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INTRA-THEATER AIR MOBILITY AND THEATER DISTRIBUTION FOR THE JOINT
FORCE COMMANDER: IS THE UNITED STATES CENTRAL COMMAND MODEL
THE BEST?

by

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The conclusions and opinions expressed in this document are those of the author. They do not reflect the official position of the US Government, Department of Defense, the United States Air Force, or Air University.

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Lieutenant Colonel Francisco “Cisco” Rivera, USAF

ABSTRACT

Wars cannot be fought without logistics. Throughout the ages, kings, conquerors, and military commanders have relied on supply chains to expand their empires and sustain their campaigns. However, the business of logistics and supply chain management is not glamorous. When compared to the shock and awe provided by kinetic effects on a battlefield, a mile-long line of fuel trucks or an airfield parking ramp full of wide-body aircraft do not make for very impressive photo opportunities. But the business of logistics and supply chain management is as vitally important, if not more so, as the business of targeting, bombardment, and scheme of maneuver. Though modern day American Joint Force Commanders have at their disposal a host of logisticians and supply chain managers to expertly manage a complex and global logistics network, it is critical that these commanders themselves be familiar with the advantages and constraints of the American global supply chain.

For the U.S. Air Force, with “Global Reach” a part of its charter, the business of logistics is firmly rooted in its contributions to the American way of war. From humanitarian assistance, to disaster relief, to combat aerial delivery, the Air Mobility Command provides the assets and the expertise to sustain America’s power projection capabilities. The global portion of the American aerial supply chain is controlled and managed by U.S. Transportation Command. However, once personnel and materials arrive in a Geographic Combatant Commander’s Area of Responsibility, that theater commander becomes responsible for onward movement and distribution. Over the last eight years, one geographic command in particular has gained an incredible wealth of knowledge and experience in the business of managing aerial supply chains within a theater: U.S. Central Command. So prolific has been the business of intra-theater air movement and distribution there that the lessons learned have been exported to other geographic commands and codified into American military doctrine.

With so much of American military thought and force structure being based on lessons learned from Operations ENDURING FREEDOM and IRAQI FREEDOM within the U.S. Central Command’s theater, a question naturally arises: Is the U.S. Central Command way of doing business the best way for all geographic commands to use in conducting their affairs? More specific to logistics and mobility affairs, the question can be framed thusly: Is the U.S. Central Command model for intra-theater airlift and theater distribution the best way to conduct intra-theater air movements for Joint Force Commanders elsewhere? This thesis aims to address the latter question.

The author utilizes a case study methodology, beginning with the U.S. Central Command. Two other commands are studied as well, each selected due to the potential for increased American strategic interests in the regions they cover: U.S. Pacific Command and U.S. Africa Command. The strengths and weaknesses of the three intra-theater air mobility systems are examined, with particular emphasis on air mobility at the operational and tactical levels of war. Following the analysis, a series of recommendations are presented for Joint Force Commanders and air power strategists to consider when planning for future campaigns.

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Introduction

Air power includes a nation's ability to deliver cargo, people and war making potential through the air to a desired destination to accomplish a desired purpose.
-General of the Air Force Henry H. "Hap" Arnold

It has been over eight years since the United States initiated its current contingency operations in the U.S. Central Command (CENTCOM) Area of Responsibility (AOR). During that time, the Defense Transportation System (DTS) has been called upon continuously, becoming a major contributor to successful American military operations. DTS is that portion of the nation's transportation infrastructure which supports Department of Defense (DoD) common-user transportation needs across the range of military operations. The U.S. Transportation Command (TRANSCOM) is the single manager for DTS and is also the single distribution process owner for the movement of the DoD's materials, supplies and personnel.¹ In 2003, then Secretary of Defense Donald Rumsfeld decided to give this responsibility to TRANSCOM in order to centralize the distribution process from "factory to foxhole," thereby improving the efficiency of battlefield logistics.² Prior to that time, each Service Component was responsible for its own supply chain. TRANSCOM is a unified command with three component commands: the Air Force's Air Mobility Command (AMC), the Navy's Military Sealift Command, and the Army's Surface Deployment and Distribution Command. It is TRANSCOM's air component AMC that is primarily tasked with providing airlift for DTS.

The DTS requirements in support of Operations ENDURING FREEDOM (OEF) and IRAQI FREEDOM (OIF) have placed heavy demands on TRANSCOM in general, but more specifically on AMC. Notably, at an Air Force Association symposium in 2008, General Arthur Lichte, then AMC Commander, remarked that each day in the CENTCOM AOR his command lifted over half of the average daily tonnage of the Berlin Airlift but with only one-fifth the number of aircraft, this despite a six percent reduction

¹U.S. Transportation Command (TRANSCOM) Organization Factsheet, available from <http://www.transcom.mil/organization.cfm>.

²General John W. Handy, U.S. Air Force, Commander, U.S. Transportation Command, *Testimony before the Senate Armed Services Sea Power Subcommittee*, March 2004.

in [personnel] end strength since September 2001.³ Whereas the Berlin airlift endured for about 18 months, mobility forces had been engaged in CENTCOM missions for six-and-a-half years at the time of his remarks.⁴ Of all the air sorties controlled by the Combined Air Operations Center (CAOC) at Al Udeid Air Base in Qatar, airlift missions, and other air mobility missions such as air refueling and aero-medical evacuation, make up the overwhelming majority.⁵ For example, according to data compiled by a mobility analyst at the CAOC in January of 2007, OEF and OIF strike sorties are outnumbered two-to-one by mobility sorties.⁶ This intense activity in air mobility operations within the CENTCOM AOR has provided a substantial opportunity to accrue and apply lessons learned to improve overall effectiveness.

