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15.Abstract: Today's Army aviation forces have the potential to provide a Joint Force Commander (JFC) or a War Fighting Commander in Chief (CINC) tremendous lethality and flexibility throughout the spectrum of conflict and operational functions. However, current doctrine for deploying and employing Army aviation forces prevents their inclusion in many Operational and Contingency plans. Therefore, new doctrine must be created to make aviation forces easier to deploy and employ. Innovative ways of overcoming strategic mobility limitations such as creating aviation prepositioned stocks, which only include the truck, tents, and other easy to maintain items to support an aviation task force, would cut the strategic air required to move an aviation task force in half. The creation of doctrine to allow Army aviation to be employed under the joint force air component commander (JFACC) would allow for the most effective and efficient use of Army aviation by an operational commander. Aviation doctrine has not changed significantly in over 25 years. Task Force Hawk's inability to rapidly assimilate into the joint air operation over Serbia and Kosovo during Operation Allied Force clearly demonstrates the need for change. Lessons learned during Operation Allied Force, which were written nearly three years ago, have yet to be incorporated into Army doctrine. The capabilities of the modern aviation fleet have out-grown the Air Land Battle doctrine of the 70s and 80s. The time for change is now.

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JMO Research Paper

Army Aviation for the Operational Commander: Can it get to the fight, and can it integrate into a Joint Air Operation?

By
Major Thomas R. Drew, United States Army

A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Joint Military Operations Course.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

Signature:

4 February 2002

Introduction

Today's Army aviation forces have the potential to provide a Joint Force Commander (JFC) or a War Fighting Commander in Chief (CINC) tremendous lethality and flexibility throughout the spectrum of conflict. Current U.S. Army (USA) doctrine does an outstanding job of integrating the use of its aviation forces within its own structure to achieve mission success: As a maneuver force, a Combat Support (CS) force, or a Combat Service Support (CSS) force, Army aviation has become the most versatile asset in the Army inventory. However, there remains a major disconnect between joint doctrine and USA doctrine for the employment and deployment of its aviation forces. Operational commanders require Army aviation to possess the flexibility to rapidly deploy to a crisis area, and conduct operations as either part of a ground force or an integrated member of a Joint Force Air Component Commander's (JFACC) operational plan.

Thesis

Army aviation must modify its doctrine for deploying and employing its assets to become a fully integrated, viable member of a Joint Task Force (JTF) in accordance with Joint Publication 1 (JP 1). Doctrinal and institutional barriers must be overcome in order to effectively, efficiently and, most importantly, safely, use Army aviation at the operational level of war. Tactically, Army aviation can complete the myriad of individual tasks required to be effective on the modern battlefield, but without new deployment and employment doctrine, Army aviation is of limited value to the operational commander. Examination of current Army and joint doctrine, and analysis of lessons learned from Task Force (TF) Hawk, reveals areas for improvement. The resulting recommendations for near and long-term methods for eliminating the disparity between the two doctrines, if implemented, ultimately will result in a more flexible aviation force that is capable of meeting the challenges of future operations.

Background

Air Land Battle doctrine; developed in the late 1970s and early 1980s, matched both the capabilities of the Army's aircraft, and the threat of the Soviet Union to Western Europe. The limited range of the legacy fleet[1], the limited firepower of the attack aircraft, and the role Army aviation played in the ground scheme of maneuver,[2] placed aviation forces firmly under the control of the Army ground force commander in all situations. The linear and contiguous nature of the European battlefield provided an environment where control measures such as the Fire Support Coordination Line (FSCL) graphically portrayed on the map all of the necessary de-confliction required to separate USA rotary-wing aircraft and United States Air Force (USAF) aircraft. The exponential advances in the technologies and capabilities of the modern Army aviation fleet[3] greatly surpass the capabilities for which Air Land Battle doctrine was designed. However, the modern fleet continues to operate under 25-year-old doctrine designed for the plains of Europe. The old doctrine is proving inadequate in the non-linear, non-contiguous battlefield of today and does not facilitate joint operations.

