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**STRATEGIC
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THE NATIONAL WAR COLLEGE

STRATEGIC STUDIES REPORT ABSTRACT

TITLE: NATO Offensive Air Power in the Central Region: TWOATAF and FOURATAF Contrasted

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NATO's 2ATAF and 4ATAF, although clearly subordinate to AAFCE, have evolved two clearly separate approaches to the employment of air power. This paper provides a background of the Allied air power organization in NATO's Central Region, describes the geographical and tactical air environment, and reflects on the different Allied Tactical Air Force tactical philosophies that have developed as a result of the ATAFs' respective and distinctive organizational and geographic differences. Finally, this paper concludes that these differences are quite likely to continue to be reflected in discussion of future NATO strategies.

BIOGRAPHICAL SKETCH

Colonel Rudolf F. Peksens, USAF, (BA, Tufts University; MS, Troy State University) has nearly ten years of operational and staff experience in the European theater. He has travelled extensively in NATO and has served in 13 of NATO's 16 nations. During the Viet Nam War he flew combat missions in both the B-52 and the RF-4C and holds the Distinguished Flying Cross with one Oak Leaf Cluster. Colonel Peksens is a graduate of National War College, Class of 1986.

Chapter 1

INTRODUCTION

The balance of forces in the Central Region of NATO Europe has undergone a dramatic shift in recent years as the Warsaw Pact's force structure has begun to reflect long and continuing programs which have improved the quantity and quality of their air power. Of particular concern is the significant advancement in the offensive capabilities of "third generation" tactical aircraft. This paper will examine NATO's response to the increased threat, but with particular emphasis on the similarities and differences of the two Central Region Allied Tactical Air Forces as evidenced in their respective approaches to close air support and battlefield air interdiction.

Since the mid 1970's a simmering controversy over Allied air tactics has found its way into military journals and operational plans. This controversy centers around the British dominated concept of relatively autonomous air operations used in the northern half of Germany as contrasted with the American dominated concept of technologically dependent, close control of air operations used in the southern half of Germany. Both sides

of this argument can be presented logically and persuasively, even while avoiding the obvious nationality bias. It should be carefully noted that significant efforts have been made over the recent years to harmonize the different concepts. Many of the efforts have been successful, yet some differences remain.

In the following chapters, this paper will examine the organizational structure of the Central Region as it affects perceptions, the environment of the theater as it drives tactical thinking, and the differing philosophies and tactics themselves as they affect the application of Allied and American airpower.

Chapter 2

ORGANIZATIONAL STRUCTURE

The principal NATO military command for continental Europe is Allied Command Europe (ACE) and is led by the Supreme Allied Commander Europe (SACEUR). His headquarters is at Casteau, near Mons, in Belgium and he is responsible for the defense of all NATO territory in Europe except Britain, France, Iceland, and Portugal. This command has about 3100 tactical aircraft based at about 200 NATO airfields and is backed up by a system of jointly financed storage depots, fuel pipelines, and communication facilities. Allied Command Europe has five important subordinate commands including Allied Forces Central Europe, Allied Forces Northern Europe, and Allied Forces Southern Europe. Of particular interest here is the Allied Forces Central Europe (AFCENT) which directs both the land and air forces in the Central European sector. (see figure on page 5a) Its headquarters is at Brunssum in the Netherlands and its commander (CINCENT) is a four star German army general. The forces of AFCENT include about 26 army divisions and about 1400 tactical aircraft contributed by Belgium, Canada, Germany, the Netherlands, the United Kingdom and

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the United States.

One final subdivision is required for this analysis and that is to separate the subordinate commands of AFCENT. Specifically, AFCENT is subdivided into the Northern Army Group (NORTHAG) and the Central Army Group (CENTAG). NORTHAG is responsible for the defense of the sector north of the Kassel-Liege line (see map on page 7a) using Belgian, British, Dutch, and German divisions supported by the Second Allied Tactical Air Force (2ATAF) which is also composed of aircraft from those same nations. Further, and significantly, since 1979, US Air Force units have also been dedicated to support of 2ATAF. The Central Army Group (CENTAG) defends south of the Kassel-Liege line and is made up of German, Canadian, and American ground forces supported by the Fourth Allied Tactical Air Force (4ATAF) which is composed of aircraft from those nations.

To coordinate the various air tasks throughout AFCENT, Allied Air Forces Central Europe (AAFCE) was formed in 1974. AAFCE's commander is a United States Air Force four star general whose primary role is providing centralized control over 2ATAF and 4ATAF, subordinate to CINCENT's requirements. In any Central Region scenario, AAFCE, in coordination with AFCENT, will accomplish the following tasks:

1. Determine the overall regional air objective and plans.

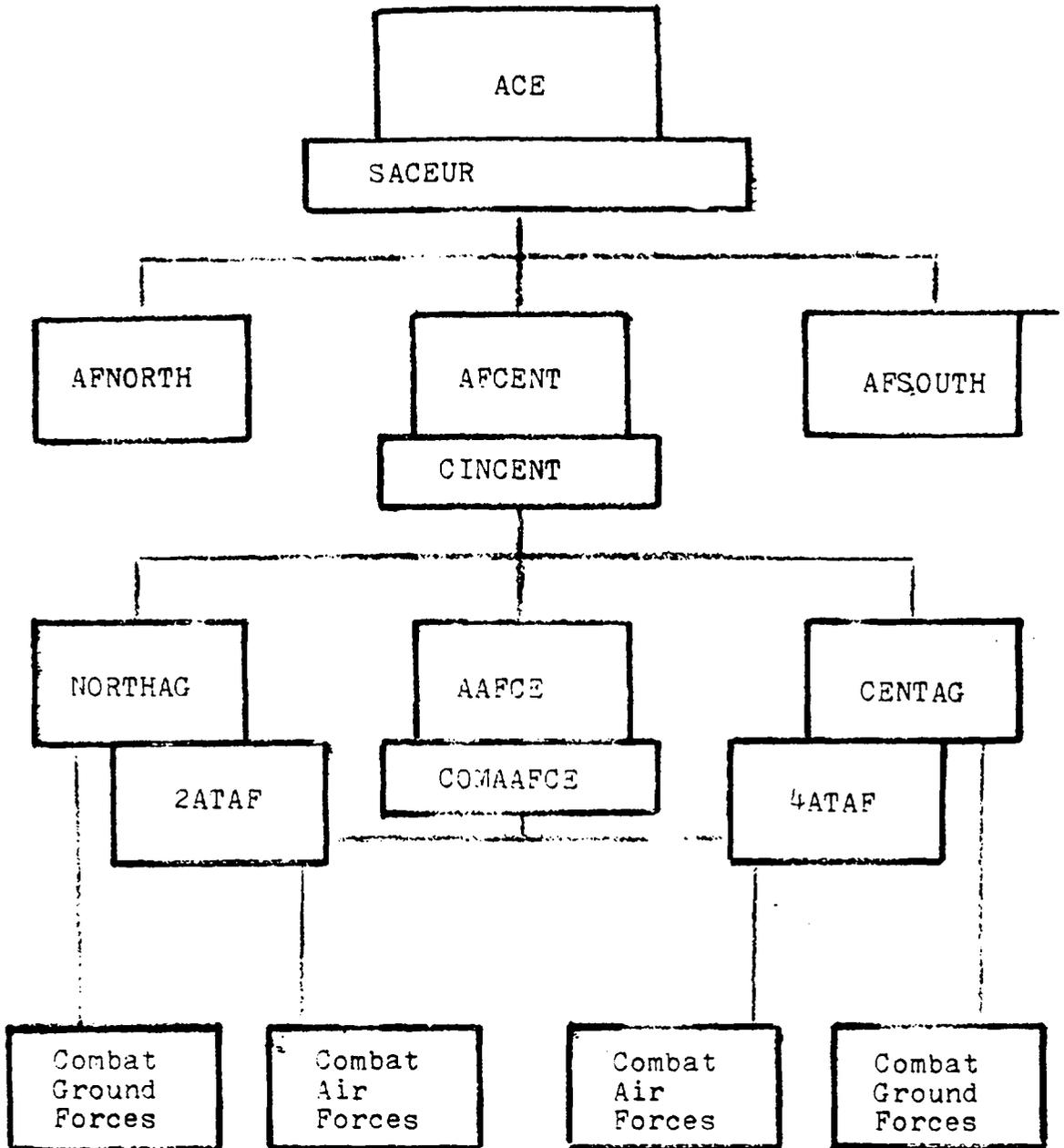
2. Determine regional target priorities.
3. Issue appropriate warning and execution orders.
4. Determine allotment of air forces to be given to each ATAF.
5. Allot and allocate unique, special air assets to the subordinate ATAFs.

In summary, the organizational structure of the Central Region is presented as a wiring diagram on page 5a.

In practice, since the American-dominated 4ATAF has a greater percentage of the air assets and since the most dangerous and likely invasion route is in NORTHAG, one of AAFCE's main roles will be to reallocate the 4ATAF air power to reinforce the British-dominated 2ATAF in the case of a North German plain attack scenario.

The cross allocation of air power highlights one of NATO's continuing disagreements: which nation's military leaders are best able to evaluate and direct the military forces in NATO? Often American generals feel that they are the best qualified because of their combat experience in Viet Nam. On the other hand, while British generals have not seen combat of Viet Nam's intensity since the Korean War (the Falklands notwithstanding), they often regard the Americans as amateurs in the NATO theater. Sir Peter Hill-Norton reflects this disharmony when he refers to

CENTRAL REGION ORGANIZATION



"the deeply held belief of many of the generals in the US Air Force that their years of bitter experience in Viet Nam read across to the European theatre. Because almost every single aspect of that war was totally different from any possible future war in Europe, hardly any of their Allies share this view..."²

