division Air Liaison Officer's area of responsibility.

  b. Increases the personnel and equipment requirements of the division TACP.

  c. Increases the possibility of confusion in both preplanned and immediate close air support request routing.

- Air Force publications refer to Army positions that have been deleted and lack guidance to the division TACP about the split command post concept.

- Army publications did not designate Air Force contact points after the deletion of the G-3 Air position or the tactical air support element.

- The Air Force compounded the equipment problem by reducing the communications equipment allocated to the division and brigade TACPs.

In this writer's opinion, the equipment change reflects the economic pressure of reduced defense budgets and is peacetime-exercise oriented. The historical review in Chapter II indicates the lack of priority of the Air-Ground Operations System between wars and the

resulting stagnation of its development. The low state of readiness and inefficiencies of the Tactical Air Control System at the beginning of the Korean and Vietnam wars are well documented. Besides equipment problems, the Air Force has not recognized the manpower or command and control problems caused by the split command post concept.

To correct the problems the division Tactical Air Control Party faces, this writer recommends that:

- The Air Force and the Army direct a joint evaluation of the alternative division TACP configuration.
- Upon successful completion of the evaluation, the division TACP configuration concept be adopted.
- The Air Force change the equipment allocation to the division TACP to provide four AN/MRC 107/108 communication centrals.
- The Air Force plan to augment the division TACP with an extra Fighter Liaison Officer during exercises or in a war situation.
- The Air Force change the TACS publication to reflect this new division TACP concept.
- The Army change TC 101-5, Control and Coordination of Division Operations (April 1976), and related documents to reflect the alternative TACP configuration and operating procedure.
- Both the Air Force and Army publications should be changed to indicate the desired immediate and preplanned contact points for the Tactical Air Control Party personnel in the main command post and the tactical command post.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The historical analysis of the present Tactical Air Control System (TACS) organization indicates that the basic TACS has been relatively unchanged since World War II. The basic system and its principles were developed in World War II, and the lessons learned were embodied in Field Manual 35-13, Air-Ground Operations (August 1946). Changes were made in the system to take advantage of improved technology and to respond to changing ground support requirements during the Korean and Vietnamese wars. Some changes made during the wars were permanently integrated into the system. An example of this was the Direct Air Support Center developed in South Vietnam. Other changes were not integrated into the system but were retained only for that specific conflict. An example of this was the single manager of all air resources used at the end of both the Korean and Vietnamese wars.

Between wars, however, the development of the TACS has been one of static growth. It has received very little priority in peacetime and, as a result, was in a low state of readiness and efficiency when both the Korean and Vietnamese wars began. Since the end of the war in Vietnam, the U.S. Army has made several changes in its organization that affect the TACS and the ability of the U.S. Air Force to effectively

provide close air support (CAS). Two of these changes are the Echelons Above Division (EAD) and the split command post concept.

Echelons Above Division Interface Problem

In 1973 the Army eliminated the field army from its command structure. This organizational change, Echelons Above Division, caused an interface problem between the Air Force's TACS and the Army. By eliminating the field army and its tactical air support element (TASE), the Army separated the Tactical Air Control Center (TACC)--the Air Force's nerve center for managing and allocating air resources--from a single overall tactical field commander.

This problem is critical in the multicorps environment because the removal of the field army TASE eliminated the Army's command and control process for providing guidance on the distribution and redistribution of limited tactical air resources between competing corps commanders. Recognizing this problem, the Air Force and the Army entered a joint evaluation of a concept, the tactical air support coordination center, that would fill this decision-making gap. The Army determined that it did not want to reestablish a level of command that EAD had eliminated.

The conclusions drawn from this part of the study are:

- The TACC manages air support to the Army through coordination with a single Army commander.
- The EAD concept reduced command and control layering in the

Army command structure. It also eliminated single source guidance to the Air Force TACC in a multicorps environment.

• Reintroduction of an organization to fill the role of the field army TASE to provide Army interface with the TACC would cause an unnecessary level in the Army's command structure.

It is recommended that:

• The TACC interface should be established with the joint, unified, or combined commander's staff to receive central guidance for distribution or redistribution of close air support among corps. An organization that will provide this interface is shown in Figure 7 (page 46).

• Appropriate changes should be made in the TACS and Army air-ground operations publications to implement this change.

• The Joint Chiefs of Staff should insure that the J-3 Air Section of the joint operations center provides this interface capability in contingency plans.

Split Command Post Concept

In addition to EAD, the Army has made another organizational change that also affects the TACS. The Army has developed a split command post for its division command operations. This concept is contained in TC 101-5, Control and Coordination of Division Operations (April 1976). In consideration of the modern battlefield environment, the Army reduced the size of its command post and divided it into three

separate functional components. The separate parts of the command post are the tactical command post (TCP), the main command post (MCP), and the division support area. This reorganization improved command post mobility and reduced physical and electronic signatures. The individual command post entities, although reduced in size, are manned to provide continuous operation. The reduced manning eliminated the division TASE and G-3 Air. These were the direct points of contact for the division Tactical Air Control Party (TACP). Other officers in the command post system have been assigned the TASE and G-3 Air functions. The result has been confusion and a lack of guidance in Air Force and Army publications.