As the Army transforms from the doctrine and force structure of today, to a lighter, more capable Objective Force[4], Army aviation must undergo a similar transformation. The survivability, lethality and range of systems, such as the AH-64D Longbow Apache, currently being fielded throughout the USA, can play an important role in future Joint Air Operations (JAO). The ability to fly low, beneath radar and bad weather, is a capability that only Army aviation can provide to the JFC or JFACC. This was the case in Operation Allied Force, but institutional and doctrinal barriers prevented the integrated use of Army aviation in that operation. The RAH-66 Comanche, which will be fielded in 2008, possesses even greater potential for use in a JAO due to its true all-weather capability and increased survivability in an

Integrate Air Defense System (IADS) environment. Therefore, the time to write, test, and evaluate the doctrine required to transform Army aviation is at hand.

Deployment

Deployability is the first challenge facing operational commanders when Army aviation is required for an operation. The capabilities that Army aviation can provide are of no use unless it can deploy assets to the theater in which they are needed. This is a problem that increasingly plagues Army aviation due to the heavy burden placed on TRANSCOM when moving aviation forces. As a consequence of the diminished threat in Europe, the bulk of USA forces and equipment have moved from their forward basing sites in Europe back to the continental United States (CONUS), which creates even more demand for strategic mobility. The heavy forces required to defend Western Europe during the Cold War deterred an armed conflict for 45 years. However, unless the future enemies of the United States will allow an unrestricted, lengthy, build-up of combat power on their border, the force structure and equipment that won the Cold War is of little use today without the ability to deploy it in a time of crisis.

The Army transformation process includes the development of new ground systems to meet the challenges of strategic mobility and power projection. Conversely, Army aviation will not get new systems as a part of the transformation process to the Objective Force. Therefore, the question now becomes, "How can Army aviation, as part of the CONUS based force, enhance its capability to deploy rapidly with enough combat power to assist a JFC accomplish an assigned mission?" Unfortunately there are no easy solutions to the strategic mobility challenges faced by Army aviation. The finite number of strategic airlift assets, combined with the limited number of large, medium-speed roll-on/roll-off (LMSR) sealift assets, will require the development of innovative ways to overcome this challenge.

Current Deployment Doctrine

For the purposes of illustrating the challenges of deploying Army aviation forces, I will use the following scenario: USCINCEUR requires the deployment of an AH-64 equipped Attack Helicopter BN (ATKHB) from the 101st Airborne Division (Air Assault) stationed at Fort Campbell, Kentucky. They are to deploy to an austere environment and establish their own base of operations with the ability to sustain combat operations. To accomplish this mission the following Aviation Task Force (AVN TF) is formed:

Aviation Task Force 101
- HHC, 101st Aviation BDE (-)
- 3-101 Aviation Regiment (24 x AH-64)
- B Co/ 2-502 Infantry Battalion (Force Protection)
- DET/6-101 Aviation Regiment (2 x UH-60 C2, 3 x UH-60, 1 x Pathfinder Team)
- DET/ 7-101 Aviation Regiment (4 x CH-47)
- SEC/C/501 Signal Battalion
- CO (-)/8-101 Aviation Maintenance Battalion (Maintenance Contact Team)

Troop/Equipment List

Personnel	756
AH-64	24
UH-60	5
CH-47	4
HMMWV[5]	81
FMTV[6]	19
ISU-60[7]	14
ISU-90	21
463L Air Pallet	83

Strategic Airlift (STRATAIR) Requirements
C-5: 35 C-141: 18

Within the scenario, the USCINCEUR needed the combat power of 24 AH-64 Aircraft to support operations in his theater. To fulfill that mission he received 756 personnel, 33 aircraft and 100 trucks requiring 53 STRATAIR sorties. The AVN TF listed above is not a fictional organization; it is the current plan on file at the 101st ABN DIV (ASSLT) for deploying an ATKHB. An operational commander must then make a choice; are 53 STRATAIR sorties worth

the combat power provided by one ATKHB? In some situations it might be worth it, but I suspect that most of the time it would not. To remain a viable force, Army aviation must reduce its strategic mobility requirements.

