STRATEGY RESEARCH PROJECT

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INCORPORATING JOINT FORCES INTO THE AIR FORCE AEROSPACE EXPEDITIONARY FORCE

BY

LIEUTENANT COLONEL PAUL A. CURLETT
United States Air Force

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by

PAUL A. CURLETT
USAF

COLONEL JOHN BONIN
Project Advisor

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U.S. Army War College
CARLISLE BARRACKS, PENNSYLVANIA 17013

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ABSTRACT

AUTHOR: PAUL A. CURLETT

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Over the last three years, the United States Air Force has successfully accomplished the first step in a revolutionary transition to an Expeditionary Air Force. Along the way, the Air Force has learned valuable lessons resulting in refinement of Air Expeditionary Force (AEF) organization and structure. Recent AEF changes targeted internal USAF processes and focused on personnel and logistics improvements. These changes provided substantial benefits to the Air Force and made substantial improvements in capabilities provided to Unified Commanders. As the transition continues, the USAF needs to reevaluate external service support, joint doctrine, and command and control relationships to identify integration of critical joint forces capabilities. This study analyzes requirements traditionally provided by other services for theater missile defense, Nuclear, Biological, and Chemical (NBC) protection; physical security; and inter-theater logistics to evaluate possible shortfalls in AEF organization, structure, and composition.

This study also analyzes the command and control relationships required to perform theater missile defense, NBC protection, inter-theater logistics, and physical security in the AEF, and outlines potential changes in AEF structure and organization to support these missions. By focusing on joint force success factors, the study offers the Air Force options for improving AEF capabilities by enhancing USAF's ability to support worldwide contingencies from small regional conflicts to major theater wars. The paper concludes with several recommendations to improve Joint Expeditionary service support to the United States Air Force Air Expeditionary Force construct.

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PREFACE

I would like to acknowledge the mentorship and support provided by Colonel John Bonin. Colonel Bonin provided a wealth of references and suggested areas of study that helped me understand Air Force and Army relationships, and the history and shortfalls of the AEF. Through his mentoring, I found multiple articles and books that documented the history of Air Force and Army relationships dating back to Brig. Gen. John J. Pershing's Punitive Expedition into Mexico in 1916. His references helped me document the doctrine development progress of Air Force and Army joint expeditionary units dating back to World War I and continuing up to the Gulf War.

I would also like to acknowledge the help of Judith Cowan a technical writer for Microsoft Corporation, who assisted with editing and grammar. Her support was instrumental in providing a professional product that supports the premise of this Senior Research Project. She provided excellent advice on grammatical corrections and changes to sentence structure that greatly improved the reading ease of the paper.

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INCORPORATING JOINT FORCES INTO THE AIR FORCE AEROSPACE EXPEDITIONARY FORCE

General Michael E. Ryan, former Chief of Staff of the United States Air Force, was the visionary leader who realized that, in a fiscally constrained Department of Defense environment, the United States Air Force could not maintain the status quo. The Chief of Staff, at an Air Warfare Symposium in Orlando, Florida, said, "Current readiness, manning and funding problems are directly related to decisions made after the Cold War." Those decisions, he said, are driving the changes he and other key Air Force leaders are making to the Air Force now and in the near future.[1] As a consequence of these post-Cold War decisions, the Air Force budget declined, from a mid-1980s budget high, 40 percent in a ten-year period.[2] General Ryan realized that the Air Force had to reconfigure itself to better prepare for the challenges of the 21st-century. With the help of then Secretary of the Air Force Shiela F. Widnell, General Ryan set out to transform the Air Force into a 21st-century entity that could satisfy emerging requirements and operate in any future environment. He outlined the basic tenets in a Notice to Airmen (NOTAM):

> The Air Force must be able to rapidly deploy powerful aerospace forces anywhere on the globe. To meet this challenge, we divided deployable Air Force personnel and assets from Active, Guard, and Reserve units into ten Aerospace Expeditionary Forces (AEFs) and two crisis-response Aerospace Expeditionary Wings (AEWs). Each AEF is scheduled to deploy, or be on-call, for a 90-day period every 15 months. The AEWs will rotate on-call status every 90 days, ensuring one AEW is always ready to respond to pop-up contingencies. When not deployed or on-call, AEFs and AEWs will remain mostly at home station, focusing on training for their next deployment or on-call window. Additionally, we created five mobility lead wings, one for each AEF rotation period, to respond to humanitarian crises around the globe.[3]

General Ryan developed a strong case for change based on the emergence of 21st-century challenges to existing Air Force organization and doctrine. The General was very effective in convincing DOD to support his initiatives by showing the benefits of the transformation for a force that is no longer forward deployed but instead is increasingly involved in regional conflicts that require the special capabilities of airpower. This paper examines the AEF today and analyzes the effectiveness of each of General Ryan's new visions to determine whether he was successful in establishing the AEF concept. It also discusses whether the concept has been institutionalized in Air Force doctrine, culture, and organization, and describes the changes required in the AEF to improve the Air Force's ability to support and defend Air Expeditionary forces. The paper analyzes the effectiveness of the new AEF by evaluating responses of DOD capabilities and shortfalls. It examines the desired effects that drove the

transition to the new AEF organizational construct and assesses the individual performance of the desired outcomes set by the AEF team that General Ryan empowered to transition the Air Force. Finally, it analyzes AEF shortfalls, joint service cooperation requirements, and future considerations in AEF deployment considerations that should be reviewed between Air Force and Army leadership in the post Cold War environment.

HISTORY OF AIR FORCE AND ARMY EXPEDITIONARY FORCES

AVIATION HISTORY

Since the advent of aviation, military strategists have struggled to incorporate this new technology into modern warfare. From the first use of balloons used as reconnaissance platforms to the present capabilities of modern fighters and bombers, military strategists have attempted to fuse aircraft with ground forces to devise new strategies that can win military campaigns. Advances in communication and employment techniques have closed the gaps but have not eliminated all problems associated with effectively and efficiently harnessing the capabilities offered by combined aviation and ground forces.

The dream to fly dates back to the early Greek legend of Daedalus and Icarus.[4] This ancient Greek story tells of a mythical engineer and his son who were trapped on the island of Crete. To escape, Daedalus invented wings constructed of wax and feathers to allow him and his son to fly to freedom. When Daedalus and Icarus flew from the island, the exuberant Icarus flew too close to the sun, against his father's warnings, and plunged into the Mediterranean Sea after the wax melted and his wings fell apart.