Why is the study of intra-theater airlift operations important? Intra-theater airlift operations have played a crucial role in the success of overall military operations since World War Two, from the airlift of supplies conducted by the 10th, 14th, and 20th Air Forces over the “hump” in the China-Burma-India Theater, to the insertion and resupply of Task Force 58 in Operation SWIFT FREEDOM during the early days of OEF.⁷ But intra-theater airlift assets are a limited resource. As air mobility operations continue to increase globally, it is necessary to determine the most efficient use of these limited assets while simultaneously providing joint and combined forces commanders with the most effective model for intra-theater distribution.

The airlift portion of air mobility is divided into two basic mission types: inter-theater or global airlift missions and intra-theater missions that take place within a specified AOR. AMC exercises command and control of inter-theater airlift missions through the 618th Tanker Airlift Control Center (TACC) at Scott Air Force Base, Illinois. However, intra-theater air movement is controlled by an Air Mobility Division (AMD) in

³Marc V. Schanz, “The Heavy Toll of High Optempo,” *Air Force Magazine* 91, no. 4 (April 2008): 36-41. During this time period, the Air Force was enduring Personnel Budget Decision 720 which was aimed at reducing the active duty end strength by nearly 40, 000 people.

⁴Schanz, “The Heavy Toll of High Optempo,” 36-41.

⁵Colonel Phil Bossert, “Global War on Terror (GWOT): The Tipping Point for Air Mobility,” *Airlift/Tanker Quarterly* 14, no. 4 (Fall 2006): 18, as quoted in Major Laura L. Lenderman, “The Rise of Air Mobility and its Generals,” Thesis, School of Advanced Air and Space Studies, June 2007, 1.

⁶For a detailed summary of the data, please see the footnote on page 2 of Major Lenderman’s thesis. Major Todd Shriver, Air Mobility Division Analyst, 30 January 2007, as quoted in Lenderman, “The Rise of Air Mobility and its Generals,” Thesis, School of Advanced Air and Space Studies, June 2007, 1.

⁷Air Force Doctrine Document (AFDD) 2-6, *Air Mobility Operations*, 1 March 2006, 11, 31.

each geographic theater, with some theaters having multiple AMDs due to the existence of sub-unified commands within those AORs. This arrangement results in AORs that contain different intra-theater airlift systems with unique operating, command and control (C2), and distribution procedures.

The DoD Dictionary of Military and Associated Terms formally defines intra-theater airlift as:

Airlift conducted within a theater. Assets assigned to a Geographic Combatant Commander (GCC) or attached to a subordinate joint force commander normally conduct intra-theater airlift operations. Intra-theater airlift provides air movement and delivery of personnel and equipment directly into objective areas through air landing, airdrop, extraction, or other delivery techniques as well as the air logistic support of all theater forces, including those engaged in combat operations, to meet specific theater objectives and requirements. During large-scale operations, TRANSCOM may be tasked to augment intra-theater airlift operations, and may be temporarily attached to a joint force commander.⁸

Intra-theater airlift is a component of the overall theater movement control system. In order to sustain the fight in the 21st century, effective theater movement control depends greatly on the hand-off between TRANSCOM's inter-theater movement system and the theater GCC's movement control mechanisms. TRANSCOM is the primary source of common-user airlift; however, several GCCs have also been assigned airlift assets to provide common-user airlift, primarily in support of operations within their AOR.⁹ TRANSCOM has movement control until an item reaches a GCC's AOR, at which point a transition is made to intra-theater movement assets.

The GCCs rely on their Joint Forces Air Component Commanders (JFACC)¹⁰ who work within Joint Air Operations Centers (AOC)¹¹ to “plan, coordinate, and manage the execution of the theater air mobility operation [for all services].”¹² The interface between AMC's C2 system and a theater's intra-theater airlift C2 system is critically

⁸Joint Publication (JP) 1-02, *The DOD Dictionary of Military and Associated Terms*, 12 April 2001 (As Amended Through 13 June 2007), 281.

⁹Joint Publication (JP) 3-17, *Air Mobility Operations*, 2 October 2009, ix.

¹⁰The acronym JFACC is used in a Joint environment while the acronym CFACC, for Combined Forces Air Component Commander, is used in multi-national or coalition environments.

¹¹The acronym AOC is used to represent the terms Air Operations Center as well as Air and Space Operations Center which are used interchangeably.

¹²JP 3-17, *Air Mobility Operations*, xi-xii.

important, as it must not only provide information for the transport of passengers and cargo, but must also de-conflict inter-theater and intra-theater air movement.¹³ Once personnel and materials are in theater, the GCC can exercise a range of options with respect to movement control. Subordinate joint force commanders and Service components can be directed to carry out their own movements, or the GCC can establish a theater joint transportation board or a joint movement center (JMC).¹⁴ From the joint doctrinal perspective, it appears that GCCs have a significant amount of flexibility with respect to how an intra-theater movement system is established.

The CENTCOM AOR is U.S. Army-centric, and as such the Army's movement control doctrine also has heavily influenced operations there. In its movement control field manual, the Army describes the hand-off between inter-theater and intra-theater modes of transportation at theater ports of debarkation (POD) as the critical seam in the deployment of forces to an AOR.¹⁵ Additionally, the Army indicates that the Air Force is primarily responsible for providing intra-theater airlift, from the POD to the Tactical Assembly Area (TAA), through the Air Force Component Command.¹⁶ The Army's field manual also makes mention of a JMC, attributing it the responsibilities of receiving and validating airlift requests and coordinating with AMC and TRANSCOM on intra-theater and inter-theater air assets.¹⁷ Across Services, there at least appears to be consistency in the conceptual understanding on how theater movements are supposed to work.