The good news is that there are ways to deploy the same amount of firepower with half of the STRATAIR sorties required above. However, it will require much more coordination and a new approach to deployment. Analyzing the equipment list above you quickly notice that there are three times as many trucks as there are aircraft. Although the trucks on the equipment list are vital to sustaining combat operations, they do not need to be brought from home station. Those same vehicles can be transferred intra-theater or contracted from the Host Nation in the EUCOM area of responsibility (AOR) which alone would will cut the STRATAIR sorties from CONUS in half. Additionally, it may be possible to trim the 35 ISUs on the equipment list. The ATKHB only needs to bring approximately a 30-day supply of parts, packaged POL and other sustainment items. Other items can be shipped via rail to a seaport and then into theater using merchant vessels to enable that AVN TF to sustain combat operations without relying on an excessive amount of "go to war" stocks.

This section on deployment gives the reader an idea of the challenges inherent in the deployment of aviation assets. In the recommendation portion of this paper I will identify ways to overcome these challenges. However, the limitations of strategic mobility will continue to be a restraint on the use of aviation forces in the foreseeable future. According to Air Mobility Command (AMC),[8] approximately 62 C-5s are available on any given day. The likelihood that an operational commander will use 56% of the nations available C-5s to move one battalion's worth of combat power seems unlikely.

Employment

At the operational level of war, Army Aviation needs to be flexible enough to fight in a major theater of war (MTW) using traditional FM 3-0 (Operations)/ FM 1-100 (Aviation Operations) doctrine, as well as being able to fight in a small-scale contingency operation in which aviation may be the only USA maneuver force. Traditional use of Army aviation as part of the combined arms team was practiced for over 20 years in exercises such as REFORGER, Team Spirit, and rotations at the National Training Center (NTC), and it ultimately resulted in a resounding victory over Iraq in Operation Desert Storm. Army aviation's performance during Operation Allied Force was not nearly as successful. This was not because the aircraft and crews couldn't perform the missions for which they were intended, but because USA doctrine does not easily support integration of Army aviation into the joint air plan. Although some crew readiness and other tactical issues were mentioned in the After Action Review (AAR) for TF Hawk, this paper is focusing strictly on doctrine and will not address those issues. The necessity for Army aviation to develop new doctrine was exposed during Operation Allied Force. The commander of TF Hawk, Lieutenant General Hendrix, acknowledges this fact in a statement made following the operation: "The Task Force Hawk mission was non-doctrinal; however, it is indicative of the new and challenging missions we confront in today's world."[9]

USA Aviation Doctrine Review

For the purposes of this discussion on doctrine, I will use a typical divisional attack helicopter battalion due to its ability to fight under both the Joint Force Land Component Commander (JFLCC) and the JFACC. The coordination issues at the operational level are the same for other aviation forces such as: Special Operations Aviation (SOA), Combat Search and Rescue (CSAR), and Air Assault operations in a non-linear, non-contiguous environment. To

begin the doctrine review I will start with the doctrinal missions of an ATKHB and then focus on those missions that must be coordinated at the operational level. The employment options of the ATKHB are[10]:

1) **To attack massed armored or light forces**
2) **To attack in depth to extend the influence of the force**
3) **To dominate avenues of approach**
4) To reinforce ground forces by fire
5) To mass to defeat enemy penetrations
6) To attack to protect the flanks of a moving or halted friendly main body
7) To provide security for the movement and passage of lines by ground forces
8) **To conduct reconnaissance**
9) **To perform search and attack missions**

