Agile C-17 Support of Special Operations

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Introduction

"Children debate ownership," stated a high ranking Royal Air Force official while discussing the role of the Combined Forces Air Component Commander in a presentation to the Air War College at Maxwell Air Force Base.[1] This statement provides clarity in an era of ever tightening budgets and limited resources. A future military leadership challenge will be the ability to maximize efficiency and effectiveness of the limited but capable aviation assets available in the United States (US) inventory. In order to meet future demands in a relevant manner, agile command and control relationships must be in place to best position commanders for success. This article will specifically argue that there is a requirement for an agile command relationship between US Transportation Command (USTRANSCOM) and US Special Operations Command (USSOCOM) with regard to the utilization of C-17s in support of intratheater special operations missions. This relationship is necessary to meet a growing airlift requirement that the Air Force Special Operations Command (AFSOC) is not currently capable of fulfilling due to the size of its airlift fleet.

The C-17 provides an excellent example of a somewhat limited but highly versatile resource. The aircraft was designed to be both a strategic airlifter, similar in capability to the C-141B, and a tactical airlifter, similar in capability to the C-130. During its 15 years of operational service, the C-17 has proven itself extremely capable in both environments.

Historically, the C-17 has primarily filled a strategic airlift role and remained under the operational, centralized control of USTRANSCOM. Though addressed in Air Force doctrine, rarely has transfer of command of intertheater airlift assets been passed to supported commanders. A centralized command relationship concept was necessary to ensure that all customers throughout the Department of Defense had access to rapid global mobility provided by intertheater airlift. Single ownership of a high demand, low density asset makes sense in most cases, but that relationship can get clouded when a highly versatile asset, such as the C-17, is capable of performing both an intertheater and intratheater role. The command relationship gets even cloudier when you consider the C-17s special operations capabilities.

The 180th C-17 was delivered to Charleston Air Force Base (AFB), South Carolina in November 2008. The weapon system also celebrated its 15th operational anniversary in 2008. The aircraft has proven itself in Bosnia, Kosovo, Afghanistan, and Iraq while sustaining zero losses. The C-17 continues to earn accolades as a versatile workhorse, comfortable in performing airlift around the globe, while at the same time performing complex multiple drop zone airdrops in Afghanistan. It is a weapon system at the apex of utility.

As the C-17 continues to flourish and prove its versatility, the highly specialized medium lift MC-130s of AFSOC are in need of modernization, refitting, and replacement due to aircraft lost in training and combat. AFSOC is currently short on lift but has a plan to meet its required needs by 2012. AFSOC currently has 61 MC-130 variants in its inventory but availability of their prime airlift aircraft will be limited through 2012 because of aircraft modernization and refurbishment programs planned over the next from 2008 to 2012.[2] Based on the growing requirements for nonconventional forces to combat asymmetric threats, AFSOC may never have enough special operations airlift, and requires an agile avenue to leverage non-AFSOC assets.

The C-17 has a special operations mission that was utilized during operations at the outset of Operation Iraqi Freedom to augment the MC-130 and provide organic lift for special operations outsized cargo. The C-17 does not possess all the capabilities of the MC-130 nor is AFSOC seeking to acquire an MC-17, according to AFSOC Commander, Lieutenant General Donald C. Wurster.[3] However, there are situations when the fluid nature of special operations missions requires time critical augmentation that can be specifically addressed by the C-17. There must be an agile command relationship in place to ensure time sensitive missions are accomplished. The current command and control relationship between USTRANSCOM and USSOCOM does not thoroughly address this requirement.

Command and Control Relationships

According to Joint Publication 1, *Personnel Support to Joint Operations*, "Inherent in command is the authority that a military commander lawfully exercises over subordinates including authority to assign missions and accountability for their successful completion."[4] Controlling authority over resources often comes to the forefront in discussions of assets for mission accomplishment. USTRANSCOM and Air Mobility Command (AMC) have made great strides since the outset of combat

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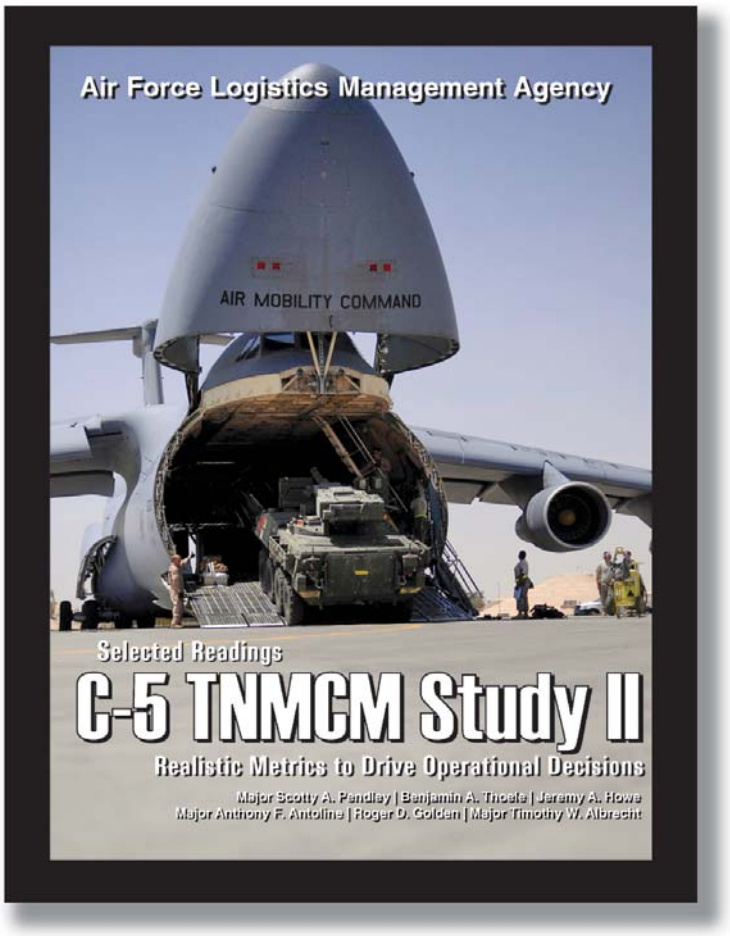