Unfortunately, all the doctrinal guidance does not guarantee that things will work out smoothly in execution. In the summer of 2003, Lieutenant General Walter Buchanan, then Commander of Air Force Forces (COMAFFOR) in CENTCOM, identified shortfalls in CENTCOM's Theater Distribution System (TDS).¹⁸ Among these were backlogs of cargo at the PODs, inefficient use of airlift resources, incomplete visibility over the

¹³JP 3-17, *Air Mobility Operations*, xii.

¹⁴Joint Publication (JP) 4-01.3, *Joint Tactics, Techniques and Procedures for Movement Control*, 9 April 2002, vii.

¹⁵Field Manual (FM) 4-01.30, *Movement Control*, September 2003, 2-1.

¹⁶FM 4-01.30, *Movement Control*, 2-1.

¹⁷FM 4-01.30, *Movement Control*, 3-6.

¹⁸Though a Theater Distribution System also includes surface and maritime forces, for the purposes of this thesis the term will primarily be used to refer to the air movement portion of the system. Robert S. Trip et al, *A Framework for Enhancing Airlift Planning and Execution Capabilities within the Joint Expeditionary Movement System, Project Air Force*, (Arlington, CA: RAND Corporation, 2006), xvii.

transport of materials, and a lack of discipline in requesting airlift support.¹⁹ TRANSCOM, having been designated the distribution process owner during that same time period, obtained the consent of CENTCOM commander and established the Deployment and Distribution Operations Center (DDOC). CENTCOM DDOC “works for the CENTCOM J4 and was created to improve the joint multimodal TDS and better integrate it with the joint multimodal inter-theater movement system.”²⁰ When it deployed to the CENTCOM AOR, CENTCOM DDOC absorbed the personnel of the previously established CENTCOM Commander’s JMC.²¹ A new way of doing business had emerged.

It is important to note that the establishment of CENTCOM DDOC did not merely reflect a clever name change. Its purpose was to provide the warfighters in CENTCOM with a team of logistics experts that could help execute theater movement missions in a more efficient manner.²² Vice Admiral Keith W. Lippert, then Director of the Defense Logistics Agency (DLA), stated that CENTCOM DDOC was integral to his agency’s work at solving a host of supply chain problems from tracking replacement orders to tracking intra-theater distribution to the end user.²³ In essence, CENTCOM DDOC became the stitch across the seam from the global to the theater movement systems.

Modifications to CENTCOM’s TDS did not end with the establishment of CENTCOM DDOC. The Air Force’s procedures for allocating, scheduling, and providing intra-theater airlift also underwent changes in an attempt to improve operating efficiencies. The Air Force began intra-theater airlift operations in the CENTCOM AOR in line with its master tenet of centralized control and decentralized execution, which states that “Centralized control and decentralized execution of air and space power are critical to effective employment of air and space power. Indeed, it is the fundamental

¹⁹Tripp et al, *A Framework for Enhancing Airlift Planning and Execution Capabilities within the Joint Expeditionary Movement System*, xvii.

²⁰Tripp et al, *A Framework for Enhancing Airlift Planning and Execution Capabilities within the Joint Expeditionary Movement System*, xviii.

²¹Tripp et al, *A Framework for Enhancing Airlift Planning and Execution Capabilities within the Joint Expeditionary Movement System*, xviii.

²²K. Cottrill, “Logistics Commandos,” *Traffic World*, February 2004.

²³Vice Admiral Keith W. Lippert, U.S. Navy, Director, Defense Logistics Agency (DLA), *Testimony before the House Armed Services Readiness Subcommittee*, March 2004.

organizing principle for air and space power, having been proven over decades of experience as the most effective and efficient means of employing air and space power.”²⁴ This guiding principle drives the Air Force to seek maximum effectiveness in theater movement control by maximizing efficiencies in intra-theater airlift and distribution operations.

As with kinetic combat air power, the master tenet when applied to air mobility transcends the theater of operations. The Air Force contends that centralized control and decentralized execution allows for the effective integration of inter-theater and intra-theater air mobility operations which is crucial to efficient and timely air mobility support to the warfighter.²⁵ Inter-theater airlift operations bring personnel and materiel to a main operating location within a theater from which intra-theater airlift operations can move personnel and equipment to forward operating locations.²⁶ The Air Force refers to this type of employment concept as a hub and spoke operation.²⁷ Besides integrating both inter-theater and intra-theater operations, the hub and spoke concept supposedly “optimizes air mobility operations when supporting multiple operational commanders.”²⁸

The Army, on the other hand, argued that there were some critical shortcomings with the Air Force’s hub and spoke concept in the CENTCOM AOR and moved in 2005 to purchase its own fleet of intra-theater fixed-wing transports.²⁹ The Army’s criticism was based partially on the findings of a December 2003 General Accounting Office report that cited lack of responsive transportation as a reason for backlogs in supplies.³⁰ Though CENTCOM DDOC was established partly to address issues like these, the Army held fast to the notion that it needed to control its own airlift. This move by the Army reignited the decades old roles and missions debate that has festered between the Army and the Air Force since the latter gained its independence in 1947. In 2007, General Richard A. Cody, then Army Vice Chief of Staff, asserted that the Army had a doctrinal right to

²⁴Air Force Doctrine Document (AFDD) 1, *Air Force Basic Doctrine*, 17 November 2003, ix.

²⁵AFDD 2-6, *Air Mobility Operations*, 2.

²⁶AFDD 2-6, *Air Mobility Operations*, 42.

²⁷AFDD 2-6, *Air Mobility Operations*, 42.

²⁸AFDD 2-6, *Air Mobility Operations*, 43.

²⁹Robert S. Dudney, “The Last Tactical Mile and Other Tales,” *Air Force Magazine* 90, no. 2, (December 2007).