Inventors and educated men such as Leonardo Da Vinci made several unsuccessful attempts to master flight. Leonardo Da Vinci made several crude designs around 1500 A.D. One design called the Ornithopter combined balloons and flapping wings.[5] Although these attempts failed, they fueled the imagination of generations of future aviation enthusiasts.

Ballooning, the first real advancement in aviation, became very popular between 1783 and 1790.[6] In 1793, the French government formed an air arm to the Army and used balloons during the French Revolution.[7] The North and South also used balloons during the American Civil War.[8] The balloons again were used as reconnaissance platforms, but poor communication techniques and vulnerabilities to ground fire resulted in commanders downplaying the importance of balloons, and the United States stopped using balloons as a military platform in 1863. Other countries continued to develop balloons including the German Army who used Zeppelins as bombers in World War I. Balloons use continued in war until the

advent of fixed-wing aviation and aerial attack development ended the use of balloons as an instrument of war.

On December 17, 1903, Orville and Wilbur Wright made history with the first powered aircraft flight in the Wright Flyer.[9] This new technology would forever change modern warfare and the conduct of battlefield operations; in fact, it ushered in a new era of the most potent and effective advances in warfare in the 20th Century. The challenge for United States military strategists was to incorporate this new technology into military doctrine, training, and combat operations.

AVIATION HISTORY: PERSHING'S PUNITIVE EXPEDITION INTO MEXICO TO WORLD WAR I

The Army and Air Force have a long history of joint expeditionary cooperation dating back to the early 1900s. In July 1909, the year the Army accepted its first airplane, an infantry-man wrote a provocative article suggesting that "aeroplanes" may soon be able to perform the most important duty of cavalry which ...has been to penetrate (the fog of war) to locate the heads of the marching columns of the enemy."[10] The earliest use of American military aircraft to support combat operations occurred during Brig. Gen. John J. Pershing's Punitive Expedition into Mexico in 1916.[11] Aviation during this period was the sole responsibility of the Army Aviation Section of the Signal Corps and was used primarily as aerial reconnaissance platforms. General Pershing's expedition into Mexico provided hard lessons concerning the difficulty of operating aviation assets at large distances from major airfields and the importance of proper equipment for aircraft ground support elements.[12] The initial attempts to incorporate aircraft reconnaissance into Army operations were less than successful but they were an excellent start in understanding how this new revolutionary technology could evolve to support Army forces in the field.

Shortly after Pershing's Expedition, the United States was thrust into war in Europe. Although initially unprepared for war outside the continental United States, the U. S. Army was dispatched to duty on October 20, 1917.[13] In September 1918, U.S. air power was introduced into the war in the form of American pilots flying aircraft provided by French and British forces.[14] During this time, new air power concepts took shape in the form of crude attempts to bomb enemy forces on the ground. Pilots would fly over enemy forces and throw small bombs or hand grenades at enemy forces on the ground. Initial attempts did not deter the enemy because of the poor accuracy of this bombing technique and heavy losses endured by inexperienced pilots flying close to the ground. Additionally, reconnaissance missions suffered

from the lack of communication with command elements and the advance of air defensive tactics on the battlefield. Aerial combat had its introduction during this period as innovation led to the incorporation of the machine gun on aircraft. Initial attempts at aerial combat did not result in decisive battles for the sky but did disrupt the ability of allied and enemy aircraft to affect the ground combat situation. Heavy losses form ground and air fire combined with poor communication capability resulted in few effective aviation contributions to the war effort.

Interwar Period

After World War I, the United States Army continued to develop air power and attempted to harness this fast developing technology to make aerial combat more effective. The advent of more accurate weapons and radio communication gave a needed boost to Army aviation. The Army began to develop doctrine to incorporate ground and air efforts. Also, short-notice humanitarian airlift missions during the inter-war period helped introduced and shape cooperative efforts between ground forces and air assets in the Army Air Corps.

Aviation continued to advance during the interwar period at a startling rate. Advances in the commercial aircraft industry introduced larger and more powerful aircraft platforms. Early aviation advocates such as General Billy Mitchell, demonstrated the power of aviation warfare by sinking several battleships during a test of new and modern bombing techniques. Strategic bombing theory had its beginning during this time. Aircraft provided the ability to leapfrog over traditional enemy lines to attack targets deep in enemy territory. Advances in munitions development continued to make aircraft more effective in waging battles. Advances in doctrine and air power theory started to emerge, although air power was still a very unproven method of warfare. Early Army aviation manuals, such as War Department Training Regulation (TR) 440-15, "Fundamental Principals for the Employment of the Air Service," 1 June 1926, limited air power to Army cooperation.[15] A 1935 revision established General Headquarters (GHQ) Air Force, thereby bringing all aviation assets under a single airman. Aviation continued to evolve swiftly until the beginning of World War II.

World War II to 1984

World War II demonstrated the immense potential of airpower. The Japanese gave a powerful display of air power effectiveness in a pre-dawn attack on Pearl Harbor on December 7, 1941. The awesome display by the Japanese on December 7th clearly made an impression on those who doubted the capabilities of aviation warfare. The Japanese raid on Pearl Harbor was one of the great defining moments in world history.[16]

As a result of the Japanese success during World War II, the United States accelerated its aviation programs. The introduction of the B-17 and B-24 bombers established the Army Air Force as a potent strategic weapon. Air power theory was still being tested and heavy losses of aircraft and crews resulted in refinements that helped shape future aviation, but strategic bombardment had made a lasting impact on the conduct of modern warfare. Fighter aircraft also appeared during World War II. Still, air and ground doctrine and training fell short of optimum employment, but it continued to evolve throughout the war. The relationship between US military aviation and ground combat forces from 1907 to 1947 was characterized by the transformation of the US Army's air force from a small section within the Signal Corps, intended strictly for the support of Army's traditional combat arms, to a separate armed service—the US Air Force.[17] The National Security Act of 1947 established the United States Air Force as a separate service on 26 July 1947 and identified service roles and missions. This new service would become a dominant factor in wars fought over the next quarter-century. Advances in modern fighter and bomber aircraft continued at a staggering rate. The introduction of jet engines and precision bombing techniques far outdistanced the ability of those developing doctrine and integration of Army and Air Force war fighting concepts.