The *C-5 TNMCM Study II* proved to be a stern test of AFLMA's abilities and perseverance. Considering the numerous potential factors that impact TNMCM rates as well as the C-5's historical challenges in the areas of availability and achieving established performance standards, the study team was determined to apply new thinking to an old problem. The research addressed areas of concern including maintaining a historically challenged aircraft, fleet restructuring, shrinking resources, and the need for accurate and useful metrics to drive desired enterprise results. The team applied fresh perspectives, ideas and transformational thinking. As a result, the study team developed a new detailed methodology to attack similar research problems, formulated a new personnel capacity equation that goes beyond the traditional authorized versus assigned method, and analyzed the overall process of setting maintenance metric standards. AFLMA also formed a strategic partnership with the Office of Aerospace Studies at Kirtland AFB in order to accomplish an analysis of the return on investment of previous C-5 modifications and improvement initiatives. A series of articles was produced that describes various portions of the research and accompanying results. Those articles are consolidated in this book.

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operations in late 2001 to ensure that its centralized command and decentralized execution model best serves both the global fight and the regional fight. Through research and discussions with key personnel at AMC headquarters and personnel in the United States Central Command (USCENTCOM) area of responsibility (AOR), agile command relationships are in place and unprecedented airlift support is being provided within that theater. That has not always been the case and we must ensure that future operations anywhere around the globe meet the current standards established within USCENTCOM. Established doctrine allows airlift assets to be attached to a special operations Joint force commander but there must be a clear language agreement in place to allow USSOCOM to leverage those assets.

What is meant by an agile command relationship? The concept of agility is discussed in Air Force Doctrine Document (AFDD) 1, *Doctrine/Command Relationships*, and is described as "our innovation to meet future challenges and our ability to adapt to the changing world around us."[5] This statement is validated in the asymmetric combat environment we find ourselves in today. In order to meet future challenges, command and control relationships must be put under constant scrutiny to ensure their relevance.

Air Force command and control relationships mirror those of Joint doctrine and ensure clear lines of authority in most circumstances. "The COCOM (combatant commander or command authority) will attach various forces to the Joint force commander (JFC) and will specify the degree of control over each force element in terms of operational control (OPCON), tactical control (TACON) or support."[6] However, there are some cases where OPCON and TACON authorities are blurred, unclear, or transfer of authority is not deemed appropriate.

As the COCOM for transportation, USTRANSCOM serves primarily as a supporting command to the regional combatant commands. USTRANSCOM's air component, AMC, controls nearly all of the intertheater airlift assets and many intratheater airlift assets. To maximize efficiency AMC maintains centralized control over these aircraft and rarely relinquishes control of these assets. With the limited number of intertheater aircraft available to support the huge number of global airlift requirements, this makes sense in most cases. However, there are always exceptions and special operations are one of the exceptions detailed both in Air Force doctrine and Air Force mobility operations doctrine.

AFDD-1 discusses the complexities in regard to support of special operations. "Such employment should be carefully coordinated to prevent conflict with other operations."[7] The coordination process can be streamlined when the JFC responsible for operations has control over the assets being utilized to the maximum extent possible. Air Force mobility operations doctrine discusses authorities during large scale operations. "During large scale operations, USTRANSCOM assets may be tasked to augment intratheater airlift operations, and may be temporarily attached to a Joint force commander."[8]

Air Force mobility doctrine specifically discusses support of special operations forces (SOF) in an intratheater context:

> When airlift is needed, SOF units usually request support through the Joint force special operations component commander (JFSOCC) and the special operations liaison element (SOLE) in the AOC. When SOF units require intratheater airlift in excess of available assets, or their airlift requirements exceed the capacity of assets in the theater, the JFSOCC or the SOLE in the AOC will coordinate appropriate support. Airlift forces capable of performing specific special operations receive appropriate training and equipment to maximize SOF integration. Airlift forces may be attached to the Joint special operations task force or JFC for specific operations.[9]

There are two areas of concern encompassed in the doctrinal discussion above. First, what is the best way to authorize airlift forces to a special operations task force when a robust theater air operation center (AOC) is not in place? Over the past 8 years, the USCENTCOM AOC has been phenomenal with their support of major combat operations. Lessons learned have driven required changes and led to adaptation. But what about the next conflict