³⁰The General Accounting Office is now known as the Government Accounting Office. General Accounting Office (GAO) 04-305R, “Preliminary Observations on Effectiveness of Logistics Activities During Operation Iraqi Freedom,” *Report*, (Washington, D.C.: Government Printing Office, 18 December 2003), 3.

move vital supplies and personnel at a theater's tactical level, what is commonly referred to as the "last tactical mile."³¹

General T. Michael Moseley, then Air Force Chief of Staff, was quick to point out that intra-theater airlift was an Air Force core competency and called into question the Army's need for organic airlifters.³² But the Army offered the counterargument that it had a need for an aircraft that would enable it to meet core logistics functions providing specialized tactical airlift of time sensitive/mission-critical movement requirements. In order to address this discrepancy, along with some other combat and service related problems, the DoD conducted a Quadrennial Roles and Missions Review, publishing a report in January, 2009. The findings of this report supported the Army's position on time sensitive/mission-critical movement requirements.³³ Additionally, the report sought to clarify this previously loosely defined requirement by offering the following definition:

Justification for organic transportation assets to conduct direct support mission are based on need to satisfy time sensitive/mission-critical requirements. Time sensitive/mission-critical requirements create a demand for delivery of equipment, supplies, and personnel that are generally non-routine in nature and must be delivered to the point of need or point of effect in an accelerated time period. These demands require the lift capacity to be supremely responsive to the supported commander's immediate operational or tactical priorities. Time sensitive/mission-critical demands cannot routinely be accommodated via planned resupply and movement processes where efficiency is the primary consideration. Note: Although no specific response time is specified, depending on the operational scenario and unit mission, time sensitive/mission-critical movement requirements are usually conducted with less than 24 hours notice.³⁴

The report also defined two new types of intra-theater airlift missions to identify a niche for the time sensitive/mission-critical movement requirement. According to the report, General Support is a type of intra-theater airlift mission downrange from a POD that is provided for a supported force as a whole and not to a particular subdivision of the

³¹Dudney, "The Last Tactical Mile and Other Tales."

³²Dudney, "The Last Tactical Mile and Other Tales."

³³*Quadrennial Defense Roles and Missions Review Report*, (Washington D.C.: U.S. Government Printing Office, 2009), 19.

³⁴*Quadrennial Defense Roles and Missions Review Report*, 38.

supported force.³⁵ Common-user airlift assets are needed for General Support missions because of their greater cargo carrying capacity. On the other hand, a Direct Support intra-theater airlift mission is a mission requiring specific support of a force answering directly to the supported force's request for assistance, typically at the very forward edge of troop activity.³⁶ Direct Support missions would be smaller in scale than General Support missions; therefore the cargo capacity of common-user assets would not be necessary. Additionally, Direct Support airlift could be more responsive to user needs since it answers directly to the supported force.

The report suggested a future for intra-theater airlift that included both General and Direct Support missions, with the Air Force delegated as the General Support mission provider through common-user airlift while each service provided its own Direct Support via organic assets.³⁷ Additionally, the report concluded that common-user airlift alone was not sufficient to satisfy Direct Support requirements and therefore tactical fixed-wing airlift assets should be allocated to both the Army and the Air Force.³⁸

However, in April, 2009 Secretary of Defense Robert Gates issued Resource Management Decision 802, moving the Direct Support mission to the Air Force along with the C-27J, which was the fixed-wing tactical airlifter that the Army was going to field in support of that mission.³⁹ In response to the move by the defense secretary, the Air Force initiated a Concept of Operations (CONOP) test in November, 2009 to meet the Army's specific time sensitive/mission-critical movement requirements.⁴⁰ This move by the Air Force and AMC marks a departure from the centralized control and decentralized execution master tenet as it places Air Force crews and aircraft under direct control of an Army commander.

Due to OEF and OIF, CENTCOM's intra-theater airlift operations, along with the TDS they support, have undergone some significant transformation. Because the preponderance of American military activity currently takes place in CENTCOM, its

³⁵*Quadrennial Defense Roles and Missions Review Report*, 22.

³⁶*Quadrennial Defense Roles and Missions Review Report*, 22.

³⁷*Quadrennial Defense Roles and Missions Review Report*, 22.

³⁸*Quadrennial Defense Roles and Missions Review Report*, 22.

³⁹Technical Sergeant Scott T. Sturkol, "Direct Support: Air Force, AMC officials in 'full support' of Army's airlift needs," available from <http://www.amc.af.mil/news/story.asp?id=123174702>.

⁴⁰Mark Diamond, "CONOP test finding success in Iraq," available from <http://www.af.mil/news/story.asp?id=123179840>.

intra-theater airlift transformation has become the *de facto* standard for U. S. forces in all corners of the world. Mobility missions are hardly exclusive to any particular geographic command. For example, in the AOR assigned to Pacific Air Forces, mobility aircraft account for 90 percent of the missions flown.⁴¹ Globally, it appears that the United States continues to trend towards an increased reliance on air mobility operations.⁴² This “trend towards mobility centric warfighting” was first hypothesized by Thomas Barnett in his book, *The Pentagon’s New Map: War and Peace in the Twenty-First Century*.⁴³ As Barnett summarizes, “From 1990-2003[,] ... 80 [percent] of the 143 contingencies the U.S. military executed were mobility centric.”⁴⁴

Managing all this global mobility involves a complex C2 system. As was mentioned previously, TRANSCOM’s air component AMC exercises global C2 over inter-theater airlift through 618th TACC.⁴⁵ However, each geographic command has its own system of C2 for intra-theater airlift and the TDS in each theater has unique characteristics that distinguish one from the others. But because CENTCOM’s system has endured the most robust usage over the last eight years, it has had the unique opportunity to adapt to become a more effective tool for that AOR’s commander. Indeed, some of the innovations in CENTCOM have been deemed so successful that portions of CENTCOM’s system have already been adopted in other geographic commands. For example, a DDOC can now be found in every AOR.⁴⁶ Furthermore, the linkages in C2 of mobility operations between TRANSCOM and the geographic commands that are now codified in joint doctrine were first developed in CENTCOM.⁴⁷ And the Direct Support CONOP that the Air Force tested in CENTCOM will eventually be exported to other

⁴¹Bossert, “Global War on Terror (GWOT),” 18, as quoted in Lenderman, “Rise of Air Mobility and its Generals,” 2.