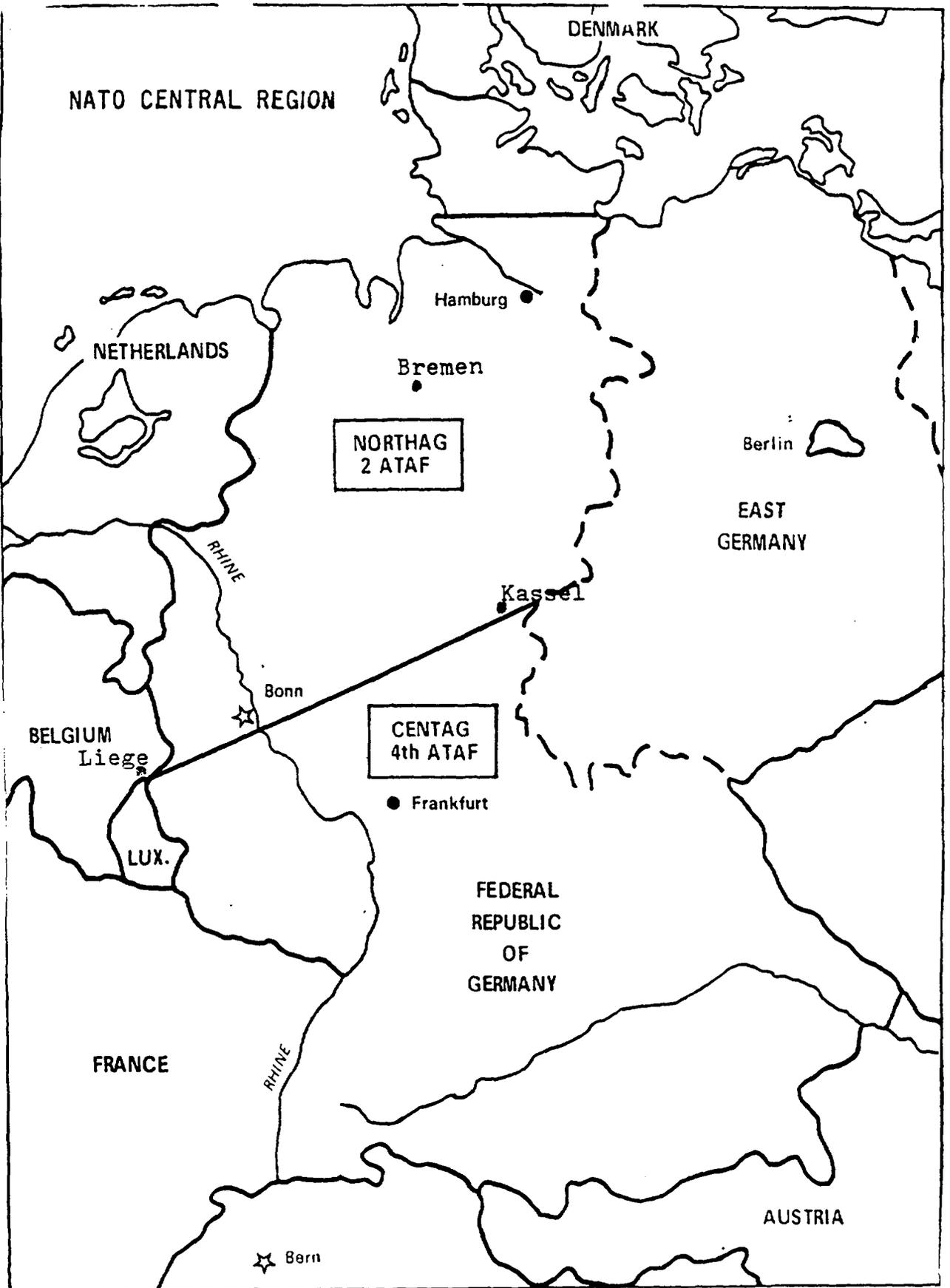
Opposing national views are often crystallized in 2ATAF and 4ATAF. The resultant and diverse philosophies and tactics will be discussed in Chapter 4.

Chapter 3

THE ENVIRONMENT

Topographically, the Central Region land mass varies widely, ranging from the flat lowlands of northern Germany, the Netherlands and Belgium - NORTHAG/2ATAF - to the rough uplands occupied by the V and VII US Corps in central Germany -CENTAG/4ATAF- to the rugged Alps on the southern German border. The topography of Germany has invited most invaders to choose the more easily negotiated terrain of the north as the traditional invasion route. Even today most scenarios forecast the primary Warsaw Pact thrusts developing in the NORTHAG/2ATAF area of responsibility between Bremen and Kassel. (refer to map on following page)

Although central Europe lies within the same latitude as southern Canada, its climate is warmer because of the effects of the Gulf Stream. The worst weather occurs in the winter, particularly in the morning, while the best conditions are found during summer afternoons. Weather ceiling and visibility conditions of less than 1500 feet and 4.5 kilometers exist approximately 50% of the time during the winter but only 10% of



ARMY GROUP/ATAF MAP

the time in summer. During the months of December and January, darkness may last up to 16 hours each day. The best estimates are that less than good flying conditions exist 86% of the time in winter.

To counter the NATO air threat, the Soviets have deployed a diverse and extremely dense tactical air defense network ranging from advanced, look-down shoot-down, interceptor aircraft to fully tracked, self-propelled Surface to Air Missiles (SAMs) augmented by highly mobile, rapid firing Anti-Aircraft Artillery (AAA).

The third and fourth generation Soviet aircraft entering the Warsaw Pact inventory are very impressive in both quantity and quality. MiG-23,-25,-27,-29 and SU-24,-25 and -27 have always outnumbered their NATO counterparts, but they now rival in technology, payload, and range the formerly superior NATO aircraft. Although each Soviet weapon system has its own inherent limitations, the deployment of these aircraft poses new threats to Allied ground and air forces.

In May of 1984 the Commander of 2ATAF described the air battle environment in this way:

The technology gap, which once gave us in NATO an offset against the Warsaw Pact's larger numbers, has narrowed very significantly in recent years. Aircraft such as the Fencer, of which there are now almost 400 facing us in the Central Region, are capable of reaching targets deep into Western Europe, and of delivering their weapons, even in bad weather, with an accuracy comparable to our own. In the air defence role, Foxbat E is now based in East Germany; and the

Russian "F-18ski", the Fulcrum, is likely to be deployed forward within the next two years...In parallel, new surface-to-air missiles are being brought in to replace the older SA-2 and SA-4 systems, and new radars, including an AWACS (the Mainstay) will provide not only stronger defence but enable the Pact to control operations more effectively over NATO territory.