Article Acronyms

AB – Air Base
AE – Aeromedical
AEG – Air Expeditionary Group
AFB – Air Force Base
AFDD – Air Force Doctrine Document
AFSOC – Air Force Special Operations Command
AMC – Air Mobility Command
AMD – Air Mobility Division
AOC – Air Operations Center
CAA – Command Arrangements Agreement
CAOC –Combined Air Operations Center
COCOM – Combatant Commander
CONUS – Continental United States
DZ – Drop Zone
EAS – Expeditionary Airlift Squadron
GWOT – Global War on Terror
I-CDS – Integrated Container Delivery System
JFC – Joint Forces Commander
JFSOCC – Joint Force Special Operations Component Commander
JOA – Joint Operational Area
JPADS – Joint Precision Air Drop System
JSOACC – Joint Special Operations Air Component Commander
JTF – Joint Task Force
JTF-CC – Joint Task Force Commander
LZ – Landing Zone
MATS – Military Air Transport Service
MEU – Marine Expeditionary Units
OG – Operations Group
OGS – Special Operations (Division)
OIF – Operation Iraqi Freedom
OPCON – Operational Control
SOF – Special Operations Forces
SOLE – Special Operations Liaison Element
TACC – Tanker Airlift Control Center
TACON – Tactical Control
TDD – Theater Direct Delivery
USCENTCOM – United States Central Command
USEUCOM – United States European Command
USNORTHCOM – United States Northern Command
USPACOM – United States Pacific Command
USSOCOM – US Special Operations Command
USTRANSCOM – United States Transportation Command
WIC – Weapons Instructor Course

in another theater that does not maintain a robust AOC? As COCOM for the Global War on Terror (GWOT), USSOCOM requires an agile command relationship with USTRANSCOM that includes augmenting forces. Special operations missions often precede major combat operations. There are rare cases when transfer of forces for a short period of time will be required. An agile command relationship that allows for USSOCOM to leverage assets should be maintained in a command arrangements agreement (CAA).

Second, there is the question of what constitutes intratheater assets. Most doctrinal discussions refer to intratheater assets when discussing transfer of control of forces. C-17s are normally considered an intertheater asset but the aircraft is capable of tactical operations normally associated with intratheater assets. Since 2006 two C-17 squadrons have rotated in and out of USCENTCOM in order to provide intratheater lift while the rest of the C-17 fleet continues to provide intertheater lift. Unlike the C-130s that are under USCENTCOM OPCON, or chopped to that command, the C-17s are simply forward deployed and remain under AMC authority. This unique relationship will be discussed later.

Intertheater versus Intratheater Airlift Command and Control

Air mobility doctrine represents an accumulation of best practices from World War II through the most recent conflicts, including Operation Iraqi Freedom[10]

Strategic airlift capability emerged in World War II as technological advances in aviation allowed for the transportation of personnel and equipment in a global context. The Korean War brought the establishment of the Military Air Transport Service (MATS). MATS developed the concept of strategic intertheater airlift in combination with tactical intratheater airlift, which led to the development of the C-141, C-5, and C-130 aircraft.[11] These aircraft allowed the US to deliver power anywhere around the globe. This concept served the US military well into the mid-1990s. C-141s and C-5s airlifted men and equipment from outside the theater into a strategic hub where the cargo could be transferred to a C-130 for movement within the AOR. The C-17s ability to provide direct delivery of cargo from stateside locations directly to the battlefield required a change in mindset and planning.

Command and control of airlift assets was based on roles and missions. Historically, strategic airlift aircraft and tanker aircraft that provided essential aerial refueling to maximize airlift range were centrally controlled due to the limited number of assets, the high demand, and the complex nature of worldwide operations.[12] Tactical airlift assets were more plentiful with a number of C-130s being assigned directly to a regional commander. When operations required, tactical airlift would be chopped to a theater commander for a specific period of time to accomplish operations within the specified AOR. C-130s are currently assigned to United States Central Command (USCENTCOM), having been chopped from United States European Command (USEUCOM), United States Pacific Command (USPACOM) and United States Northern Command (USNORTHCOM).

Based on the staggering volume of lift delivered in support of regional commanders and the GWOT, AMC can take pride in the efficiency of its operational doctrine. In 2007 AMC moved nearly 570,000 short tons of cargo and nearly 2,000,000 passengers on various airlift missions (at the time of writing, 2008 figures were not yet available).[13] It is difficult for any entity to argue that the current airlift system is not meeting or exceeding the needs of customers based on the output mentioned above. However, there is always room for improvement and the need to adjust to an ever changing environment.

In the latest AFDD 2-6, Air Mobility Operations, (published in 2006), air mobility moved away from the concepts of strategic and tactical lift and moved to the concept of intertheater and intratheater lift. The intertheater lift mission describes airlift movement between geographic regions or from the continental United States (CONUS) around the globe.[14] In the intertheater discussion, command and control of this mission and the assets is executed by components of the 18th Air Force: "Normally, operational control (OPCON) of the air mobility forces involved in intertheater operations is not transferred."[15] The assets referred to in the intertheater context include the C-17.

Discussion of the intratheater mission is a little more complex, especially in the context of command and control. The following are excerpts from the doctrine document description of intratheater:

> The term intratheater operations covers two types of operations; those of a single geographic combatant commander during peacetime or when a Joint operational area (JOA) has not been established, and those operations inside a JOA. In both of these situations, operations are normally conducted using forces assigned or attached or made available for tasking to the JFC.[16]

> When theater air mobility requirements exceed the capability of the assigned or attached forces, the geographic combatant commander may request augmentation from, or the establishment of a supported/supporting relationship with, either USTRANSCOM or another geographic combatant commander. Similarly, a Joint task force commander (JTF/CC) would first request augmentation from the geographic combatant commander who may pass that request along as described above.[17]

The discussion clearly lays out the ability to transfer control of assets when necessary to a JTF/CC and recognizes that the area of operations may not always have a robust AOC structure. USSOCOM deals with this type of operations on a daily basis. What is missing from the intratheater discussion is the type of assets involved. While not specifically mentioned, C-130s are often the asset chopped to a regional commander to provide the required airlift. Over the past 3 years, chopping C-17s to JTFs for intratheater operations has been discussed but control of the assets has remained with AMC. The C-17s tested capability in the intratheater environment and its current numbers (180 aircraft in the inventory) require a paradigm shift in its utilization. It is an asset that is easily incorporated in either the intertheater or intratheater environment.