⁴²Bossert, “Global War on Terror (GWOT),” 18, as quoted in Lenderman, “Rise of Air Mobility and its Generals,” 2.

⁴³Bossert, “Global War on Terror (GWOT),” 18, as quoted in Lenderman, “Rise of Air Mobility and its Generals,” 2.

⁴⁴Bossert, “Global War on Terror (GWOT),” 18, as quoted in Lenderman, “Rise of Air Mobility and its Generals,” 2.

⁴⁵JP 3-17, *Air Mobility Operations*, xi-xii.

⁴⁶ U.S. Transportation Command (TRANSCOM) Instruction 36-35, *Joint Deployment Distribution Operations Center (JDDOC) Selection and Training*, 4 June 2009, 1.

⁴⁷JP 3-17, *Air Mobility Operations*, xi.

geographic commands where the Army may need it.⁴⁸ In light of the increasing role of air mobility operations worldwide, is CENTCOM's way of doing business with respect to intra-theater airlift indeed the best? Would a Joint Force Commander (JFC) in another geographic command get even more effectiveness out of his or her intra-theater airlift system if he or she were to fully adopt all of CENTCOM's procedures? Are there characteristics unique to each AOR that would preclude him or her from doing so?

This thesis aims to examine what type of intra-theater airlift system and associated TDS is best for a JFC. Does one size fit all? In other words can CENTCOM's model meet the needs of every geographic command despite different physical, socioeconomic, and political characteristics? If other geographic commands do not fully adopt CENTCOM's system, would JFCs still be able to deal with the volume of intra-theater movement inherent in large-scale combat operations if war broke out in their AORs? CENTCOM's model has been continuously improved over a long period of time, but does it still have drawbacks?

These questions will be addressed utilizing a case study methodology. First, this thesis will examine CENTCOM's intra-theater airlift system and assess its strengths and weaknesses. Then it will examine the intra-theater airlift systems of two other geographic theaters. The U.S. Pacific Command (PACOM) and U.S. Africa Command (AFRICOM) AORs were selected due to their rising significance with respect to American national security interests, making them AORs where the potential exists for increased military activity and consequently increased airlift needs. PACOM also has some unique characteristics because of its large sub-unified commands, with the potential to make the C2 of intra-theater airlift in the AOR as a whole more complex. Moreover, AFRICOM is a new unified command, in the process of building its intra-theater airlift capabilities.

The case study's assessment will consist of a review of CENTCOM's intra-theater airlift system in relation to the following questions: What type of C2 connectivity exists at the seams between TRANSCOM's global C2 system and the AOR's intra-theater C2 system? How are forces allocated in the theater? How are airlift requests

⁴⁸USAF *Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment*, 13 September 2009, 5 (obtained courtesy of Major Mark C. Keener, HQ AMC/A5QH).

routed and validated in the theater? This series of questions will subsequently be addressed for PACOM and AFRICOM.

The strength of this approach is that the intra-theater airlift systems of two theaters with high potential for increased airlift activity can be compared to the intra-theater airlift system of a theater which has benefited from lessons learned over eight years of robust activity. A drawback to this approach is that due to time constraints and the need to keep the scope of this study manageable, only two geographic commands will be reviewed in addition to CENTCOM, perhaps missing the opportunity to draw different conclusions based on the unique situations in other geographic areas. Another drawback to this approach is that intra-theater movement control and distribution have Service components as well as joint components but the thesis will focus primarily on the air component, perhaps missing some of the factors that can impact air movement from the perspective of other modes of transportation or Service-specific doctrinal concerns.

Chapter 1

The CENTCOM¹ Way

Without air mobility, we would have the best continental defense in the world. Air Mobility allows us to move beyond our borders and conduct US national security policy anywhere in the world.

-Lieutenant General John Sams, 15th Air Force Commander

In order to examine the evolution of CENTCOM's intra-theater airlift and theater distribution operations in the appropriate context, this chapter will first review a brief history of CENTCOM and its Air Force component, U.S. Air Forces Central (AFCENT). From its inception, CENTCOM has witnessed near-continuous American military activity, making it one of the most tried and tested geographic commands. In fact, several initiatives that were ultimately inculcated by the Air Force as a whole were first fielded in the CENTCOM AOR. The chapter will then examine the development in CENTCOM of the various C2 relationships that impact air mobility forces.² Inter-theater air mobility forces operate under TRANSCOM's direction, through AMC's C2. Intra-theater air mobility assets operate under CENTCOM's C2; however TRANSCOM still has visibility of intra-theater air mobility missions through the DDOC. Additionally, some intra-theater air mobility missions in CENTCOM remain under AMC's control through the 618th TACC. From there, the chapter will examine AFCENT's AMD, designated 609th AOC/AMD, and the unique features that distinguish it from the doctrinal AMD construct, as well as examine the Theater Air Control System (TACS), and the various types of intra-theater airlift missions conducted in the AOR. The remainder of the chapter will examine CENTCOM aerial port operations, the mobility forces available to the CENTCOM commander and their employment methods, Army organic air movement requirements, and the factors that led to the emergence of the Air Force's new Direct Support (DS) CONOP.