Wars in Korea and Vietnam often resulted in disagreement between Army and Air Force leaders about the best use of air power. The Army wanted to use the Air Force primarily as a support component to ground operations. The Air Force wanted to continue to develop strategic bombing as a decisive instrument to decide wars. Eventually, Army and Air Force leaders worked together to develop joint concepts and doctrine and establish a future framework to conduct war. The Cold War drove cooperation between the services. In the 1980's, the threat posed by the Soviet Union in Europe resulted in Air Force and Army Air-Land Battle doctrine. Air-Land Battle doctrine became the focus of Army and Air Force Service doctrine until the collapse of the Soviet Union in 1990. Air Force Tactical Air Command and U.S. Army Training and Doctrine Command (TRADOC) cooperation resulted in many productive doctrinal developments to include "Active Defense," "Close Air Support," "Joint Suppression of Enemy Air Defenses (JSEAD)" and defined roles and missions between the two services to attempt to eliminate duplication. The Army and Air Force continued the process and eventually agreed to 31 Initiatives signed by the Chiefs of Staff from both services that solidified Air Land Battle doctrine and enhanced inter-service communication during planning and programming processes.[18]

1990 to Present

The Persian Gulf War demonstrated that aviation could play a major role in the conduct of war. Precision-guided munitions and massing of air power delivered a decisive blow to a modern Iraqi Army and Iraqi leadership. The air campaign capitalized on emerging capabilities and was built around highly adaptive war plans stressing parallel attacks that shocked and paralyzed Saddam Hussein's ability to control his forces, neutralized the ability of Iraqi forces to effectively fight and undermined their will to fight while reducing Iraqi production base and ability to project combat forces.[19]

The success of the Gulf War and the end of the Cold War resulted in a restrictive fiscal environment that led to a reduction to force structure and modernization in all four services. In the resulting peacetime environment, the new challenge became peacekeeping operations around the world, as the collapse of the Soviet Union meant that only one superpower was able to project power globally. The increase in United States military commitments and the decrease in available resources in the post Cold War era left every service scrambling to transform itself into a viable entity in the 21st century. The Expeditionary Air Force evolved as a result of this new environment.

Similarly, Army is transforming into a leaner and more lethal service as it moves from the legacy force to the new objective force. Unfortunately, service cooperation and doctrinal development has not been actively pursued by either service since 1984, as both services try to define their new roles and missions in the post Cold War era. A new effort is required to leverage transformation efforts by the military departments to make them a more effective joint war fighting team able to deliver decisive force anywhere in the world.

UNITED STATES AIR FORCE TRANSFORMATION

AIR FORCE EXPEDITIONARY AIR FORCE DEVELOPMENT

The United States military has seen tremendous change over the last 40 years. The end of the Cold War and the outstanding success of the military during Operation DESERT STORM resulted in an unprecedented belief by the American public that the United States did not have a peer competitor. Because the American public wanted a peace dividend, the U.S. Congress actively engaged the Department of Defense to reduce force structure and operating budgets. As a result, all services, but especially the Air Force, made deep cuts in force structure and infrastructure. Since 1989, Air Force active-duty manpower has been reduced by over 36 percent; likewise, total force strength, which factors in the Air National Guard and Air Force

Reserve, has declined over 30 percent.[20] During this period, force structure dropped from 24 active-duty and 12 reserve fighter wings to 13 active-duty and 7 reserve fighter wings.[21]

Over the same period of time, the Air Force experienced a high demand for air power in Military Operations Other Than War (MOOTW), in addition to sustaining air operations such as Northern and Southern Watch over Iraq. Since 1992, the Air Force averaged six to seven additional "pop-up" crises per year requiring deployments of about 25 aircraft.[22] Commitments to Operation Northern and Southern Watch and other contingencies resulted in an average of about 250 aircraft deployed per year.[23] This extreme demand placed a high degree of stress on Air Force personnel and forced many Air Force members to experience excessive temporary duty (TDY) deployments away from home station. As a result, the Air Force started to experience unacceptably low retention rates among Air Force service members, especially those in high-demand skill areas, such as pilots. Acceptance rates for the pilot retention bonus dropped from a 1994 high of 81 percent to 32 percent in 1997.[24] In addition, high operations tempo (OPS TEMPO) caused problems in maintaining readiness of Air Force aviators and aircraft. CONUS based forces showed a 7 percent decline in mission capability rates from 1992 to 1997; with rates dropping another 9 percent in 1998.[25] Commanders sounded the alarm to senior Air Force leadership. General Ryan responded by announcing that the Air Force must transform to operate effectively in an environment that required "rapid and tailored engagement in many regions and during numerous situations."[26] As described by General Ryan, the Expeditionary Aerospace Force was "an idea whose time had come."[27] The General set a vision that would propel the United States Air Force on a revolutionary new path and forever transform the charter and culture of his service.

John P. Kotter, in his book Leading Change, listed the following characteristics of an effective vision:

1. Imagination: Conveys a picture of what the future will look like.
2. Desirable: Appeals to the long-term interests of the employees, customers, stockholders, and others who have a stake in the enterprise.
3. Feasible: Comprises realistic attainable goals.
4. Focused: Is clear enough to provide guidance in decision making.
5. Communicable: Is easy to communicate; can be successfully explained within five minutes.[28]

General Ryan's Notice to Airmen clearly set a vision that met most of the parameters Kotter recommends. General Ryan showed imagination by making a clear case for the new

Expeditionary Aerospace Force concept and what it would accomplish. This new force would be able to rapidly deploy powerful aerospace forces anywhere on the globe and encompass all the available Air Force assets to include Active, Guard, and Reserve units. Reserve and Air National Guard units provide 10 percent of the personnel and 25 percent of the aircraft for the expeditionary forces.[29] The Notice to Airmen clearly articulated the composition of the AEF. It would be split into ten Aerospace Expeditionary Forces (AEFs) and two crisis-response Aerospace Expeditionary Wings (AEWs) with each AEF being scheduled to deploy, or be on-call, for a 90-day period every 15 months. He set the parameters of duty for each AEF. He set rotations for every 90 days and articulated AEF on-call parameters. Additionally, he set the expectation of mobility forces to support the AEF. He created five mobility lead wings, one for each AEF rotation period, to respond to humanitarian crises around the globe.