Where Does the C-17 Fit?

After more than 8 decades of experience, the logistical value of airlift in counterinsurgency is obvious and springs from the dependence insurgents have for sanctuary.[18]

Forward deployment of C-17 units for intratheater operations, while still under centralized control of AMC, has been the standard model since the aircraft entered the operational inventory in 1995. In support of Bosnia operations, C-17s flew out of Rhein Mein Air Base, Germany into the same airfields of the former Republic of Yugoslavia supported by USEUCOM C-130s. The C-17s received their taskings from the 18th Air Force's Tanker Airlift Control Center (TACC) at Scott AFB, Illinois while the C-130s were tasked by USEUCOM.

As the number of C-17s grew, their utilization in the mobility picture became more complicated. Their ability to provide direct delivery from the CONUS directly to the battlefield meant that they had a foot in both the strategic and tactical worlds.[19] In the 1999 Kosovo operations, the C-17 forward deployed mission had matured as the increased numbers of aircraft allowed a larger footprint. For this operation, 12 C-17s were assigned to support operations out of Ramstein Air Base, Germany. Charleston AFB deployed the equivalent of a C-17 operational squadron along with a group commander. The Charleston AFB Wing Commander, Colonel Rod Bishop, also deployed to Ramstein as the Director of Mobility Forces and would remain in place until Kosovo airlift support was completed. Once again, control of the C-17s remained under control of AMC and received their tasking from TACC. Transfer of the assets to EUCOM or the JTF/CC was not deemed necessary. Overall, the C-17s forward deployed participation was generally deemed a success, though questions remained with regard to the C-17s ability to perform in a more hazardous and austere environment.[20]

Those questions were answered by the C-17's intertheater and intratheater roles in support of operations in Afghanistan. C-17s conducted 26-hour round trip intertheater operations out of Ramstein, Germany into austere airfields in Afghanistan on night vision goggles. In an intratheater capacity, C-17s deployed two Marine expeditionary units into a dirt airstrip in southern Afghanistan using recently established special operations C-17 crews and aircraft from Charleston AFB, South Carolina. The success of the C-17 at the outset of Afghanistan operations in both the intertheater and intratheater capacity allowed for the possibility of an OPCON or TACON relationship.

There were other factors that affected the command relationship discussion. By 2001, Boeing was delivering one C-17 a month to the Air Force which provided AMC greater capacity. The C-17 also took over the AMC special operations mission from the C-141 in 2001. As preparations for Iraqi Freedom were made, it was determined the C-17 was required to support the special operations task force in an intratheater capacity. From March 2003 to April 2003, the 781st Expeditionary Airlift Squadron (EAS) commanded by Lieutenant Colonel Matt Whelan (special operations division chief at Charleston AFB), deployed seven C-17s, aircrews, maintenance, and logistical support to Saudi Arabia specifically to support the special operations JTF/CC. In this role, the C-17s not only augmented AFSOC's MC-130s but also provided their unique capability. Though not completely autonomous from AMC, this is the first instance of C-17s operating in a special TACON relationship with the JTF/CC. Specifics of this relationship will be discussed in a later section.

AFSOC Airlift Capability (Pre-9/11, Today, and the Future)

As it became clear that the war in Iraq would continue, USCENTCOM increasingly required intratheater lift to augment and replace C-130s in-theater. Air National Guard and Reserve C-130 units had flown beyond their time requirement and active duty C-130 units were strained from years of constant deployment. The harsh environment of both Iraq and Afghanistan also had a negative impact on the C-130 airframe and maintenance in-commission rates were falling. AFSOC MC-130s also felt the strain of years of constant deployment with a much smaller fleet of aircraft to rely on. The effects of combat and the harsh environment were being reported in 2005 when a study by AFSOC logisticians showed that mission capable rates had fallen by 9 percent and aircraft nonavailability rates had increased in order to get aircraft into depot maintenance.[21] MC-130 variants in USCENTCOM continue to face maintenance challenges.

Prior to September 11, 2001, AFSOC's fleet of airlifters provided adequate support for USSOCOM operations and had excelled in numerous special operation missions around the globe. Fixed wing airlift was provided primarily by the MC-130E/H variants while the MC-130P could provide limited lift but primarily served in a tanker role. There were 59 MC-130E/H/Ps in the AFSOC inventory in 2000.[23]

Since the start of post-9/11 combat operations the MC-130H, the most capable aircraft of the AFSOC airlift fleet, has suffered four lost aircraft reducing its numbers from 21 to 17 aircraft.[24] With no immediate replacements available and no program replacements scheduled, the remaining aircraft were forced to fly beyond their annual programmed flying hours. This affected the entire MC-130 fleet. The situation has been further exacerbated by the age of the MC-130E which is now in its fifth decade of service.[25] The MC-130E was not programmed to fly in the USCENTCOM AOR in 2008 putting further strain on the MC-130H and MC-130P (see Table 1).