The split command post concept has caused problems within the division TACP. The conclusions of this part of the study are:

- The split command post concept geographically separates the division TACP, which:

  a. Fragments the division Air Liaison Officer's area of responsibility.

  b. Increases the personnel and equipment requirements of the division TACP.

  c. Increases the possibility of confusion in both preplanned and immediate close air support request routing.

- Air Force publications refer to Army positions that have been deleted and lack guidance to the division TACP about the split command post concept.

- Army publications did not designate Air Force contact points after the deletion of the G-3 Air position or the tactical air support element.

- The Air Force compounded the equipment problem by reducing the communications equipment allocated to the division and brigade TACPs.

This writer developed an alternative division TACP configuration to solve the problems created by the split command post concept. This TACP configuration provides additional personnel support and communications equipment. The routing of immediate and preplanned close air support requests in this configuration would reduce the potential for confusion. Additionally, the Air Force electronic signature from the tactical command post would be reduced.

Recommendations of this study are:

- The Air Force and the Army should direct a joint evaluation of the alternative division TACP configuration.

- Upon successful completion of the evaluation, the alternative division TACP should be adopted.

- The Air Force should change the equipment allocation to the division TACP to provide four AN/MRC 107/108 communication centrals.

- The Air Force should plan to augment the division TACP with an extra Fighter Liaison Officer during exercises or in a war situation.

- The Air Force should change the TACS publications to reflect the alternative division TACP concept.

- The Army should change TC 101-5, Control and Coordination of Division Operations (April 1976), and related documents to reflect the alternative TACP configuration and operating procedure.

- Both the Air Force and Army publications should be changed to indicate the desired immediate and preplanned contact points for the Tactical Air Control Party personnel in the main command post and the tactical command post.

Conclusions

This study's conclusions and recommendations have addressed two specific Tactical Air Control System problems resulting from changes in the Army's organizational structure. As the Army reacts to threat analysis or capitalizes on improved technology, the organization and character of its force structure changes. The Air Force must continually analyze these changes to maintain the efficiency of the Tactical Air Control System and the capability to provide close air support. The Air Force must also insure that the Tactical Air Control System remains a viable system in the light of changing enemy threat and that it has the ability to adapt to the latest tactical air force tactics and technology.

From the historical research portion of this study, a basic conclusion more significant than the problems initially investigated becomes obvious. This conclusion is that subsequent to World War II and between each succeeding conflict the development of the Tactical Air

Control System received very low priority in Air Force planning. As a result, the Air Force entered the Korean and Vietnamese wars with an inefficient Tactical Air Control System. The problems addressed in this study are indicators that the development of the Tactical Air Control System may again be stagnating. The Air Force must heed the lessons learned from the past and must place emphasis on the continual development of the Tactical Air Control System. The result must be a dynamic system that continues to accommodate Army requirements and have the capability to provide close air support with the latest Air Force tactics and equipment in the face of increasing enemy capabilities.

APPENDIX A

SCHEDULE OF QUESTIONS FOR DIVISION AIR LIAISON OFFICERS OR DIVISION FIGHTER LIAISON OFFICERS

The telephone interview was begun by stating the reason for the survey and reviewing the split command post concept as taught in the U.S. Army Command and General Staff College and presented in TC 101-5, Command and Coordination of Division Operations (April 1976). The basic questions asked in each interview follow.

1. Is the division with which you are located using the split command post concept or a modification of it?
   Has it been used in field exercises?

2. How has the split command post concept affected your division Tactical Air Control Party (TACP) operations?

3. Where are the personnel of your division TACP located under this concept?

4. Do you have enough people to support the three separate division TACP locations?

5. Does the geographical separation of the TACP elements cause the division Air Liaison Officer (ALO) any management or supervision problems, either in the division TACP or within the division Tactical Air Control System?

6. Do you think the best location for the division ALO is at the main command post or at the tactical command post?
   Why?

7. What do you think is the best location for the Fighter Liaison Officer?
   Why?

8. Has the split command post concept caused the TACP any equipment problems?

9. Can the manning and equipment of the TACP support continuous operations (more than 72 hours)?

10. What is the routing of preplanned requests through the split command post?

11. How are immediate close air support requests routed under this concept?

12. What do you think is the most important step required to improve TACP operations under this concept?

APPENDIX B

QUESTIONNAIRE ON TACTICAL AIR CONTROL SYSTEM (TACS)

[Completed by Tactical Air Support Squadron,
Bergstrom Air Force Base, Texas]

This questionnaire seeks information about the TACS which will be used by Major Ronnie K. Morrow, USAF, in a thesis for the U.S. Army Command and General Staff College. Please feel free to expand on any answers or to add comments as you desire. Your assistance is appreciated. Thank you.

1. What is your experience/background within the TACS?

2. Have you ever worked at a division Tactical Air Control Party (TACP) when both the main command post and the tactical command post were operating?
   If so, what did you see as the advantages or disadvantages of the TACS with this concept?

3. In the split command post concept, where do you think the division Air Liaison Officer and the division Fighter Liaison Officer should be located?
   Why?

4. Could both the main command post and the tactical command post be stations on the immediate request net?
   If so, which would have priority?

5. What do you think the manning in the division TACP should be to support the split command post for continuous operation (more than 72 hours)?
   Why?

6. What additional equipment do you think is necessary to support continuous operation?
   Why?

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