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When Warsaw Pact divisions attack, they advance under a "bubble" which is a lethal, defensive umbrella provided by SAMs and AAA. These tactically threatening systems include the obsolescent SA-2s and SA-3s to the vastly more dangerous and capable SA-11, SA-12, SA-13, and the very effective ZSU-23-4 radar directed, four-barrelled gun. Each Pact division has over 140 of these anti-aircraft weapons assigned. The wide and modern variety of air defenses makes the airspace over the Pact ground forces the deadliest ever faced by Allied aircrews. It is believed to be an environment more lethal than that found over Hanoi. The next chapter will discuss how AAFCE has changed its air tactics to meet the new threat environment.

In terms of hardware, the US Air Force has undertaken significant force modernization programs with the deployment of the F-15, the F-16, the A-10, the EF-111, the F-4G, and the E-3A AWACS. For example, over 100 F-15s are now bedded down in the Central Region. At the same time, the NATO Allies are modernizing their air forces with Tornados, F-16s, Jaguars, Harriers, and Alpha Jets. Additionally the NATO nations have joined in a NATO AWACS operation which has improved NATO C3I throughout the region.

Weapons in the Allied inventory range from conventional gravity bombs, anti-armor rockets, guns, and cluster weapons to sophisticated electro-optical and laser guided bombs. Further a whole new family of "runway defeat" munitions are now being fielded. Plagued for years by logistic shortfalls, ammunition stockpiles are again being filled to meet minimum NATO standards.

Chapter 4

ATAF PHILOSOPHIES AND TACTICS

The operational philosophy of 2ATAF generally reflects the sentiments of the European air forces and is often in clear contrast to a 4ATAF operational philosophy that reflects the sentiments of the US Air Force which has dominated that headquarters since its inception. Although the German Luftwaffe has units assigned to both 2ATAF and 4ATAF, its heart (and pocketbook) is with 2ATAF. It would be a mistake to speak of the "European," "Allied," or "2ATAF" view for the simple reason that NATO's Central Region is made up of forces from seven sovereign states whose national views on any issue are rarely in total harmony. There are issues on which, for example, the British will be closer to the American position than the Dutch will be and vice versa. Further, staff officers on one ATAF staff may well empathize with the positions of the other ATAF staff. All of the distinction is even further blurred by Allied staff manning that has a Luftwaffe three star general commanding 4ATAF and a US Air Force one star general as the operations deputy for COMTWOATAF. However, this discussion will, for clarity of presentation, consider that a comparison of 2ATAF and 4ATAF is

actually an organizational representation of national philosophical divergences, that is the European Allies versus the US Air Force.

One other caveat for the reader: For the purpose of discussion and in order to highlight the ATAF differences, this paper will emphasize the area of air combat that most underlines those differences, that is close air support/battlefield air interdiction. It is probable that the ATAF philosophies diverge less with regard to defensive counter air, offensive counter air, and support (such as reconnaissance and electronic warfare) operations; but those issues are left for another paper.

2ATAF generally relies on high speed, very low level flights of two aircraft attacking targets of opportunity without benefit (or restraint) of an expensive C3I system. On the other hand, the 4ATAF approach "has evolved from a high technology system, based on real-time command and control, sophisticated defense suppression, and precision guided munitions." ⁴ One preferred US Air Force option is to go in at medium altitude with a large strike group including many expensive support aircraft such as the F-4G Wild Weasel and the EF-111 defense suppression platform. The aircraft will be directed to the targets by a Tactical Air Control System similar to the one used in Southeast Asia nearly twenty years ago. Americans tend to believe that the Allies are unwilling philosophically or unable financially to buy

the "proven and effective" American concepts. The Allies, for their part, believe that the Americans do not understand the European threat environment and that an American weakness is its heavy reliance on expensive technology and close communications. Presenting the American counter-argument on force package sizing, Major (now Colonel) D.J. Alberts declares:

The preferred USAF tactics for penetrating into hostile air space would be a medium altitude penetration. However, most of the practicing fighter forces realize that our preferences may be very difficult to enact....We are not convinced that the British preference for low altitude penetration is necessarily better - better being defined as more survivable and efficient at accomplishment of the mission.

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The Allies are concerned that the formation of AAFCE was an American ploy to force 2ATAF to "modernize" its tactical philosophies. Their concern is deepened by the fact that the commander of AAFCE has always been, and is likely to continue to be, an American Air Force four star general. Further, most of those American COMAAFCEs have had limited NATO experience. Although much progress has been made, not all philosophical differences have yet been resolved by the formation of AAFCE.

The main philosophical differences can be divided into three broad areas:

1. The Allies (2ATAF) feel that the American Air Force (4ATAF) has a tendency to literally and figuratively look down on the ground war from lofty heights. The Allies suspect the US Air

Force of not really wanting to be a part of the ground battle.

2. The Allies feel the close and centralized control of air operations is probably appropriate for the US Air Force in conflicts in other parts of the world but is not appropriate for air war in the Central Region.

3. Finally, many of the Allies are sure that the American reliance on very expensive high technology and highly automated procedures means less flexibility and innovation when things go wrong.

In the following pages the specifics of these broad areas of difference will be discussed.