The future is somewhat brighter for AFSOC airlift but it will take a couple of years to bring the programmed aircraft online. Currently, AFSOC has a total 61 MC-130H/E/P/Ws in the inventory.[26] AFSOC has three programs ongoing that impact their fixed wing airlift fleet. AFSOC is in the process of refurbishing the MC-130H center wing boxes. This program should be completed in 2013.[27] To fill the airlift gap left from the lost MC-130Hs, AFSOC has been converting standard C-130s to the MC-130W.[28] While they do not provide the same combat capability as the MC-130H, they do provide the airlift. AFSOC plans on buying 12 MC-130Ws. They currently possess eight of the aircraft, and plan on the first aircraft being mission ready in February 2009. The last aircraft

	Oct 2007	Nov 2007	Dec 2007	Jan 2008	Feb 2008	Mar 2008	Apr 2008	May 2008	Jun 2008	Jul 2008	Aug 2008	Sep 2008
MC130H	86.4	93.4	90.6	82.2	87.9	84.9	76.6	61.4	80.7	93.3	88.3	71.6
MC130P	75.3	97.0	90.5	79.0	73.4	88.4	83.9	75.6	85.6	84.0	82.3	65.0
MC130E	NO DEPLOYMENTS FOR FY08											

Table 1. 2007-2008 MC-130H/P Mission Capability Rates [22]

is scheduled for delivery in 2010.[29] AFSOC is also investing in 37 MC-130Js to replace its 37 MC-130E and MC-130P models (see Table 2).[30]

USSOCOM has a decision to make about the airlift capability they require and desire. The MC-130H showcases a medium threat penetration capability that is not integrated in the MC-130W. To go beyond the current upgrade to the MC-130W would take extra time and money that USSOCOM does not have.[31] The road ahead for the USSOCOM and AFSOC leadership is whether they need to modify the MC-130W to meet the MC-130H capabilities or work toward a new special operations airlift platform. Based on the current numbers and program overlaps, special operations airlift aircraft availability will be stretched thin through 2011.[32] Having the C-17 in the USCENTCOM AOR has offset some of the lift requirements to both the C-130 community and the MC-130 community, but the C-17 does not possess all of the MC-130 capabilities.

MC-130 Strengths and Weaknesses

The MC-130 is the primary special operations airlift platform in the Air Force inventory. The MC-130E Talon I is in its fifth decade of service but received upgrades through the 1990s.[33] The MC-130H Talon II is relatively young compared to the MC-130E, having entered operational service in 1992 but possess a glass cockpit, greater mission computer integration, a better avionics suite, and an upgraded communication suite.[34] The main characteristics that set the Talons apart from other airlift aircraft is their extensive electronic warfare capability combined with terrain-following radar that allows the Talons to penetrate an integrated air defense system (IADS) in any weather condition or terrain.[35] This capability is essential to insert, recover, and resupply special operations forces either by airdrop or airland. The MC-130 size compared to the C-17 allows it greater access to airfields. The Talons only require a 60-foot wide airfield in comparison with the 90-foot wide requirement for the C-17. The Talons are also air refueling capable which allows them to cover distances at speeds helicopters cannot provide. They also have an obvious cargo capacity advantage over helicopters.

The MC-130 has served the special operations community well since the 1960s but the growing requirement for special operations lift is outpacing their numbers. While extremely capable in the intratheater environment their speed, range, and cargo capacity do not provide a rapid intertheater option demanded by USSOCOM to meet the GWOT. Special operations units have also brought on new systems, such as the Stryker, that are not compatible with the MC-130 cargo compartment. Seven years of operations in Afghanistan and Iraq have taken a huge toll on the airframes, as it has with the entire force, but with limited numbers of assets, the MC-130s have paid a higher toll. This can be witnessed in the comparison of maintenance reliability between the MC-130H and the C-17 (see Table 1 and Table 3). Three years separate the operational dates of the two aircraft but the Talon II has paid a higher price due to operations tempo. The number of each asset available, 19 Talon IIs vice 180 C-17s, illustrate the need for an agile command relationship between USSOCOM and USTRANSCOM. The C-17 is not as capable as the MC-130 in the special operations mission but it can help to augment the MC-130 requirements. The forward deployment of C-17s has helped to relieve some of the USCENTCOM intratheater load.

C-17 Strengths and Weaknesses

Ongoing C-17 operations in USCENTCOM provide a good example of both the strengths and weaknesses of the aircraft. In 2006 AMC established two C-17 expeditionary airlift squadrons (EAS) to service the USCENTCOM AOR. Prior to the establishment of the EASs, C-17 support was provided simultaneously by as many as six stage locations in Europe, the Middle East, and Central Asia. This operation proved to be an inefficient model for both aircraft and aircrews.

The EAS construct typifies how the C-17 can best be utilized in the intratheater construct and highlights its strengths in the tactical environment. The EASs deploy as a squadron on 120-day cycles and come under the leadership of the 385th Air Expeditionary Group Commander (AEG/CC). The 385th AEG/CC is a deployed AMC group commander and currently controls two C-17 squadrons, with 17 aircraft and a KC-135 detachment with three aircraft.[36] The C-17 squadrons are dispersed to three locations allowing operations into Iraq and Afghanistan.

The C-17's cargo capacity, range, speed and air refueling capability allow it the flexibility to service multiple airfields inside the AOR in a crew duty period providing nearly three times the lift of a C-130. The C-17 has also made headlines for its flexibility to rapidly adjust to an aeromedical role and transport wounded soldiers out of Iraq and Afghanistan, back to medical specialists in the United States without a need for aircraft or crew changes.