¹ Unified and combatant commands use acronyms with and without the preceding "US" interchangeably, for example USCENTCOM and CENTCOM. The author prefers omitting the "US" but some directly quoted materials throughout the thesis may include the "US" in the acronyms.

² Though the terms air mobility operations and air mobility forces encompass aero-medical evacuation and air refueling along with airlift, for the remainder of this thesis these terms will refer to airlift alone.

History of CENTCOM

The involvement of American military forces in the CENTCOM AOR can trace its roots back to 1979, a year that saw both the Iranian revolution and the Soviet invasion of Afghanistan.³ The United States responded to these events by standing up a Rapid Deployment Joint Task Force, marking the first time an American four-service rapid reaction task force headquarters was established during peacetime.⁴ In 1980, the 9th Air Force was identified as the task force's air arm in preparation for Operation EAGLE CLAW, the ultimately unsuccessful attempt to rescue American hostages held in Iran.⁵ On 31 December 1982 the task force was inactivated followed by CENTCOM's activation on 1 January 1983.⁶ Additionally, 9th Air Force was selected as the provider of CENTCOM's air forces.⁷

From 1990 through the present, the CENTCOM AOR has been the hub of major American contingency operations. 1990-1991 saw Operations DESERT SHIELD and DESERT STORM in response to Saddam Hussein's invasion of Kuwait.⁸ The year also marked the beginning of nearly two decades of sustained air mobility operations in the theater. C-130 tactical airlifters first arrived in Saudi Arabia on 17 August 1990 and during the next seven months, TRANSCOM "moved nearly 504,000 passengers, 3.7 million tons of dry cargo, and 6.1 million tons of petroleum products to [the CENTCOM AOR.]"⁹ Eventually, more than 145 C-130 intra-theater airlifters were deployed to bases throughout CENTCOM.¹⁰ These aircraft moved units to FOBs once they arrived at one of the four main Aerial PODs in Saudi Arabia: King Khalid Military City, Riyadh, King Fahd, and Dhahran.¹¹ From the initial deployment in August through the cease-fire, C-130s flew 46,500 sorties, including more than 500 sorties per day during the "100-hour"

³U.S. Air Forces Central (AFCENT) Factsheet, available from <http://www.afcent.af.mil/library/factsheets>.

⁴AFCENT Factsheet.

⁵AFCENT Factsheet.

⁶AFCENT Factsheet.

⁷AFCENT Factsheet.

⁸Jay E. Hines, Command Historian, "History of the Persian Gulf War, and subsequent actions of the U.S. Central Command," available from <http://www.centcom.mil>.

⁹Hines, "History of the Persian Gulf War, and subsequent actions of the U.S. Central Command."

¹⁰Airpower in Desert Storm Factsheet, available from <http://www.af.mil/library/factsheets>.

¹¹General Accounting Office (GAO) 93-40, "DESERT SHIELD/STORM: Air Mobility Command's Achievements and Lessons for the Future," *Report to the Chairman, Committee on Armed Services, U.S. Senate*, (Washington, D.C.: Government Printing Office, January 1993), 14-15.

ground campaign, moving over 209,000 personnel and 300,000 tons of supplies throughout the AOR.¹²

Due to the large number of FOBs throughout the AOR, intra-theater airlift was an absolutely critical component of the theater's overall movement plan.¹³ In order to move the XVIII Airborne Corps to position them for the "Hail Mary" flanking maneuver, C-130s were essential.¹⁴ In that campaign, C-130s landed every "7 minutes, 24 hours a day, for 14 days."¹⁵ During the ground operations that followed, the tactical airlifters shadowed the Army's progress north from Kuwait deep into Iraq, conducting multiple aerial resupply missions, including an airdrop of over 100 tons of food and water to the 101st Airborne Division.¹⁶ C-130 aircraft in particular flew more sorties than any other individual type of aircraft, and by type of mission, the 22,064 intra-theater airlift sorties ranked second only to the 38,277 interdiction sorties.¹⁷

Despite these spectacular results, DESERT SHIELD/STORM initially caught TRANSCOM and AMC badly prepared to carry out large-scale air mobility operations, partially due to the fact that in August 1990 both the theater's operations plan and transportation plan were not fully developed.¹⁸ Other factors that hampered air mobility operations included constraints in the flow of airlift due to limited availability of Aerial PODs and cargo priorities that were inappropriately classified.¹⁹

Among the first of many air mobility innovations to come to fruition in CENTCOM-related activity, TRANSCOM and AMC embarked upon several actions to correct the initial Gulf War shortfalls. These actions included establishing teams at Dover and Tinker Air Force Bases to prioritize cargo and divert non-priority items to sealift, establishing airlift allocations by Service component for sustainment cargo, and implementing daily express cargo missions.²⁰ Of these actions, the daily express cargo missions, dubbed Desert Express, were the most unique. Desert Express consisted

¹²Airpower in Desert Storm Factsheet.

¹³Thomas A. Keaney and Eliot A. Cohen, *"Gulf War Air Power Survey Summary Report,"* (Maxwell Air Force Base, AL: Air University Press, 1993), 184.

¹⁴Keaney and Cohen, *"Gulf War Air Power Survey Summary Report,"* 184.

¹⁵Keaney and Cohen, *"Gulf War Air Power Survey Summary Report,"* 185.

¹⁶Keaney and Cohen, *"Gulf War Air Power Survey Summary Report,"* 184-185.

¹⁷Keaney and Cohen, *"Gulf War Air Power Survey Summary Report,"* 187.

¹⁸GAO 93-40, "DESERT SHIELD/STORM," 23.

¹⁹GAO 93-40, "DESERT SHIELD/STORM," 19-21.