The Allied charge that the US Air Force has a tendency to peer down disdainfully on the ground battle appears to be off the mark. The US Air Force has been heavily committed to Close Air Support ever since World War II and certainly to a degree unmatched by the Allied Air Forces. For example, the United States has deployed its largest combat wing (comprised of over 100 A-10s) to Europe and dedicated it exclusively to forward operating locations and support to army maneuver units. Further, US Air Force basic doctrine unreservedly declares that "close air support can create opportunities, protect maneuver, and defend land forces." ⁶ Additionally, while Americans continue to be concerned with Close Air Support, the Allies are generally

disposed toward a Battlefield Air Interdiction campaign no closer than 5 to 10 kilometers to ground troops. COMTWOATAF put it this way: "Although CAS can still be very effective, it is usually more profitable to use air power in the Battlefield Air Interdiction role against the concentrated target groups, leaving the land forces with their organic weapons to deal with the enemy in contact." ⁷ The real point of contention is probably how each air force expects to support the ground force.

The air forces differ in their concept of the integration of air and ground power. 4ATAF sees air power as CINCENT's central, strategic reserve to be shifted from sector to sector with great flexibility. As a USAF general explains, "Such flexibility is important because aircraft are more mobile than ground forces and, in a fluid situation, we will have to rely on air power to quickly neutralize any imbalances in the ground battle." ⁸

The idea is to add firepower in the area of most immediate threat. 2ATAF views air power in a different light; that is as a dear resource to be employed as an aid to the ground commander's (COMNORTHAG) scheme of maneuver. Air power is not viewed as airborne artillery to support troops in contact. Sir John Slessor expressed this European view thirty years ago: "Even your fighters and light bombers will contribute far more effectively to the Army's battle by paralysing the movement of enemy supply and reserves behind the battlefield than by

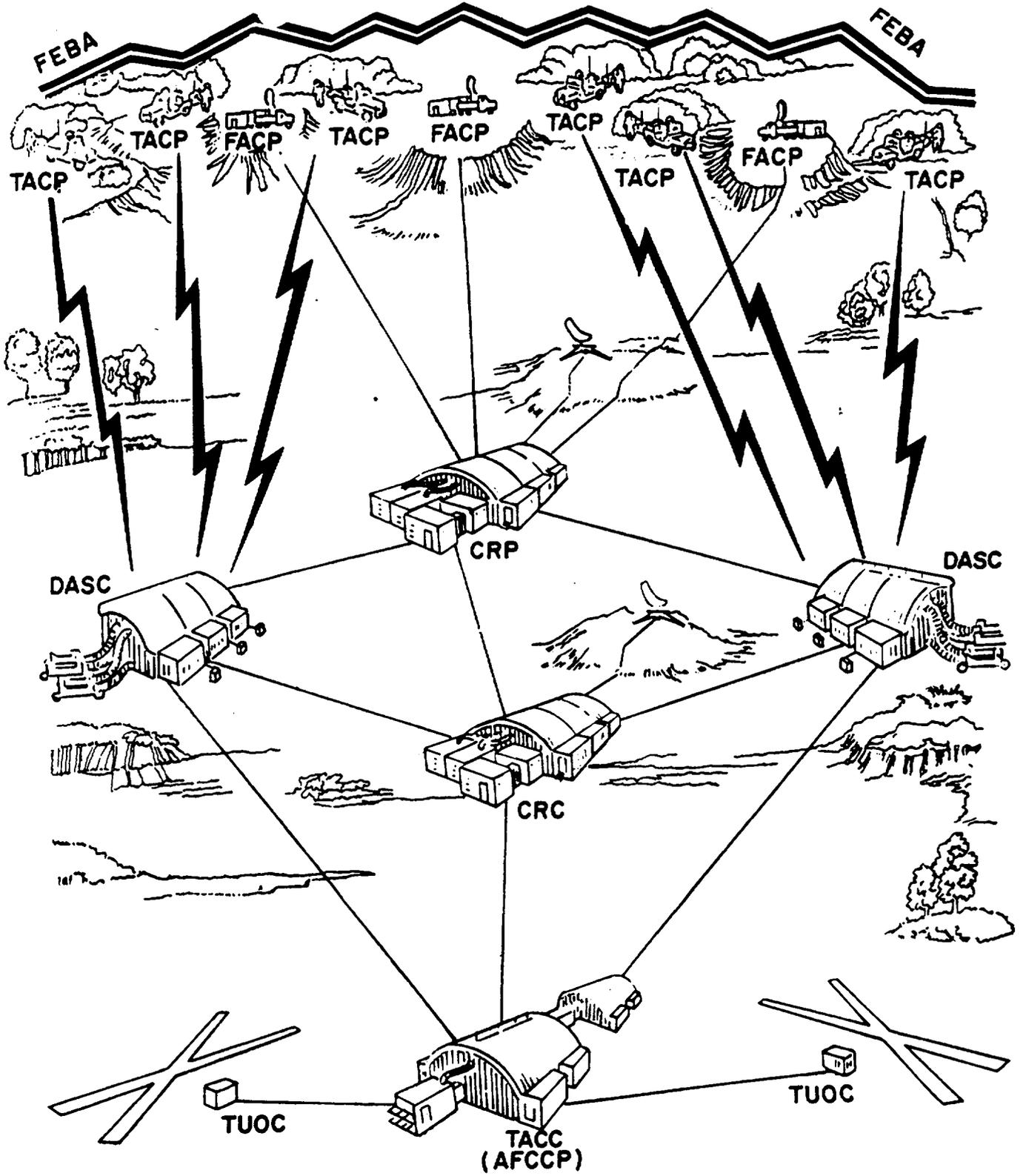
attacking strong points, etc., on the battlefield - that is the

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job of artillery." However, as one US Air Force Officer puts it,
"The theoretical disagreement in NATO is not so much between air
forces but between certain national air forces and the same

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nation's army."