The C-17 has also had the opportunity to increase its air-drop productivity and highlight this capability. Air-drop riggers were moved from Balad Air Base (AB) Iraq to Al Udeid AB, Qatar so they could rig airdrop for C-17 deployment in Afghanistan.[37] Once again the capacity and range of the C-17 has a huge impact on its air-drop capability. By rigging in Qatar, the C-17s can airdrop on six different drop zones in Afghanistan, land at Bagram, Afghanistan, receive more air-drop supplies, airdrop to more locations and return to Qatar in a single crew duty day.[38] During the 816th EAS deployment from 1 September to 30 November 2008 the C-17 airdropped 2,197 bundles covering 79 drop zones as compared to the C-130s that delivered 986 bundles.[39]

C-17 air-drop accuracy continues to improve with advances in technology. The C-17s are now utilizing the Integrated Container Delivery System (I-CDS) which allows the aircraft to remain at an altitude above small arms fire yet deliver supplies more accurately.[40] This is important in the combat environment to ensure that the air-dropped supplies make it to the customer and not the enemy. The I-CDS is a less expensive version of the Joint Precision Air Drop System (JPADS) that holds a very promising future for airborne delivery of supplies. The current JPADS system allows delivery from up to 16 miles away at altitudes up to 25,000 feet, which offers tremendous capability to resupply ground forces while evading hostile fire.[41]

Fiscal Yr	2009	2010	2011	2012	2013	2014	2015	2016
Buy	11	4	5	6	6	5		
Del			4	8	8	6	6	5

Table 2. MC-130J Delivery Schedule

The C-17 has held up well in the USCENTCOM theater despite the harsh environment and increased flying hours. AMC retains control of the aircraft and the C-17s usually remain in-theater for 30 to 45 days before they are sent home for scheduled maintenance. The home station maintenance schedule and the aircraft's relative young age compared to other assets in the AOR, along with exceptional intratheater maintenance, have produced outstanding mission capability rates (see Table 3).

An area of friction worthy of discussion is the complex command relationship of the C-17 forces in USCENTCOM. The 385th AEG is located at Incirlik Air Base, Turkey, in the USEUCOM AOR and a large portion of group's assets reside in the CENTCOM AOR; but the group commander reports back to the 18 AF/CC. All of the deployed C-17 aircraft and aircrews remain under AMC control. Mission taskings are provided by two cells in 618th TACC at Scott AFB, Illinois. The C-17 EAS in Turkey receives its missions from the Channel Cell which mainly consist of airland delivery of cargo into Iraq. The C-17s in Qatar and a small contingent at Ali Al Salem, Kuwait receive their taskings from the Theater Direct Delivery (TDD) cell.[43] The TDD receives its inputs from the USCENTCOM Combined Air Operations Center (CAOC) Air Mobility Division (AMD) TDD cell.[44] While all those interviewed agreed that the system was efficient and was successful, there are more efficient command relationships available.

One area of command relationship refinement in the intratheater environment has been in the tactical use of the C-17. Air-drop requests in the AOR are made by all customers, to include special operations forces, to the AMD.[45] Air-drop missions are planned and executed within the USCENTCOM AOR and are normally executed within 36 hours of the request. There have been instances when the missions were planned and executed in 12 hours.[46] Two issues have made this possible. First is the requirement for a C-17 Weapons Instructor Course (WIC) graduate or air-drop qualified pilot to be in the CAOC tactics cell. According to former 385th AB/CC, Colonel Wiley, "Our weapons officers are paying off in spades at the CAOC as they understand the tactical capability of the C-17 and are familiar with the collaborative planning process."[47] The second issue is the delegation of tactical employment of the C-17 in-theater from the 18th AF/CC to the 385th AEG/CC. Until recently, airdrops and semi-prepared surface landings had to be approved at the AMC headquarters level.[48] The delegating of this authority is a huge step in the right direction and allows for greater flexibility when employing the C-17 in-theater.

Recommendations

There must be an agile command relationship in place between USSOCOM and USTRANSCOM for intratheater airlift augmentation. The C-17 has the training, special operations relationship, and capability to augment AFSOC airlift forces and provide unique capabilities required by special operations forces. To that end, the following recommendations are made:

- The Command Arrangements Agreement (CAA) between USSOCOM and USTRANSCOM needs to be updated. It needs to contain plain language that includes USSOCOM's ability to receive TACON command and control of special operations C-17 crews and aircraft when needed for intratheater operations. The guidance should allow for the C-17s to operate under AFSOC rules, enforced by the Joint Special Operations Air Component Commander (JSOACC) with regard to drop zone (DZ) and landing zone (LZ) approvals. This would allow C-17s to airdrop and land on the same airfields certified in the combat environment by AFSOC combat controllers for MC-130 use, when the LZs and DZs met C-17 standards. It should be noted that the AMD in USCENTCOM has streamlined this function for AMC over the years and they are very responsive to certifying LZs and DZs. The DZ and LZ provisions are for fluid operations encountered in the special operations environment that may not occur in a region that has a robust AMD capability. The only way this CAA will work is if AMC believes that components are in place to ensure that proper risk mitigation is observed and the aircraft will be efficiently utilized while chopped to the JSOACC and returned to AMC upon completion of operations. While the C-17 EASs are not chopped to USCENTCOM, there is an efficient operation in place between AMC, TACC, USCENTCOM AMD, the 385th AEG/CC, and the deployed squadron commanders. These operations have been refined over time and the lessons need to be captured or be lost to time and rediscovered during the next conflict. Retired Colonel Ralph Van Wagner from the AMC special operations division said, "We need to establish the relationships that have been built from our current experience … but what about 3 years from now? We need to get this on paper."[49] Ralph was in the unique position of briefing AMC leadership on C-17 special operations missions during the 781st EAS deployment in 2003. On a number of occasions he was seeking approval for operations as aircraft were loaded and awaiting execution approval.[50] A more agile command relationship must be in place.
- The first component required to mitigate AMC leadership's reservations of losing centralized command of its assets is deployed leadership. For more robust operations, usually conducted at the beginning of a major campaign, a standing C-17 operations group (OG) commander (preferably with C-17 special operations knowledge) should go forward as the AMC representative with the C-17 package (paired and tailored to fit mission). With the downgrading of the Charleston AFB Deputy Group Commander for Special Capabilities (437 OG/CDS) position to 0-5, the horsepower and responsibility no longer exists beyond J-Alert operations. Deploying a standing OG is doctrinally sound, has historical