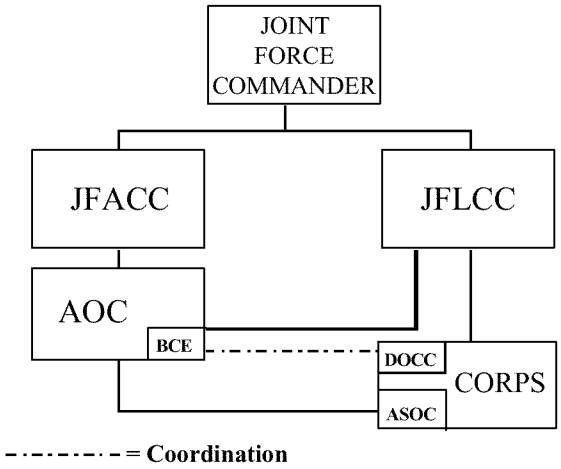
Of the missions listed above, only those in bold type would normally require coordination at the Joint level. Additionally, they represent capabilities that may be utilized by the JFACC when ground forces are not participating. The others can be executed unilaterally by the JFLCC. To complete this Army doctrine review as it pertains to an Army ATKHB, we need to look at the organizations that provide the bridge between the JFLCC and the JFACC. Those organizations are the Battlefield Coordination Element[11] (BCE) and the Deep Operations Coordination Center (DOCC).

The BCE is the organization that provides the interface between the JFLCC and the JFACC.[12] It consists of 39 personnel, is collocated with the Air Operations Center (AOC) and has seven sections: plans, fusion, Air Defense Artillery (ADA), Army airspace command and control (A2C2), intelligence, operations, and airlift. The BCE provides the following functions:

- Monitor and analyze the land battle for the AOC.
- Provide the interface for exchange of current intelligence and operational data and support requirements.
- Coordinate and integrate JFLCC requirements for Air Interdiction (AI), Close Air Support (CAS), Suppression of Enemy Air Defense (SEAD), Airspace Coordination Measures (ACM), Fire Support Coordination Measures (FSCM) and tactical airlift.

Simply stated, the commander of the BCE is the JFLCC's representative in the AOC. However, it is typically a one-way process. The BCE requests air assets in the apportionment and allocation process to program against targets that the ground force commander deems important to his/her ground scheme of maneuver. Normally it is *not* a conduit for the JFACC to request Army aviation assets. The BCE is also the Army's interface in the Air Tasking Order (ATO) process. Attack helicopter battalion and field artillery missions that extend beyond the FSCL should be integrated into the ATO by the BCE. This requires the DOCC to issue preliminary guidance for deep operations to the BCE 72 hours out.

Typical Battlefield Coordination Element Interface



The DOCC plans, coordinates, synchronizes, and executes deep operations. A deep operations coordination center can be found at both division and corps levels. Deep operations are operations directed against enemy forces and functions not engaged in the close battle. In this context, deep refers to the battlespace forward of the line of contact out to the FSCL (normally). Army deep operations include both attack helicopter and fire support assets such as the Multiple Launch Rocket System (MLRS). The DOCC is the staff element that conducts the targeting process at the Corps/Division level and assigns those targets to the appropriate weapon

system within the Corps/Division. Shortfalls in the ability of the DOCC to attack those targets with organic assets precipitate the nomination of those targets through the BCE to the JFACC.

The preceding paragraphs reflect the current doctrine for how an ATKHB is linked to the AOC and therefore to the JFACC. A thorough search of aviation doctrine revealed no reference to fighting under the JFACC. Army doctrine only reflects a process for informing the AOC of "some" Army aviation activities that need inclusion in ACM or FSCM. Furthermore, Army doctrine leaves the impression that it is a one-way process whereby the JFLCC transmits nominations to the JFACC for integration of air assets into the ground scheme of maneuver.

Joint Doctrine Review

> "Battle experience proved that control of the air, the prerequisite to the conduct of ground operations in any given area, was gained most economically by the employment of air forces operating under a single commander."
>
> General Eisenhower

Joint doctrine attempts to create synergism and unity of effort amongst the forces assigned to the JTF. It accomplishes this, in some instances, for its aviation assets through the designation of the JFACC. The JFACC was designed to exploit the capabilities of all of the aviation assets in the theater/area of operation (AO) in support of the JFC's objectives. In a broader sense, the JFACC is responsible for developing the Concept of Air Operations, which is the bridge between the strategic and tactical levels of war. It takes the JFC's strategic objectives and translates them into a Joint Target List (JTL), further refined into the Master Air Attack Plan (MAAP), then finally into the Air Tasking Order (ATO) for tactical execution. During all phases of developing the Concept of Air Operations, the commander of the BCE represents the JFLCC. Taking into consideration the purpose, scope and theory behind the establishment of a JFACC, combined with the fact that the JFLCC is represented in this process, there appears to be no barriers to the integration of Army aviation into the JFACC's plan for operations.