The second major difference between ATAFs concerns the amount of centralized control that is appropriate for combat air operations. The Allies view the US Air Force Tactical Air Control System (TACS) as an aid; that is as an advisory agency providing information to tactical pilots as time and circumstances permit the pilots to receive that information. (see the TACS diagram on the next page)

The American air operations in South Vietnam were based essentially on the command and control facilities very similar to the TACS deployed in NATO. This system provides the cornerstone for the employment of offensive air support operations in 4ATAF today. The system requires a complex network of communications (HF,UHF,VHF, FM, and land line) stretching from the front lines to various controlling headquarters in the rear. Through this network pass the requests for air support at the front, sortie availability from flying units, allocation of sorties from higher headquarters, tasking messages, handoffs of aircraft from one sector to another, and two way communications between ground facilities and aircraft from takeoff to landing. All this



TACTICAL AIR CONTROL SYSTEM

requires an immense effort. A disruption of any of the vulnerable communication nets due to enemy jamming or interference or simply equipment malfunction can be enough to preclude mission success. 4ATAF contends that the TACS is needed to allow the formation of large strike packages including attack F-16s, MigCAP F-15s, Wild Weasel F-4Gs, escort EF-111s, tanker KC-135s, AWACS, and reconnaissance TR-1s and RF-4s, all of which are required to defeat enemy defenses. Even the relatively simple task of bringing all the aircraft in a large strike package together in the air before the attack will be very difficult in the communications jammed environment of the wartime Central Region.

The Allies do not deny that a TACS and all its communications are required to control large attack formations. However, they argue that it may be simpler and better to evade the defenses rather than to attempt to defeat them in a war of attrition. Particularly with regard to the relative worth of an enemy SAM site in relation to a far more expensive aircraft, one writer points out:

...in the Falklands, the British Aerospace Rapier system optically acquired and shot down at least 14 aircraft. A total of 50 to 60 Rapier missiles were fired. Sixty missiles cost only about one-twentieth of the price of 14 aircraft. The maintenance and support costs of these systems are not in the same set of zeros. Perhaps even a more telling argument involves the loss of 14 highly trained pilots, the cost of which is incalculable. And no one can believe that attacking fixed targets in Europe will be as easy as in the South Atlantic.

Therefore, 2ATAF (not expecting much EW, tanker, or weasel support) will penetrate low and fast using terrain masking, staying under the Pact air defense bubble whenever possible, and relying on the individual initiative of the pilots to make the sorties effective. No radio calls, no in-flight diverts, no checking in with higher headquarters for 2ATAF aircrews; they will be attacking targets of opportunity in breakthrough areas. On the other hand, claim the Allies, 4ATAF will be micro-managing assets to get the last bomb on the last target on the last day of the war and in so doing will stifle the aircrew initiative that they believe is NATO's biggest advantage over Warsaw Pact aircrews. Phillip Karber summarizes the US Air Force's counter-argument:

A carefully orchestrated interdiction campaign focused on delaying the opponent in a few places which have a decisive impact on the Forward Defense battle has a more immediate payoff in disrupting the opponent's time schedule and game plan than does the launching of autonomous deep strikes spread throughout the enemy's rear area. An integrated interdiction concept also permits NATO's air forces to reduce losses by concentrating their attacks in time and space, rather than dribbling them; by not having to penetrate as deeply; by being able to allocate assets for air defense suppression and escort.

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The third major difference between ATAFs concerns their perception of the role and capability of C3I. The Allies contend that Americans have grown overly dependent on C3I to such a degree as to suggest that the present state of C3I detracts

critically from 4ATAF's ability to carry out its wartime missions. The Allies can even cite a US Senate report which concluded, "A final implication for NATO of the new Soviet threat is the inadequacy of the Alliance's current C3I capabilities, which one senior NATO commander declared to be the fundamental

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deficiency within NATO." The US Air Force admits that there are deficiencies in some C3I programs but insists that it is working hard on better target acquisition, improved data flow, improved communications with aircraft, better data display, and overall increased efficiency in controlling air employment. 2ATAF then hints that some American planners in 4ATAF may be underestimating the Soviet radio-electronic combat (as the Soviets call it) threat. The Allies point out that C3I is recognized in Soviet military literature as critical elements of battle, and the destruction or disruption of NATO C3I assets will be a major tactical objective of Warsaw Pact forces. The Allies believe that 4ATAF's (and indeed 2ATAF's) critical communication nodes will be knocked out early and that 2ATAF is better prepared to continue the fight in that environment. The Allies make an excellent point in that regard. American reporter Arthur T. Hadly comments, "...in spite of the fact that one of the major lessons of the Yom Kippur War is that ground-based radars and ground-to-air communications will not be present, NATO (read 4ATAF) continues to maneuver and plan as if there were no threat

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from beam-riding missiles or Soviet jammers."