2008	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Average
Aircraft C-17 I/O	510	461	651	545	430	522	544	482	507	526	444		5,622	517.8
Depart Reliability % MX (C-17)	94.30	94.49	95.69	93.19	88.10	76.80	88.58	91.41	92.16	95.10	94.37			91.29

Table 3. 2008 C-17 Mission Capability Rates.[42]

precedence, and more importantly, relationships matter! The OG would work with the JSOACC (Spec Ops OG equivalent) to mitigate risk and ensure the C-17 was utilized correctly and transferred back to AMC for other missions when not in use. An AMC OG provides an established level of AMC leadership to make the correct call with regard to proper utilization of assets and risk mitigation and management. This will allow for fluid operations to occur without having to receive headquarters AMC leadership approval for every operation. An example of this delegation to the OG level by the 18th AF/CC is the recent approval of airdrops by the C-17 in the USCENTCOM AOR by the 385th OG/CC.

- Having planners in place who understand C-17 capabilities and the Joint planning process is imperative. As more C-17 pilots graduate the Weapons Instructor School the C-17 will enjoy a larger cadre of planners that can integrate in planning cells. The special operations division also trains their pilots to integrate in a Joint special operations planning cell. This training is validated in multilateral training exercises and planners are also sent to regional virtual training exercises in a planning capacity. Qualified planners, should be sent as planners and liaison officers (LNOs) to the following locations: The Special Operations Joint Operations Center (JOC) (especially if there is no C-17 experience at that location), and the AMD or CAOC tactics cell, if one is up and established. I would also include a representative from AMC/A3DJ (AMC Combat Operations, Special Operations Branch) as an LNO to the deployed OG. Relationships and expertise in the right locations matter.
- The final recommendation is based on the three previous recommendations being met. There are numerous examples that can be provided in which the C-17 is required to augment or provide unique special operations airlift and airdrop to a special operations Joint task force (JTF). During these operations, a TACON command relationship where the assets are transferred to the JTF for a determined time period makes sense. This is not a matter of control but a matter of mission accomplishment. AFSOC is short on airlift for at least the next 3 years and AMC can help fill that requirement when necessary. This relationship would be different in that the C-17s chopped to the JSOACC would still have to provide TACC lines in-theater when tails were not in use. Having an AMC OG in place makes this a more palatable solution. My experience is that the need for a TACON requirement of the C-17 is only for initial footprint operations and the MC-130s can provide sustainment operations.

Conclusion

United States Air Force Commander General Norton Schwartz recently remarked, "I'm less worried about ownership" of kinds of planes "than I am about the end results," Schwartz said. "This is a versatility issue, not an ownership issue. We have to get off of these theological debates."[51] This is the leadership mindset required to meet the challenges of an aging aviation fleet and a tightening of resources.

The versatility of the C-17 allows it to operate in both the intertheater and intratheater environment. As the number of C-17s continues to grow there is an opportunity to use this previously limited asset in nontraditional roles to complement other weapon systems that are older or are limited in numbers. The C-17 has proven its tactical prowess in Afghanistan and Iraq and is providing much needed relief to traditional intratheater assets in the USCENTCOM AOR.

AMC maintains a special operations capability at Charleston AFB, which has a robust training relationship with Joint special operations forces. The C-17 is expected to provide additional airlift and air-drop capability in conjunction with AFSOC airlifters. The GWOT has thrust USSOCOM to the forefront of a global asymmetric threat that requires both an intertheater and intratheater response capability. The fluid nature of this no-fail mission requires an agile command relationship that allows USSOCOM control of assets needed for mission accomplishment. In a moment of crisis there is no time to debate ownership when results are required.

Notes

1. (The speaker's name is omitted as the presentation was made in an academic freedom environment) "CFACC Responsibilities," presentation to students, Air War College, Maxwell AFB, Alabama, 15 December 2008.
2. Lieutenant Colonel James W. Deloach, "AFSOC Stick Planes," briefing, 31 October 2008.
3. Lieutenant General Donald C. Wurster, address to students and faculty, Air War College, Maxwell AFB, Alabama, 12 November 2008.
4. Joint Publication 1, *Doctrine for the Armed Forces of the United States*, 14 May 2007, IV-1. Air Force Doctrine Document (AFDD) 1, *Air Force Basic Doctrine*, 17 November 2003, 82.
5. AFDD 1, 80.
6. AFDD 1, 54.
7. AFDD 2-6, *Air Mobility Operations*, 1 March 2006, 107.
8. AFDD 2-6, 35.
9. AFDD 2-6, 1
10. Major Robert C. Bruno, "Planting the Seeds of Rapid Global Mobility: The Roots of Airlift Control Elements in the United States Air Force," *Air Mobility Symposium 19-20 September 1997*, 116.
11. Keith Hutcheson, Air Mobility The Evolution of Global Reach, Vienna, Virginia, Point one VII, Inc., 1999, 54
12. United States Transportation Command (USTRANSCOM) 2007 Annual Report, Scott AFB, Il, 2, [Online] Available: http://www.transcom.mil/annualrpt/annualreport.cfm.
13. AFDD 2-6, 8.
14. *Ibid*.
15. AFDD 2-6, 9.
16. *Ibid*.
17. Robert C. Owen and Karl P. Mueller, *Airlift Capabilities for Future U.S. Counterinsurgency Operations*, Santa Monica California: RAND Corporation, 2007, viii.
18. Dr David R. Mets, "Between Two Worlds: Fodder for Your Professional Reading on Global Reach and Air Mobility," *Aerospace Power Journal,* Spring 2002, 47.
19. *Ibid*.
20. Major Lisa A. Ulshoffer, Captain Andrew S. Young, Senior Master Sergeant William Nivison, and Master Sergeant Dean J. George, "AFSOC Logistics: Quiet Professionals Supporting the War Fighter," *Air and Space Power Journal*, Spring 2005, .2.
21. Master Sergeant Nicholas Bender, AFSOC MC-130E/PJ Program Manager, e-mail correspondence to the author, 15 December 2008.
22. James W. Deloach, AFSOC Master Brief, 31 October 2008, e-mail to the author, 8 December 2008,1.
23. *Ibid*.
24. Colonel William E. Saier, (Retired), "The Advanced Special Operations Air Mobility Platform (M-X): The Time Is Now," *Air and Space Power Journal*, Spring 2005, 1.
25. Derry McKinney, AFSOC/A5RM, e-mail correspondence, 8 December 2008.
26. *Ibid*.
27. *Ibid*.
28. *Ibid*.
29. Ralph McDonald, AFSOC/A5RM, e-mail correspondence to the author, 8 December 2008.
30. *Ibid*.