Further examination of joint doctrine reveals that Army aviation assets are not precluded from operating under the JFACC. Joint Publication 3-0, *Doctrine for Joint Operations,* and Joint Publication 5-0, *Doctrine for Planning Joint Operations*, support the integration of Army aviation in the JAO. Furthermore, the definition of joint air operations in Joint Publication 3-56.1, "those air operations performed with air capabilities/forces made available by components in support of the JFCs operation or campaign objectives, or in support of other components of the joint force,"[13] does not exclude the use of Army aviation.

Lieutenant General Buster C. Glosson sums up the USAF perspective very well:

> There is no formal doctrine regarding participation of Army aviation assets in joint air operations. Army aviation assets are normally retained for employment as organic forces; current Army doctrine considers Army Aviation forces as maneuver units. However, with their increased reach, some Army helicopters could be employed in interdiction beyond the FSCL, in which case they would come under the purview of the JFACC.[14]

USA / Joint Doctrine Comparison

Comparing doctrine as it applies to Army aviation, gives the impression that the Army has an institutional bias towards maintaining control of its aviation forces under the JFLCC. Granted, in a major theater of war (MTW), most Army aviation forces are required to operate in the deep, close and rear areas of the JFLCC as outlined in FM 3-0. However, that shouldn't preclude allocating ATKBN assets to the JFACC when they are available or required. The process and staff elements already exist to accomplish a reallocation of assets. It is my opinion that statements such as those found in FM 1-100 create an environment that does not facilitate realization of the full potential of Army aviation in the joint fight[15]:

> "Aviation operates in the ground regime.
>
> (1) This cardinal principle defines aviation's role as an element of landpower. Aviation is a component of the combined arms team, not the air component of the US Army.
>
> (2) Aviation's primary mission is to fight the land battle and to support ground operations. Aviation is comprised of soldiers, not airmen, and its battlefield

> leverage is achieved through a combination of reconnaissance, mobility, and firepower that is unprecedented in land warfare."

The next area of contrast is the Army's view of the ATO process. Army planners are resistant to participating in the ATO process due to a perceived stifling of initiative and reduction in flexibility. The ATO is used to synchronize, plan, and execute a theater wide JAO. It is a systematic process that matches available capabilities/forces with targets to achieve operational objectives. Not only does the ATO process make sense to ensure maximum effectiveness of aviation assets, it is also a deconfliction tool to prevent fratricide. The JFACC primer recommends that flights beyond the FSCL be integrated into the ATO for coordination purposes. In my view, any flight beyond the Forward Line of Troops (FLOT) should be on the ATO. The FSCL is in name, all it should be, the *Fire Support* coordination line. We conveniently use it as an airspace coordination measure. Inclusion of flights beyond the FLOT into the ATO would require those aircraft to check in with AWACS/ABCCC prior to crossing into denied/non-permissive areas so they could be tagged and tracked during the execution of deep operations. This would give the BCE in the AOC the ability to monitor, real-time, the execution of Division/Corps deep attacks. Additionally, should any of these aircraft go down for any reason, AWACS could transmit that information to the Rescue Coordination Center (RCC) without delay.