²⁰GAO 93-40, "DESERT SHIELD/STORM," 24.

initially of a single C-141, to provide “overnight delivery service for specified critical spare parts and medical supplies from Charleston Air Force Base, South Carolina, to Dhahran and Riyadh, Saudi Arabia.”²¹ These were specialized flights transporting small, but high-priority cargo that could be rapidly loaded onto a C-141 after arriving at Charleston via commercial shippers.²² On 13 February 1991, a second C-141 was added.²³ All in all, more than 200 flights were flown between 30 October 1990 and 31 May 1991.²⁴ On 7 December 1990, another specialized flight dubbed European Desert Express was initiated by TRANSCOM, using a C-141 from Rhein Main Air Base, Germany to the CENTCOM AOR.²⁵ By the time it terminated operations on 31 March 1991, European Desert Express had flown 92 missions.²⁶

Though the Desert Express program demonstrated success, there were still problems.²⁷ Some units abused the priority system, “coding items [for high-priority shipment] that were not legitimate Desert Express cargo.”²⁸ In fact, many of the items that were improperly coded would normally have been relegated to very low priority, things such as “noncritical spare parts, duplicating paper, sandbags, and tents.”²⁹ The misuse grew so rampant that in January 1991 Desert Express was marred with significant backlogs.³⁰ The problem with persistent backlogs in the air mobility system is one that continued to plague both TRANSCOM and CENTCOM throughout much of the military operations that followed the first Gulf War, as will be evident later in this chapter.

Another problem which plagued TRANSCOM and AMC air mobility operations during the first Gulf War was the lack of recovery bases within the theater for strategic mobility aircraft and aircrews.³¹ AMC’s war plans called for a crew recovery location in the CENTCOM AOR where aircraft could be refueled and aircrews could rest.³² The

²¹GAO 93-40, “DESERT SHIELD/STORM,” 26-27.

²²GAO 93-40, “DESERT SHIELD/STORM,” 27.

²³GAO 93-40, “DESERT SHIELD/STORM,” 27.

²⁴GAO 93-40, “DESERT SHIELD/STORM,” 27.

²⁵GAO 93-40, “DESERT SHIELD/STORM,” 27.

²⁶GAO 93-40, “DESERT SHIELD/STORM,” 27.

²⁷GAO 93-40, “DESERT SHIELD/STORM,” 27.

²⁸GAO 93-40, “DESERT SHIELD/STORM,” 27.

²⁹GAO 93-40, “DESERT SHIELD/STORM,” 27.

³⁰GAO 93-40, “DESERT SHIELD/STORM,” 27.

³¹GAO 93-40, “DESERT SHIELD/STORM,” 29.

³²GAO 93-40, “DESERT SHIELD/STORM,” 29.

lack of those recovery bases coupled with the distance between Saudi Arabian Aerial PODs and European crew recovery locations forced AMC to augment its aircrews to a greater extent than it had initially planned for.³³ This led to a host of problems for AMC, including crew management deficiencies and the need for substantial flight waivers that decreased the safety margin built into flight regulations.³⁴ The influence this problem had on future operations in CENTCOM was evident in the basing arrangements secured in Kuwait, Oman, and Qatar for Operation SOUTHERN WATCH (OSW) as well as the basing arrangements secured in Kyrgyzstan, Uzbekistan, and Tajikistan for OEF.

In 1992, OSW commenced, enforcing the no-fly zone over southern Iraq. The CENTCOM CAOC, based in Riyadh, Saudi Arabia, was realigned under the newly established Joint Task Force-Southwest Asia (JTF-SWA), with the JTF-SWA Commander dual-hatted as the 9th Aerospace Expeditionary Task Force Commander.³⁵ CENTCOM also began Operation PROVIDE RELIEF in August of that year to supply aid to Somalia and northeastern Kenya.³⁶ American forces involved in this operation “peaked at 858 personnel and 14 C-130 aircraft. By the end of 1992, they had flown 1,699 missions and delivered nearly 20,000 metric tons of supplies.”³⁷

The years 1994-2000 saw several other operations in response to a myriad of events, ranging from Iraqi troops massing on the Kuwaiti border to continued humanitarian missions in Somalia.³⁸ During that same timeframe, the Air Force was conducting a number of experiments that would shape future force structure and C2 throughout the Air Force, utilizing the CENTCOM AOR as a proving ground. First among these was the Aerospace [sic] Expeditionary Force (AEF) Concept which was tested in Qatar during two periods, from July to August 1996 and then again from February to June 1997.³⁹ The AEF concept eventually became the global model for how

³³GAO 93-40, “DESERT SHIELD/STORM,” 29.

³⁴GAO 93-40, “DESERT SHIELD/STORM,” 40.

³⁵Hines, “History of the Persian Gulf War, and subsequent actions of the U.S. Central Command.”

³⁶Hines, “History of the Persian Gulf War, and subsequent actions of the U.S. Central Command.”

³⁷Hines, “History of the Persian Gulf War, and subsequent actions of the U.S. Central Command.”

³⁸Hines, “History of the Persian Gulf War, and subsequent actions of the U.S. Central Command.”

³⁹William L. Dowdy, PhD, Military Defense Analyst, “Testing the Aerospace Expeditionary Force Concept,” Research Paper 2000-01, College of Aerospace Doctrine, Research and Education (Maxwell Air Force Base, AL: Air University Press, 2000), 9-11.

Air Force forces were to be presented to a JFC as well as how those forces were to rapidly deploy to a given AOR.