31. Derry McKinney, AFSOC/A5RM, e-mail correspondence, 8 December 2008.
32. US Air Force Fact Sheet, *MC-130 E/H Combat Talon I/II*, Hurlburt Field, Florida: US Air Force Special Operations Command, October 2007.
33. *Ibid*.
34. *Ibid*.
35. Author's interview with Colonel Joseph Wiley, 385 AEG/CC, 6 December 2008.
36. Author's interview with Lieutenant Colonel Mike Mitchell, 816 EAS/DO, 17 December 2008.
37. *Ibid*.
38. Lieutenant Colonel Mike Mitchell, 816 EAS/DO, e-mail correspondence with the author, 10 December 2008.
39. Major Erin Staine-Pyne, AMC A3/DT, e-mail correspondence with the author, 17 December 2008.
40. *Ibid*.
41. Lieutenant Colonel Fred Boehm, 8 EAMS/CC, e-mail correspondence with the author, 11 December 2008.
42. Author's interview with Colonel Joseph Wiley.
43. Lieutenant Colonel John Roscoe, AUAB CAOC AMB Chief, e-mail correspondence, 12 December 2008.
44. *Ibid*.
45. Author's interview with Colonel Joseph Wiley.
46. *Ibid*.
47. *Ibid*.
48. Author's interview with Colonel Ralph Van Wagner (Retired), AMC A3DJ, 11 February 2009.
49. *Ibid*.
50. John T. Bennett, "Schwartz: 'Not Threatened' By Army Airlifters, UAV," *DefenseNews*, 11 February 2009, [Online] Available: http://www.defensenews.com/.

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Intuition is often crucial in combat and survivors learn not to ignore it.

—Col F. F. Parry, USMC

Knowledge must come through action; you can have no test which is not fanciful, save by trial.

—Sophocles

Tomorrow's warriors will have to relearn the things that today's warriors have forgotten.

—Gen Billy M. Minter, USAF

Knowledge is of two kinds. We know a subject ourselves, or we know where we can find information on it.

—Samuel Johnson

You can know the name of a bird in all the languages of the world, but when you're finished, you'll know absolutely nothing whatever about the bird.… So let's look at the bird and see what it's doing—that's what counts. I learned very early the difference between knowing the name of something and knowing something.

—Richard Feynman

The merit of an action lies in finishing it to the end.

—Genghis Khan

Have no fear of perfection—you'll never reach it.

—Salvador Dali

The difference between what we do and what we are capable of doing would suffice to solve most of the world's problems.

—Mohandas Karamchand Gandhi

One faces the future with one's past.

—Pearl S. Buck

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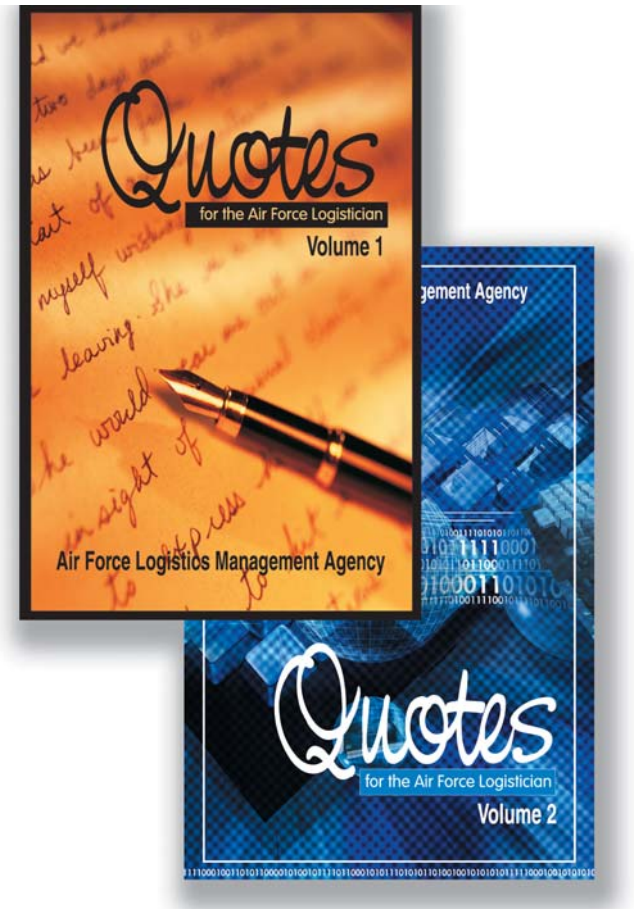

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