Historical Examples

Since the signing of the Goldwaters/Nichols (G/N) Act of 1986, the United States military has been compelled to minimize service rivalries and adopt doctrine that achieves the maximum combat effectiveness through the coordinated use of all service assets. With those criteria as the measure of effectiveness, how did we perform in the Gulf War and Operation Allied Force? Reading the myriad of AARs and lessons learned from the Gulf War leaves one with the

impression that in the four short years after the signing of G/N Act of 1986, full integration of the services into the joint force had been accomplished. However, we must observe how Army aviation was utilized to see if true "Jointness" was achieved. The use of Army attack helicopters in a joint role began with a bang, literally. A joint aviation task force of AH-64 Apaches from the 101st Abn Div (AAslt) and MH-53 Pavelows from the 20th Special Operations Squadron were on line #1 of the ATO firing the first shots of the war. The destruction of those critical targets proved that Army aviation had the ability to conduct Air Interdiction (AI) missions under the JFACC. However, that is slightly misleading. USAF officers on the SOCCENT staff performed the process that enabled that mission to be on the ATO, not the BCE/DOCC. This means that the ability for the BCE/DOCC to coordinate Army aviation into a JAO was not tested during the Gulf War. That initial mission took place on 17 January 1991; the ground war didn't start until 23 February 1991, meaning that the 161 AH-64s in the theater sat idle, as far as AI missions were concerned, for 37 days. Certainly a portion of those aircraft could have been allocated to the JFACC for use in the Air Campaign. The end result of the Gulf War was a resounding victory for the U.S. led coalition, but it is my opinion that the U.S. military did not gain any ground in the use of Army aviation as a Joint asset.

Operation Allied Force was also a resounding success, with 78 days of continuous combat operations, 38,000 combat sorties, and no allied combat casualties. However, the integration of TF Hawk's Apache helicopters into the JAO proved to be a bridge too far. TF Hawk's participation, or lack thereof, in Allied Force demonstrated a significant underlap between Army doctrine and Joint doctrine. In an e-mail (concerning integrating Apaches into the JAO) from a USAF officer assigned to the DOCC during Allied Force, to the chief of Air Force doctrine, Major General Kinnan, the Air Force officer stated that "... (The Army) is desperately trying to

get the square peg in the round hole--use the same Army doctrinal "deep operations" procedures always used in support of the ground scheme of maneuver."[16] I'm convinced that most Army officers would shrug this off as just "the Air Force" perspective, but there is substance in the officer's comments. The DOCC/BCE elements normally do not involve themselves in the JAO planning process other than nominating the JFLCC AI targets. During Allied Force, the DOCC and BCE were operating in a totally different environment. For example, they were required to be involved in the weaponeering/allocation phase of the ATO development cycle, which required them to be the JFACC's subject matter expert on the capabilities and limitations of the AH-64. A staff that was normally decisively engaged just nominating targets, in a more or less one-way flow of information, had little chance of performing at the "Super Bowl" level required to establish an efficient two-way flow of information in a combat operation. In testimony before the Senate Armed Services Committee, Secretary of Defense William Cohen acknowledged this new environment as one of the challenges facing TF Hawk, "Although deployed independently, the units assigned to TF Hawk were organized, equipped, and trained to operate as an integral part of a larger land force, providing direct support to its operations and under control of its commander."[17]

Review of the historical case studies above demonstrates the military's need to concentrate more on writing and implementing doctrine that maximizes combat effectiveness through the coordinated use of all service assets. Joint Vision 2020, along with the individual service transformation efforts, will attempt to solve the lack of interoperability in certain aspects of joint doctrine, but our enemies are not likely to wait until these transformation efforts are complete. Therefore, we need to implement changes to our doctrine now, and as necessary to match current capabilities to the threat until Joint Vision 2020 comes to fruition.

Recommendations for an Interim Solution

The intent of these recommendations is to improve Army aviation's ability to deploy its forces and to employ those forces once they arrive in theater. To achieve that goal, in the near term, Army aviation must find ways to become a lighter force, and ways to efficiently be employed under the JFACC. Obviously there is only so much that can be done to lighten the strategic mobility load that aviation places on the operational commander. However, deploying 100 vehicles to support 24 Apaches is clearly not the answer. During the commander's estimate of the situation, a determination must be made if the Army aviation assets will be required to operate from a fixed site such as an airfield, or operate from a field site that moves with the flow of the battle. The mobility requirements for these different types of operating bases are drastically different. However, current aviation deployment paradigms and doctrine do not consider operations from a fixed site, only operations from a mobile field site. Making such an assumption can cause needless deployment of vehicles that are not necessary for mission accomplishment. In an attempt not to get too far into the tactical level of war, I'll just say that the aviation task force commander should send his vehicle requirements to the J-4 based upon mission analysis. The J-4 of each theater should then identify the best method of supporting those requirements; shipping vehicles from home station; transferring vehicle within the theater; or contracting vehicles from the Host Nation or a coalition partner.