General Ryan tapped into the clear desire of Air Force personnel to gain some relief and order in a hectic high OPS TEMPO environment. The initial goals of the Expeditionary Aerospace Force concept were to:

1. Reduce high OPS TEMPO by providing a better tool to manage the force.
2. Provide greater stability and predictability by operating on an established 15-month deployment cycle.
3. Increase readiness by allowing scheduled time to organize, train and equip the forces.
4. Instill an expeditionary warrior mindset in every airman, based on real-world changes in post-Cold War service operating environments.

This is exactly what Air Force personnel wanted. They needed relief from high TDY rates, which in many cases exceeded 120 days per year. The concept also addressed the problem of not being able to plan because of the pop-up nature of the deployments and the lack of assets to address the requirements for continuous readiness placed on high-demand units.

General Ryan led the DOD in initiating this revolutionary concept that set a new direction for the Air Force. Influenced by stringent fiscal constraints and shrinking overseas infrastructure, General Ryan's plan offered new ways of conducting business. His new approach appealed to DOD and Unified CINCs grappling with the difficult task of trying to fulfill high peacetime and contingency requirements with limited Air Force assets. General Ryan's plan provided forces in pre-determined packages of aerospace capability (air superiority, air-to-ground, precision attack, mobility, and bombers) in scheduled sets of forces that ensured availability of aircraft, equipment and personnel. The new AEF presented Unified CINCs with pre-designated support, combat, mobility, and leadership capabilities that the Joint Task Force Commander could tailor to meet the desired operational requirements of any situation.

General Ryan made a clear case that his plan was feasible by detailing the composition of the new AEFs and the employment strategy for Air Force and Unified CINC leadership and planners. His plan gave clear guidance on the window of availability and force packages with the objective of meeting any global steady state and contingency operational requirement. It gave commanders an on-call "911" set of forces that included a cross-section of Air Force weapon systems (150+ combat aircraft) and people (10,000-15000) to meet theater commanders' requirements. It gave the theater commander the capability to tailor force packages based on different operational situations. General Ryan's plan also outlined how these new AEFs would fall under the authority of the existing command structure of theater CINCs' Command and Control structure. Theater commanders and Unified CINCs enthusiastically accepted his argument for improvements to current availability of Air Force assets and personnel.

General Ryan envisioned the transformation to EAF as a journey, not a destination. Secretary of the Air Force F. Whitten Peters, in an article entitled "A Journey, Not an End," stated,

> "EAF is a journey and we have many more steps to take along this path as we transition the Air Force from a forward-based, Cold War force to an expeditionary force able to respond to crises around the globe. EAF is not one event. It is a completely different way of looking at how we do business. It is also a fundamental change in the way we operate as evidenced by establishment of completely new training courses for both enlisted airmen and young officers."[30]

General Ryan's vision was focused, although initially it needed some clarification to provide guidance in decision making, both at the Air Force senior leadership level and with Unified CINC planners. The initial vision did not set specific parameters for carrying out the plan. General Ryan probably left this point vague to give planners and unit commanders the opportunity to determine the best way to execute the process. The plan did provide enough information to enable commanders and planners to chart future operational interfaces and complete the process. It also allowed for some innovation in the execution of the plan.

General Ryan followed his vision with an aggressive campaign to incorporate all players into the process by setting up an office in the Pentagon responsible for fulfilling the plan. He empowered this new office by allowing it to cut across traditional Air Force organizational coordination policies and gave it broad authority to change policy and doctrine to institutionalize the new concept. General Ryan also focused the plan by setting a definitive time-line to achieve the transition to the new AEF/AEW structure.

General Ryan led his team by fostering an environment open to change. He provided the vision, shaped the culture, managed joint, combined, and interagency relationships, and represented the leadership through each stage of AEF development. In short the General institutionalized the AEF concept into Air Force Doctrine. In Air Force Doctrine Document 1 (AFDD1), Air Force Basic Doctrine, September 1997, the Expeditionary Air Force concept was cemented into the Air Force culture. AFDD 1 is the capstone publication in the Air Force doctrine hierarchy and the premier statement of theory that guides the employment of Air Force air and space power.[31] AFDD 1 set the AEF concept as the new direction of the Air Force. General Ryan reinforced the new AEF concept in AFDD 2, Organization and Employment of Aerospace Power. In AFDD 2, General Ryan's team identifies the AEF concept as the basic building block of the Air Force organization.[32] It clearly identifies the AEF structure, command relationships and training principles that guide Air Force organization and planning.

General Ryan also directed Air Education and Training Command to help institutionalize the AEF concept for all new Air Force officers and enlisted members. Now the new rallying cry can be heard repeatedly rumbling through the confidence course and on drill pads during Air Force basic military training. One airman yells, "AIR POW-ER!" The dozens shout their response, "A_E_F!" These enthusiastic calls represent the new warrior mentality stressed in today's Air Force training for new recruits.[33]

The ultimate test of any organizational change is the ability to withstand the test of time. The AEF is still a new concept, and now is the time for the Air Force to incorporate the transformation of the Air Force into the joint environment. Although the Air Force AEF concept is firmly entrenched in the Air Force Service culture, the Air Force leadership needs to work with the Army to identify new initiatives required as both the Army and Air Force transform to be an effective fighting force in the 21st Century.

AEF SHORTFALLS

Success of air power in the conduct of recent operations in Bosnia, Kosovo and during Operation DESERT STORM transformed the Air Force's traditional role of supporting ground forces to a preferred option of air power being deployed as the decisive force in US war fighting. This changed equation has relegated ground forces to an ancillary role, with Special Forces serving in a primary role as target spotters and liaison to local militaries, and ground forces being used only to secure land areas after decisive air battles shape the environment.[34] This new task organization of prosecuting theater campaigns changes the traditional Cold-War deployment flow by placing the Air Force as the lead element in a campaign strategy. Previous

doctrine places the Army in the lead role of establishing and maintaining the initial deployment, with the Air Force as a follow-on element.