The 2ATAF answer to the C3I problem is to go around it by using relatively autonomous operations that provide high sortie rates against Battlefield Air Interdiction targets. 2ATAF is prepared to operate without any assistance from the 4ATAF's expensive and exposed TACS. The 2ATAF aircraft will attack along pre-determined Pact invasion routes. The argument is that exact target location and destruction are not required; all that is required is disruption. N.F. Wikner, an American scientist and defense analyst, suggests that this idea reflects "...the fundamental difference in the US and European approaches to tactical air strikes. The US concept is to engage a single target on the ground with an aircraft. European air forces are now emphasizing weapons which involve the engagement of a weapon, delivered by an aircraft, and a group of several objects making

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an area target.." The Allies will use their aircraft in the immediate rear of the battlefield to attack Pact reinforcement echelons rather than the leading edge of the Soviet forces where defenses are fully deployed and where the friendly situation is probably confused. Britain's Lord Trenchard has said, "All land battles are confusion and muddle, and the job of the Air is to accentuate that confusion and muddle in the enemy's Army to a point when it gets beyond the capacity of anyone to control."

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This concept almost by definition produces a much reduced C3I requirement for 2ATAF.

Still further differences in ATAF philosophy are reflected in their separate wartime organizations. In paraphrasing Clausewitz, one senior RAF officer in 2ATAF declaimed that, "He who plans the war should execute it!" To that end the 2ATAF wartime staff is function rather than task oriented. That means that, for example, the same group of officers responsible for Offensive Air Support Operations (OAS) acts both as the planning cell for all OAS missions and as the current operations cell tracking mission execution. These men receive rapid feedback on the success of their planning. On the other hand, in 4ATAF, wartime OAS planning is done by one cell and a physically separate group tracks execution in the current operations cell. The result is that there tends to be more continuing interest in the overall conduct of the ATAF war plan in 2ATAF than in 4ATAF.

Further, both ATAF staffs, by the admission of their respective senior officers in "not for attribution" conversations, do not attract or employ the best field grade officers each service has to offer. This potential problem is occasionally compounded in 4ATAF by the assignment of USAF officers with no previous NATO experience. In 2ATAF, on the other hand, this happens less often as most Allied staff officers have had operational and/or NATO staff experience.

Another organizational difference is revealed when comparing the numerical size of the respective ATAF staffs. The

2ATAF staff is about 25% smaller than the 4ATAF staff. 2ATAF benefits from the arguable advantage of being a very close knit group while 4ATAF has the advantage of having "excess" manpower to direct at problem-solving. Of course, another advantage of the larger staff is the ability of the staff to withstand a higher wartime casualty rate and still continue to function.

However, these enumerated differences may not be so great as to affect an overall successful defense of the Central Region. Major D.J. Alberts writes, "...in air doctrinal terms, at least, the air forces are not that far apart in fundamental thinking.

There are differences, however." ¹⁷ In fact, there may be a convergence of views that can be directly related to improved mutual cooperation between ATAFs as a result of the formation of AAFCE. Supporters of the convergence view observe that:

1. The ATAF staffs are, and will continue to be, multinational, thus allowing for representation of all nations' views on each ATAF staff. For example, when AAFCE was formed, the command of 4ATAF passed from a US Air Force four star general to a Luftwaffe three star general. Additionally, a US Air Force one star general became the operations deputy to COMTWOATAF.

2. Allied Tactical Publications (ATPs) governing air doctrine and procedures have been reaccomplished with special emphasis on standardizing those doctrines and procedures within and between the ATAFs. As Major Alberts points out, "Common

procedures allow USAF air to support British or German troops and, conversely, the procedures allow RAF or Luftwaffe aircrews to use airborne FACs to support the US Army." ¹⁸

3. The commitment of US air wings to 2ATAF including the forward basing of A-10s in north Germany.

4. The use of US Air Force special assets such as TR-1s, RF-4s (equipped with Side Looking Radar or Tactical Electronic Reconnaissance suites), F-4G Wild Weasels, and aerial tankers by both ATAFs in exercise training.

In summary, it seems clear that ATAF differences have indeed developed and been maintained between 2ATAF and 4ATAF as a result of independent national approaches to defense issues, unique national weapon system capabilities, and separately developed ATAF organizational structures. The future impact of those differences will depend on whether or not the current trend toward a convergence of views continues.

Chapter 5

IMPLICATIONS FOR THE FUTURE

A conflict in the Central Region would result in two somewhat different air wars; one in 2ATAF and one other in 4ATAF. The distinction in tactics between ATAFs will be blurred by the fact that aircraft from each Central Region nation may fly in each ATAF and by the fact that both ATAFs now have dedicated US air wings. Nevertheless, and particularly with regard to close air support and battlefield air interdiction:

1. In 2ATAF, Allied offensive air forces will depend less on very high technology and more on the tactical innovation of their pilots in the less capable weapons systems. Further, 2ATAF air forces will operate more autonomously than those in 4ATAF and with less close command and control. Finally, 2ATAF air forces will operate further from troops in contact for doctrinal reasons and because of the wide open terrain of the north German heath which provides broad, flat, high-speed avenues of attack for the Warsaw Pact.

2. 4ATAF will have the distinct advantage of supporting very capable ground forces (German and US corps) in very

defensible terrain which will channelize and slow the Pact advance. Initially at least 4ATAF will have an advantage over 2ATAF in available state of the art technology in the most modern fighters, munitions, and intelligence reporting systems. 4ATAF will also designate a larger portion of its force to close air support early on in the conflict while depending on the Tactical Air Control System to ensure timely weapons delivery in support of ground forces.