Interim changes to the way Army aviation is employed on the modern battlefield should begin with changing the Army's attitude towards Army aviation assets operating under a JFACC. Without this fundamental change in attitude, true synergy of all of the military's combat power is unattainable. Placing Army aviation forces under the JFACC does not make those aviation soldiers "airmen." Nor does it mean that placing Army aviation under the JFACC is the most

effective way for them to be employed in all situations. New doctrine would simply provide the operational commander the flexibility to employ his or her Army aviation assets in the most effective and efficient manner.

The interim structure to facilitate Army aviation operations under a JFACC, when there are no ground forces involved, should primarily be determined by the Air Force. The Air Force is the institution with the most experience in planning, coordinating, and executing joint air operations; it therefore should be the one to determine how best to integrate the Army officers into their staff. During the conduct of a major operation that includes a JFLCC, the BCE and DOCC are still necessary staff elements. However, the structure of those staff elements will need to be modified to support a two-way flow of information that provides the AOC the necessary information to deconflict air operations through the ATO process.

Once an efficient flow of information is established between Army aviation assets and the JFACC, whether integrated into the JAO or not, all aviation assets in the theater should then be included in the air tasking order. The ATO is a process and mechanism that allows the operational commander to truly command and control his or her aviation forces theater wide. The need to integrate the Army into the ATO process is obvious, and will be even greater in the "Network Centric Warfare" environment of the future.

Recommendations for a Long-term Solution

The long-term recommendations I am suggesting reinforce the interim changes listed above. However, my long-term recommendations take the next step in the evolution of doctrine and include the following: 1) creation of aviation prepositioned stocks. 2) changing the Army's doctrine for aviation assets. 3) creation of a standing JFACC. In the deployment arena, the Army needs to examine ways to overcome the challenge of strategic mobility. One way to assist in that

effort is to create aviation prepositioned stocks, which are available in the different geographic regions. Obviously, aircraft cannot be prepositioned forward. They are too expensive and too maintenance intensive. However, the creation of two or three battalion sets of trucks, tents, camouflage, and oversized loads such as HEMMT[18] tankers for refueling operations, would be a realistic solution. This prepositioned equipment would be easy to maintain, and more cost effective than having to double the strategic mobility assets required to move an aviation task force. As the Army moves to a more CONUS based force, ideas such as aviation preposition stocks might provide the answer to Army aviation's strategic mobility problems.

The next major component of my recommended long-term solution is the formulation of a more flexible doctrine that allows both the traditional use of Army aviation, as well as the use of Army aviation under the JFACC. It must be written in close coordination with the Air Force and devoid of any service parochialism. Once written it must be thoroughly tested, integrated into Army aviation officer professional education,[19] and exercised during operational level joint exercises. Conducting realistic exercises using new doctrine will identify any areas that need to be corrected. Computer assisted war games will provide a realistic environment in which to train the staff elements involved in this new doctrine. The intent is to exercise the staff process between the DOCC, BCE and AOC in a MTW scenario, or exercise the integrated AOC staff element in an "Operation Allied Force" style scenario. The electronic battlefield could ensure that those staff sections create the synergy required to maximize the capability of the air assets assigned to the JFACC.