With the AEF being deployed as the lead element in a conflict, some traditional roles and missions provided by the Army leave the Air Force vulnerable. With the advent of asymmetric warfare, several problems have surfaced in rear area defense and inland logistics and are causing the Air Force to rethink the AEF deployment strategy. Recent deployments by the USAF to fight terrorism in Afghanistan highlighted several shortfalls in the deployment posture of the Air Expeditionary Force. The AEF was designed as an answer to high OPSTEMPO rates for Air Force personnel. In a steady state environment the AEF worked very well. The deployment to Afghanistan in a non-steady state environment identified several shortfalls in force protection and logistical support that required joint solutions. Four separate areas of concern were highlighted during preparations for deployment to this non-steady state theater. The four are:

1. Air Base Ground Defense (outside the perimeter of the base) – Army
2. Theater Missile Defense – Army
3. Nuclear, Chemical, Biological (NBC) Defense – Army
4. Ground logistics in theater - Army

All four of these areas required support from the US Army to sustain and maintain operations in a non-steady state environment. The AEF was designed around only Air Force assets and personnel based on operations in Southwest Asia (SWA), Bosnia and Kosovo where a traditional Cold-War deployment model or structure existed. These theaters contain joint forces with sufficient Army assets to provide the required USAF support in the four areas identified.

This paper now analyzes Army-Air Force service agreements to determine how the AEF can make the transition to a Joint Expeditionary Force and overcome problems identified during the deployment to Afghanistan. The paper will also recommend changes to the current joint deployment process to improve the AEF structure and scheduling. Additional changes that incorporate Army and Air Force missions and personnel and address the four areas identified to streamline the joint deployment process are also proposed. This new structure allows Unified CINC planners a definite force planning architecture that reduces confusion during planning for operations to non-steady state operations where the AEF is the lead element. In light of recent global operations posed by the threat of terrorism, the AEF deployments process needs to be modified to be able to operate in non-permissive environments outside traditional steady-state deployments. The expectation is that US Forces, with an AEF as the lead element, will be

deployed to wide-ranging non-steady state areas such as the Philippines, Syria, Africa, and potentially any destination that harbors terrorists.

AIR BASE GROUND DEFENSE

The ABGD role was outlined in an Army-Air Force agreement in 1984.[35] The agreement, signed by Chief of Staff of the Army General John A. Wickham and Chief of Staff of the Air Force General Charles A. Gabriel, assigned primary responsibility for Air Base Defense inside base perimeter to the Air Force.[36] It further assigned the Army as primarily responsible for ground-based air defense at Air Force Main Operating Bases (MOBs) worldwide.[37] This agreement recognizes the Army's fundamental role in land combat and the need to protect the Air Force's ability to generate and sustain air power for joint air land operations. The agreement further specifies that the Air Force Base or installation commander is the officer responsible for the local ground-based defense forces of services other than his own, that are assigned to his base or installation for the conduct of local ground defense.[38] It states that ground based defense forces shall be assigned under his operational control.[39] The recent deployment by the Air Force to the Central Asian Republic demonstrated the Air Force requirement for rear area protection. One thousand soldiers from the 10th Mountain Division (Light Infantry) have been deployed to the Central Asian republic of Uzbekistan, adjacent to Afghanistan, and are operating out of the former Soviet air base of Khanabad as part of Operation ENDURING FREEDOM. Army forces are initially being employed for force protection.[40]

The deployment of the 10th Mountain Division for AEF force protection was required because terrorist organizations are widely dispersed in poor countries such as the republics of the former Soviet Union. The high cost of weapon systems and munitions in the Air Force inventory provide a lucrative target for terrorist organizations that employ low-cost asymmetric methods to disrupt or destroy opposing military force. It is imperative that DOD ensures the protection of these valuable war-fighting instruments from asymmetric threats.

As the AEF becomes a vehicle of choice to combat terrorism in non-steady state areas it is imperative for the Army and Air Force to work closely to provide the necessary forces to ensure air base security when host nation support cannot be arranged in the critical area. DOD cannot afford to allow high-tech weapons and highly trained personnel to be vulnerable to low-cost weapons such as mortars, vehicles loaded with explosives, or any threat that can be launched outside the base perimeter.

THEATER MISSILE DEFENSE

Joint Pub 3-01.5 dated 22 February 1996 outlines the doctrine for Joint Theater Missile Defense. Today the United States has no military competitor that can challenge the USAF in air superiority, but many states are developing theater missiles as an asymmetric counter to US air superiority. SCUD missiles used in the Gulf War provided a potent threat to combine forces and air bases. Joint Pub 3-01.5 states, "Proliferation and advances in missile and associated technologies, coupled with the pursuit of weapons of mass destruction (WMD) capabilities, can provide adversaries with potentially decisive attack capabilities."[41] Iraq effectively used SCUD missiles on Israel as a political weapon to try and break the US-led coalition. Left unprotected, large land areas, populations, and critical bases and forces are at risk. AEF as a lead element in the campaign to eliminate terrorist cells in developed countries are vulnerable to theater missile threats. It is imperative that the Army provides Theater Missile Defense (TMD) when the AEF is deployed to areas where a state sponsoring terrorism is targeted. The Army, as part of the 31 Initiatives divided counter air operations into two groups, based on airspace control. Air Force would control and execute offensive counter air operations, while the Army would control and execute rear area security operations.[42] The Army also assumed the role of point defense of air bases, ports, and critical USAF assets. Initiative 2 further defined the theater air defense mission as follows:

> The two services agreed to develop jointly and review annually a plan to resolve air base point defense. As part of that task the Air Force would provide the Army with an updated list of outstanding worldwide point air defense needs. Secondly, the two services would develop a joint statement of future rear area point air defense systems. Lastly, the Army agreed to Air Force participation in an Army review of air defense requirements and capabilities at corps and echelons above corps. The first two recommendations if carried through, would protect Air Force Bases and rationalized point air defense for Army rear areas.

Based on this agreement, the Army plays the lead role in TMD. The Army fielded the Patriot Missile Defense System to support this mission area effectively during numerous campaigns in Southwest Asia and Europe to protect critical allied and US assets from all four services to include ports and air bases. With the advancement of theater missiles in third-world countries such as Iraq, Korea, and Iran, it is imperative that the Army expertise be incorporated into a Joint Expeditionary Force structure where the AEF is the lead element. The Air Force must rely on the Army to provide theater missile protection to protect critical Air Force personnel and weapon systems. Patriot upgrades and new capabilities provided by the Army's Theater High Altitude Area Defense (THAAD) system are required to be incorporated into active air base defenses to ensure survival of AEF personnel and assets as these new systems come on line.