It is not at all clear which of the two approaches would be most successful in stopping the Warsaw Pact onslaught. If one accepts the Clausewitzian dictum that everything in war is simple but that even the most simple thing is difficult, then the apparently less technological and less complicated approach of 2ATAF is very attractive. However, the lure of technology is great, particularly in view of steadily improving Soviet technology. From another perspective, it is significant to note that the two different approaches may be more of a tactical headache for Warsaw Pact planners than for NATO planners. That is to say that, at present, Pact war planners must address themselves to two separate enemy concepts to achieve Soviet offensive and defensive objectives.

At any rate, and for the future, there is every evidence that the American view of a Central Region war will continue to occasionally conflict with the European Allied view. This is normal, natural, and probably constructive. As Major D.J.

Alberts points out, "The great debate within air power circles is how best to take advantage of this inherent flexibility - the ability to be wherever the friendly commander desires - in light of the enormity of the enemy threat posed to ground forces." To be more specific, the following three areas of current concern are grander views of the ATAF differences and will dominate NATO military thinking in the near term:

1. Follow-on Forces Attack(FOFA). The issue here really is whether or not Allied armies can hold off the first day's attack with few air resources so that offensive air power can concentrate on destroying the enemy's later attack formations before they come "on line." The advantages of FOFA depend on an attractive concept which:

...aims at exploiting particularly critical enemy vulnerabilities in the reinforcement process: the rigidity of his planning for an echeloned offence, the density of forces along limited attack routes, and critical transportation facilities.

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One US analyst with European sympathies, Jeffrey Record, argues to the contrary that:

...the (SACEUR General Bernard A.) Rogers plan for FOFA not only is of doubtful operational validity and political feasibility but also fails to address the most serious operational deficiencies in NATO's present conventional defenses. ...the plan is little more than the latest expression of the old forlorn hope of victory through air power.

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2. Deep Strike. At issue here is how deep into Pact territory to attack in order to slow the Pact momentum. An essential element of the controversy is what kind and how expensive will the technology be to support the C3I, targetting, and munitions required to make Deep Strike a successful concept. Deep Strike "concepts are designed to strengthen NATO's conventional defences, and thereby deny the Warsaw Treaty Organization the quick breakthrough and deep exploitation that

its strategy demands." ²² Jeffrey Record, countering in another article, writes:

It is difficult to resist the impression that Deep Strike is less a calculated attempt to exploit a truly fatal weakness in Soviet operational doctrine than it is yet the latest manifestation of the Pentagon's long-standing penchant for technological escapism. Deep Strike, however, is no substitute for barrier defense, operational reserves, and other means of stopping and defeating the Warsaw Pact's first echelon.

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3. Emerging Technology. A thread that runs through all of the tactical discussions is technology; it is an issue in itself. Over the last five years of expanding US defense budgets, the US Air Force has had the real luxury of being able to put a great many dollars against tactical warfare requirements. The impending fiscal constraints of the Gramm-Rudman-Hollings balanced budget amendment seem certain to slow the progress of such impressive tactical programs as JTIDS, LANTIRN, and "low observable" technology. The US Air Force may

find itself forced to adopt the lower cost European approach.

If...the purpose of FOFA is to defeat Soviet theater strategy, its dependence on emerging technologies in the areas of very-high-speed integrated circuits, stealth technologies, advanced computer software and algorithms, new-generation electronics, and composites raises the issue of cost, which is a major concern in European debates.

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In summary, there are clear philosophical differences between 2ATAF and 4ATAF. These differences are of long standing, complicate Soviet war planning, are likely to continue, and on the whole reflect a healthy approach to war fighting. The only recommendation arising from these observations is that the US Air Force ensure that those officers assigned to NATO Central Region staff assignments be prebriefed before their departure from the CONUS on the need to be aware of the differences in ATAF war planning. Further, those officers should be encouraged to be open-minded on the issues, tolerant of a variety of approaches, and innovative in seeking ways to ensure that every idea be explored in finding ways to meet the ATAFs' common threat.

NOTES

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GLOSSARY

AAFCE - Allied Air Forces Central Europe
ACE - Allied Command Europe
AFCENT - Allied Forces Central Europe
AFNORTH - Allied Forces Northern Europe
AFSOUTH - Allied Forces Southern Europe
ATAF - Allied Tactical Air Force
 2ATAF - Second Allied Tactical Air Force
 4ATAF - Fourth Allied Tactical Air Force

CSI - command, control, communications, and intelligence
CENTAG - Central Army Group
CINCENT - Commander-in-Chief, AFCENT
CINCEUR - Commander-in-Chief, Europe
CINCUSAFE - Commander-in-Chief, USAFE
COMAAFCE - Commander, AAFCE
COMFOURATAF - Commander, 4ATAF
COMNORTHAG - Commander, NORTHAG
COMTWOATAF - Commander, 2ATAF

ET - Emerging Technology

FAC - Forward Air Controller
FEBA - Forward Edge of the Battle Area
FLOT - Forward Line of Own Troops
FOFA - Follow-on Forces Attack
FOURATAF - 4ATAF

JTIDS - Joint Tactical Information Display System

LANTIRN - Low-Altitude Navigation and Targeting Infrared for
 Night System
Luftwaffe - German Air Force

NATO - North Atlantic Treaty Organization
NORTHAG - Northern Army Group

RAF - Royal Air Force

SACEUR - Supreme Allied Commander Europe

TACS - Tactical Air Control System
TWOATAF - 2ATAF

USAFE - United States Air Forces in Europe
USEUCOM - United States European Command