The final recommendation is to create a standing JFACC. The complexity of planning and executing a theater wide, joint air operation is so great that the creation of an ad hoc staff in a crisis situation is inefficient at best, and at worst is ineffective. All of the reasons for which the

military is examining the creation of standing JTFs can be applied to the creation of a standing JFACC. However, in the case of the JFACC, it is normally even more time critical. Our National Military Strategy relies on the Air Force to be the "first responders" during a crisis situation. Getting the Air Force "wheels up" enroute to a crisis requires the JFACC staff to be up and operational faster than any other organization. This reason alone should warrant the creation of a standing JFACC. A standing JFACC could also provide the Joint Chiefs of Staff a resource for conducting contingency planning. From the Army perspective, a standing JFACC would provide an environment for Army officers to learn the skills needed to coordinate air operations at the operational level, and to become productive members of the JFACC staff.

Conclusion

The Goldwater Nichols Act of 1986 prompted the military services to increase cooperation and end the rivalries that reduce effectiveness. Joint doctrine has gone a long way towards achieving that goal. However, the lessons learned during Operation Allied Force and Desert Storm are still waiting to be corrected. It is time that the United States Training and Doctrine Command and the U.S. Army Aviation Center go the final mile to give the JFC the tools required, in the form of doctrine, to effectively employ Army aviation on today's fluid battlefield.

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Endnotes

[1] Legacy fleet includes the UH-1 Huey, AH-1 Cobra, OH-58 Kiowa and the CH-47A/B Chinook.

[2] As an example of the institutional bias against creating an Army Air Force, until the late 70s, Attack Helicopter Battalions were known as Aerial Rocket Artillery Battalion. The TOW missile, a tank killing point weapon system, precipitated this change in the name of AH-1 equipped battalions to Attack Helicopter battalions.

[3] The modern aviation fleet consists of the following platforms: AH-64A/D Apache, UH-60L Blackhawk, CH-47D Chinook, and the OH-58 Kiowa Warrior which is to be phased out beginning in 2008 and replaced by the RAH-66 Comanche.

[4] Objective Force is the name for the USA force at the completion of the transformation process.

[5] HMMWV is a High Mobility Multi-purpose Wheeled Vehicle.

[6] FMTV is a Family of Medium Tactical Vehicles.

[7] (Interval Slingable Unit)

[8] Statistics for C-5 availability are based upon USTRANSCOM daily brief (4 January 2002).

C-5 Force	ASGN	POSS	PLAN AVAIL (65%)
TOTAL FORCE	118	100	62
AMC	73	62	39
AFRC/ANG	45	38	23

[9] Hendrix, John W., Lieutenant General, USA, Commander Task Force Hawk, *Military Intelligence Professional Bulletin*, Volume 26, Issue 1, Jan-Mar 2000

[10] Field Manual (FM) 1-112, *Attack Helicopter Operations*, (Washington D.C.: Headquarters Department of the Army, 2 April 1997), 1-3

[11] There is a disparity in the name of this organization within Army Doctrine. FM 100-13 calls it the Battlefield Coordination Detachment (BCD) and FM 6-20-10 calls it the Battlefield Coordination Element (BCE).

[12] Field Manual (FM) 100-15, Corps Operations, (Washington D.C.: Headquarters Department of the Army, 29 October 1996), 4-20

[13] Joint Publication 3-56.1. *Command and Control for Joint Air Operations.* (Washington D.C.: Joint Staff, 14 November 1994) I-1

[14] Glosson, Buster C., Lieutenant General, USAF, DCS, Plans and Operations, USAF Pamphlet, *JFACC Primer,* August 1992

[15] Field Manual (FM) 1-100, *Army Aviation Operations,* (Washington D. C.: Headquarters Department of the Army, 21 February 1997), 1-3

[16] Atkinson, David and Keeter, Hunter; Apache Role in Kosovo Illustrates Cracks in Joint Doctrine, *Defense Daily* (Vol. 202, Issue: 40), 26 May 1999

[17] Cohen, William S., Secretary of Defense, Prepare testimony before the Senate Armed Services Committee, Library of Congress, 14 October 1999

[18] HEMMT is a heavy expanded mobility tactical truck that can service in a cargo capacity or in a tanker capacity.

[19] Army aviation officer professional development and education does not include any discussion of the ATO process. This shortfall needs to corrected immediately. Additionally, the Army needs to take the program of instruction from the Air Force JACCC course and integrate it into the basic course.