NUCLEAR, CHEMICAL, BIOLOGICAL (NBC) DEFENSE

> "The number-one security challenge in the United States, now and probably for years ahead, is to prevent weapons of mass destruction - whether chemical, biological, or nuclear - and the scientific knowledge of how to make them from going all over the world to rogue groups, to terrorist groups, to rogue nations."[43]

Weapons of Mass Destruction (WMD), specifically chemical and biological weapons pose a serious threat to US Forces. Although the United States Air Force is capable of operating in a contaminated environment, it relies solely on the US Army for the NBC detection and decontamination mission. Evidence from open sources indicates that roughly 13 countries are actively seeking biological weapons and closer to 20 are pursuing chemical warfare capabilities. States of particular concern to the United States include Iraq, Iran, Libya, North Korea, Sudan, and Syria.[44] This poses a significant threat to air bases and AEF personnel and weapon systems, especially when the AEF is deployed as the lead element in a non-steady state location. The US Army is responsible for early detection and decontamination of weapon systems. Because the USAF does not contain this capability, it is imperative that this capability be incorporated into a Joint Expeditionary Force when the AEF is the lead element.

GROUND LOGISTICS IN THEATER

Joint Publication 4-0, Doctrine for Logistics Support of Joint Operations, 6 April 2000 outlines the responsibilities and doctrine for theater logistics support. Army Field Manual 100-7 specifies that the Army Operational Level Commander is task organized to contribute forces for combat, logistics, and support activities in theater.[45] The Army Theater Logistics Handbook defines the Theater Support Command (TSC) as being responsible for maximizing the throughput and follow-on sustainment of ARFOR, and other forces as assigned, in a theater of operations. This includes supply, maintenance, services, and rear area operations general support in the communications zone (COMMZ), as well as direct support of operational level formations such as Army Service Component Command's (ASCC's) subordinate corps.[46] Because the Army has the preponderance of theater ground transportation assets, the USAF relies on the Army for in-theater movement of supplies, fuel, ammunition, and critical aircraft parts that require movement via ground transportation.

The USAF is severely limited in its capability to maintain sustainment operations without support from Army transportation from port of debarkation to delivery at USAF installations. This could result in limiting USAF sortie generation to maintain air superiority and a possibility for enemy forces to achieve localized air superiority, resulting in placing air bases and US personnel and equipment in jeopardy. Once air operations are started it is imperative that a

constant flow of petroleum, ammunition and critical aircraft parts are maintained to ensure that the USAF can generate the sorties necessary for defensive counter air and rear area Close Air Support (CAS) to forces assigned to protect rear area operations.

OPPORTUNITIES FOR CHANGE IN JOINT EXPEDITIONARY (ARMY/AIR FORCE) FORCE DEPLOYMENT

JOINT DEPLOYMENT OPTIONS

With the advent of the AEF, the traditional process of apportionment of forces to theater CINCs is obsolete. The traditional JCS Joint Force Deployment apportionment process designated forces for specific theater missions in the Unified Command Plan and Joint Strategic Capabilities Plan. This apportionment allowed Unified CINC planners to plan contingency operations with specified forces as designated in approved CINC OPLANS or CONPLANS. The AEF structure rotates forces in a high OPSTEMPO environment between steady-state contingency operations. The new AEF scheduling system has proved to be an effective tool to reduce OPSTEMPO for Low Density/High Demand Air Force units but reduces the availability of UCP and JSCP apportioned forces to support regional theater CINC OPLANs and CONPLANs.

As part of the transformation to an expeditionary joint force concept, the Army and Air Force must analyze and change the traditional JCS Joint Force Deployment apportionment process from an identified forces-based system to a capabilities-based system, as a result of problems identified during AEF rotation scheduling. The USAF initiated the AEF concept as a scheduling mechanism to support heavy peacetime requirements generated by Operations in Bosnia, Kosovo, and Southwest Asia (SWA). The impact of high steady-state USAF OPSTEMPO results in shortfalls in forces available to support specific missions provided to support war plans of regional CINCs during apportionment in the JSCP and regional Joint Deployment Plans as outlined in the UCP, JSCP, and Joint Pubs 5-0 and 4-0. Transformation is driving both Air Force and Army to reevaluate how best to support regional contingency OPLANS and CONPLANS based on the high commitment of Active, Guard, and Reserve components to steady-state operations.

Recent requirements generated by USCENTCOM to support operations in Afghanistan highlighted severe shortfalls in the availability of apportioned forces because of prior commitments of USAF assets supporting peacetime requirements. Disengaging AEF forces from on-going operations complicates current deployment planning considerations that require external sourcing of available forces to support emerging requirements in Afghanistan. USAF contends that an AEF capabilities-based apportionment process allows flexibility to meet

regional CINC requirements without placing undue workload on Air Force personnel and eliminates overstress on low density/high demand (LD/HD) units. It also allows a mechanism to incorporate joint (Army) personnel to robust AEF capabilities to fill gaps in AEF structure in a non-steady state environment. A capabilities-based system allows the USAF to meet regional CINC requirements with a wider range of available forces within the construct of the new USAF AEF rotation schedule. AEFs are organized into ten Air Expeditionary Wings that provide a full range of capabilities to support regional CINC requirements to include air superiority, strike operations, electronic warfare, command and control, and search and rescue.

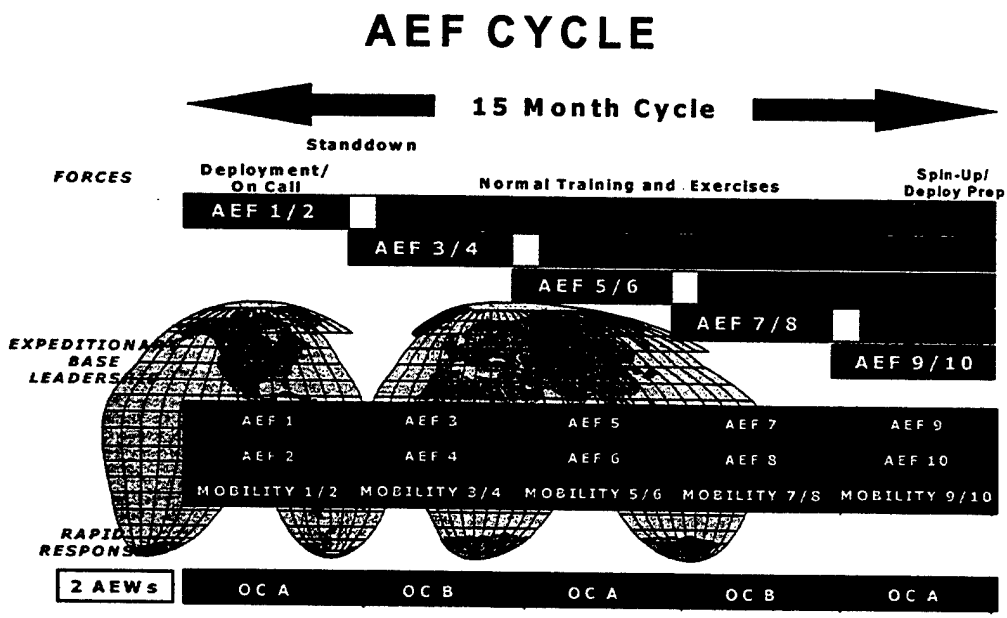

FIGURE 1 - AEW 15 MONTH DEPLOYMENT ROTATION CYCLE

LIMITATIONS OF CURRENT JOINT DEPLOYMENT PLANS

The JSCP is not configured to support the Air Force transformation to an Expeditionary Air Force concept, nor is it configured to allow for joint force packaging in a Joint Expeditionary Force concept. Joint Pub 5-0, Doctrine for Planning Joint Operations, specifies the process required by Services to identify apportioned forces to support regional CINC requirements and contingency planning. By identifying specific forces, it limits the flexibility of services (primarily USAF) to provide identified forces in a high peacetime tasking environment. Joint Pub 4-0, Doctrine for Logistics Support of Joint Operations, ties logistical considerations to specified forces. Changes in available forces delay regional CINC execution time and result in additional manpower requirements to work changes to developed plans. USCENTCOM's modification and execution of regional plans to support operations in Afghanistan resulted in multiple

changes to the Time Phased Force Deployment Data (TPFDD) and severely limited the CINC's ability to resource and close forces needed to support on-going operations. USAF units are committed under several regional CINC deployment plans, causing conflicts within the Air Force on mission priority and availability of forces based on peacetime tasking. Also, commitments to on-going operations resulted in forces traditionally available to USCENTCOM being unable to respond, causing confusion as CENTCOM planners had to build new force lists. Fortunately, the Air Force AEF scheduling process allowed a prepackaged force to help solve CENTCOM force development problems.

CONCLUSION

NEW JOINT EXPEDITIONARY FORCE CONCEPT

The new global engagement strategy of DOD requires a robust capability of forces that are available to meet any objectives specified by the National Command Authority. The resultant high OPS TEMPO of all four branches of the military requires new solutions and an expeditionary mindset to keep the current state of operations in balance without sacrificing the ability of the United States to project power and influence to stabilize the world situation. As the Army evolves to a lean transportable expeditionary force, it makes sense for DOD to build joint teams with the required capabilities to handle any contingency. The Navy and Marine Corps have teamed expertly in expeditionary capabilities and are an extremely effective force capable of global engagement within the littoral and maritime theaters. The Army and Air Force should also team to provide a potent combat projection capability anywhere in the world on short notice.

FORCE PACKAGING

The best way to achieve this capability is to force-package Army and Air Force units structured around a new Joint Expeditionary Force concept based on the AEF model. An AEF with Army augmentation to provide missile defense, rear area security, NBC capability and theater logistics can provide a readily deployable joint force with fire power to engage with air assets as the decisive force, as in Bosnia and Afghanistan. It could also be deployed as the lead element to halt enemy forces until sufficient ground forces can be deployed into theater to lead offensive operations to deny or repel enemy ground forces. In this new global environment that requires US forces to be highly committed all over the globe, now is the time to build a new Joint Expeditionary Force (JEF) capability with a rotation schedule that reduces OPSTEMPO for Army and Air Force units.

TRAINING ADVANTAGES

A JEF comprised of dedicated Army and Air Force equipment and personnel based on the AEF design can provide available forces for any Unified CINC. This concept has many advantages. A JEF rotation built around the AEF model would allow Army and Air Force prepackaged teams the opportunity for realistic joint training as part of a 15-month JEF rotation schedule. First Lieutenant Andy Walker of the First Marine Corps Expeditionary Force observed (after walking the gulch), that a team that trains together under realistic conditions is better prepared to act decisively and effectively when success hinges on critical decisions and coordinated action. "Expect the unexpected and train like you fight, whether it's a war, a business, or a fire."[47] A JEF cycle with packaged Army and Air Force units fosters joint training with the same basic players practicing their skills in joint exercises and Service flag exercises that provide the requisite joint training, which then become basis of certification for forces available to Unified Commanders for crisis action planning.

STREAMLINED FORCE DEPLOYMENT CAPABILITIES

By re-designing the Joint Deployment Process to a capabilities-based system force planners can pre-design contingency OPLANS and CONPLANS around a JEF notional force. This offers a wide range of forces and options to joint planners. Based on the specific task, Unified CINC planners could choose an Air Force/Army JEF or Navy/Marine Corps JEF based on mission requirements, area of operations, or other considerations. A prepackaged Army/Air Force JEF could reduce time Unified planners spend sourcing forces for specific missions when individual service personnel are committed to other theaters or peacekeeping operations. Also, a pre-scheduled JEF allows a set plan that allows Reserve Component (Guard and Reserves) participation. The Air Reserve Component (ARC) is completely integrated into the AEF concept and ARC leadership likes the ability to forecast and schedule ARC participation on a regularly scheduled basis. Additionally, by having the flexibility to forecast requirements, the ARC can increase its participation in steady-state operations, thereby further reducing the OPSTEMPO in active duty units. An Army/Air Force JEF presents many positive advantages in the current fast-paced global environment that includes potential increases in workload caused by the new terrorist war. Now is the time to analyze and change our deployment structure and concepts to be ready for the challenges of the 21st Century expeditionary environment.

JEF COMMAND AND CONTROL

Because the Air Force would have the preponderance of assets, the JEF commander could be assigned to an Air Force Colonel (or general officer) with an Army Deputy. A Joint

Expeditionary Commander with Air Force Air Expeditionary Wing(s) would follow under the JEF Commander. The Army forces could be assigned as an Army Task Force to include NBC Defense, MP forces for Air Base Defense outside the Air Base perimeter, and Logistics support personnel. Theater Air Defense forces would report directly to the JEF Commander, but is under the administrative support and control of the Army Task Force Commander.

The intent of the JEF is to employ force packages with all the requisite forces to give Unified CINCs a cohesive unit that is trained to effectively employ combat power anywhere on the globe. This package allows operations under existing steady-state operations (i.e. for example, SWA or Bosnia) with the capability to pare out those forces that are not required in theater. It also gives Unified CINCs the ability to rapidly deploy teams that are on ready alert to thwart intentions of rogue nations states that threaten world stability or to react to stabilize an ongoing peacekeeping mission. This system provides a systematic process for JFCOM and Unified CINC planners to swiftly source a force that is ready-made to fit within an existing theater under a Joint Force Commander (JFC) or the ability to be sent to remote areas as a separate standing Joint Task Force with the JFC Commander operating as the JTF Commander. Figure 2 shows a proposed Army/Air Force JEF command and control Structure.

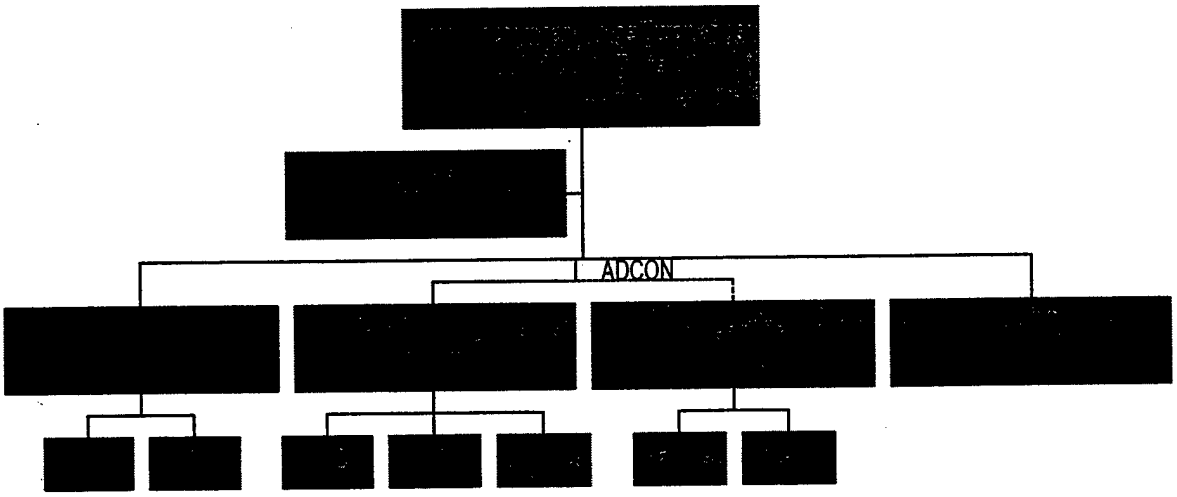

FIGURE 2 - JOINT EXPEDITIONARY FORCE STRUCTURE

RECOMMENDATIONS:

Transition to a Joint Expeditionary Force concept requires participation by the services, Unified CINCs, and JCS to set up a new, more effective joint deployment capability using the AEF as a model for building a JEF. Through analysis, review, and reform of current Joint deployment doctrine and force structure, it is possible to achieve transformation to a Joint Expeditionary Force concept by reinstating an Army/Air Force initiative team to develop a new JEF structure. Incorporating and testing under a JFCOM experimentation concept could test this new concept. It is recommended that the following actions be implemented to stand-up a new Army/Air Force Joint Expeditionary Force:

1. Army and Air Force reconvene a JEF initiative tiger team to identify Army Forces for incorporation into the current AEF rotation to include command and control concept.
2. JFCOM develop exercise plan for JEF training certification based on the current AEF 15-month rotation schedule.
3. JFCOM and Unified CINCs analyze and recommend changes to the UCP, JSCP and Joint Deployment Processes documents based on a JEF force package.
4. JFCOM and Unified CINCs review options for restructuring the Joint Deployment Process from an identified/tasked-based system to capabilities-based system built around a notional JEF based on the worst-case deployment scenario.
5. Joint Staff, Unified CINCs and Service Chiefs evaluate (Army, Navy Air Force and Marine Corps) deployment requirements to peacetime operations and identify potential problems on availability of forces to support regional CINC requirements.
6. JFCOM draft proposed changes to Joint Publications 5-0 and 4-0 and coordinate the proposed changes with regional CINCS and the Services for approval by CJCS.
7. The Joint Staff and Unified CINCs review JEF planning considerations and regional CINC contingency plans and submit recommended changes to the JSCP based on the new combined US Army/USAF JEF structure.
8. JFCOM, Army and Air Force build a notional TPFDD based on the worst-case JEF deployment scenario to provide to USTRANSCOM for analysis and submit to regional CINC's for coordination.
9. USTRANSCOM provide a transportation feasibility of JEF TPFDD to support planning considerations involving JEF concepts.

CLOSING

JOINT EXPEDITIONARY FORCE CALL

> "Each of the services formally acknowledges the principal of unity of effort which states that military forces should be integrated into an efficient team of land, naval, and air forces."[48]

Building a Joint Expeditionary Force based on the AEF model allows DOD to meet challenges set forth by Secretary of Defense Donald Rumsfeld in the 2001 Quadrennial Defense Review and sets a new precedent in joint cooperation between the Army and Air Force. General Robert Herres, former Vice Chairman, Joint Chief of Staff spells out the importance of building joint teams in the following quote:

> Jointness is "hot" because as technology makes the world smaller, the division between what were once unique service media, that is air, land, and sea becomes more and more blurred. Consequently, the need for our forces to operate in an integrated fashion becomes more critical and crucial. If we are to utilize our military forces efficiently, then we have to learn to operate together, plan together and acquire equipment in an optimum way. There are drawbacks or, better put, "trade offs" to interoperability where it is needed.[49]

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