As the model for the presentation of Air Force forces to a JFC evolved, so too did the manner in which those forces were controlled. The Air Force engaged in an experimental C2 construct dubbed the Expeditionary Force Experiment (EFX) in the fall of 1997 to explore new capabilities.⁴⁰ “The EFX showed that a [more] standardized management approach to building and maintaining AOCs would provide more efficient [C2] of air power in future wars.”⁴¹ The Air Force’s desire to pursue this experiment was inspired in part by the dissatisfaction of some senior leaders, like General John P. Jumper, who witnessed deficiencies in AOC operations while at the AOC in Vicenza, Italy.⁴² This led to another experiment, one initially fielded in CENTCOM, which produced a new C2 and information architecture called Theater Battle Management Core System (TBMCS).⁴³ This system was developed by Air Force Material Command’s CAOC-Experimental (CAOC-X) team at Langley Air Force Base, Virginia.⁴⁴ With the help of operators from CENTCOM CAOC, the CAOC-X team was able to work through challenges that could potentially be encountered by CENTCOM when TBMCS became operational.⁴⁵

In April 2001, CENTCOM CAOC, along with JTF-SWA, was relocated to Prince Sultan Air Base (PSAB), Saudi Arabia.⁴⁶ OSW missions were subsequently controlled from PSAB and in October of 2001 OEF missions commenced under C2 from there as well.⁴⁷ The following July, General Michael E. Ryan, then Chief of Staff of the Air

⁴⁰Department of the Air Force, *AOC Weapon System Acquisition Strategy*, Air and Space Operations Center, System Project Office, Langley Air Force Base, VA, 22 April 2005, as quoted in Major Robert V. Weaver, “Leveraging ITIL to Govern AOC Information Technology,” Master’s Thesis, Air Force Institute of Technology, December 2005.

⁴¹Department of the Air Force, *AOC Weapon System Acquisition Strategy*, as quoted in Weaver, “Leveraging ITIL to Govern AOC Information Technology.”

⁴²General John P. Jumper, Chief of Staff, U.S. Air Force, “Future Force: Joint Operations,” Address during the Air Armaments Summit VI, Sandestin FL, 17 March 2004.

⁴³Bruce Rolfsen, “Standard Ops-Center Procedure,” *Air Force Times*, 27 November 2000, 20, as quoted in Lieutenant Colonel Teresa A.H. Djuric, “Future Command and Control of Aerospace Operations,” U.S. Army War College Strategy Research Project, U.S. Army War College, 2001, 6.

⁴⁴Lieutenant Colonel Teresa A.H. Djuric, “Future Command and Control of Aerospace Operations,” U.S. Army War College Strategy Research Project, U.S. Army War College, 2001, 6.

⁴⁵Djuric, “Future Command and Control of Aerospace Operations,” 7.

⁴⁶Hines, “History of the Persian Gulf War, and subsequent actions of the U.S. Central Command.”

⁴⁷Hines, “History of the Persian Gulf War, and subsequent actions of the U.S. Central Command.”

Force, mandated the creation of a new AOC at PSAB.⁴⁸ It was General Ryan's vision to standardize all AOCs across the Air Force and he began by declaring the CAOC a weapons system and giving it the official designation of AN/USQ-163 Falconer.⁴⁹ As a result, the CENTCOM CAOC became the standard bearer for what an AOC was supposed to look like.⁵⁰ In 2003, while the CAOC at PSAB continued to provide C2 for OEF, another CAOC was opened at Al Udeid Air Base, Qatar to provide C2 for OIF.⁵¹ In December of that year, "[the CAOC] at PSAB was closed and the Al Udeid [CAOC] became the [Air Force's] baseline AOC."⁵²

Since OEF was initially conducted with a small ground footprint utilizing largely special operations forces, intra-theater air mobility operations did not need to be expanded much over what was already in place for OSW, save for the establishment of some Aerial PODs in Central Asia, like the Manas Transit Center currently still in operation in Kyrgyzstan.⁵³ A small number of C-130 assets were forward deployed into Central Asia as well, based at Karshi-Khanabad Air Base, Uzbekistan until the Uzbek government asked the United States to cease operations in 2005.⁵⁴ The situation would change rapidly however, as conventional American forces poured into Afghanistan to secure the country after the defeat of the Taliban. The lack of sufficient bases in Afghanistan, and the limited number of bases in the rest of Central Asia, led to backlogs and congestion as the influx of inter-theater aircraft overwhelmed the system.⁵⁵ Additionally, as it occurred during DESERT SHIELD/STORM, the lack of adequate facilities immediately available for inter-theater airlift crews led to issues with crew fatigue until the bases in Afghanistan, Uzbekistan, and Kyrgyzstan could be augmented.⁵⁶

⁴⁸Major Robert V. Weaver, "Leveraging ITIL to Govern AOC Information Technology," Master's Thesis, Air Force Institute of Technology, December 2005, 54.

⁴⁹Weaver, "Leveraging ITIL to Govern AOC Information Technology," 54.

⁵⁰Weaver, "Leveraging ITIL to Govern AOC Information Technology," 54.

⁵¹Weaver, "Leveraging ITIL to Govern AOC Information Technology," 56.

⁵²Weaver, "Leveraging ITIL to Govern AOC Information Technology," 56.

⁵³History of the 376th Air Expeditionary Wing and Manas Air Base, Kyrgyz Republic Factsheet, available from <http://www.manas.afcent.af.mil/library/factsheets/factsheet.asp?id=12790>.

⁵⁴Melissa McNamarra, Associated Press, "U.S. Troops Leave Uzbekistan: Ordered Out in July, Base Used to Move Supplies into Afghanistan," *CBS News.com*, 21 November 2005, on-line, Internet, available from <http://www.cbsnews.com>.

⁵⁵Dr. Daniel L. Haulman, "Intertheater Airlift Challenges of Operation Enduring Freedom," Research Paper, Air Force Historical Research Agency, 14 November 2002, 6.

⁵⁶Haulman, "Intertheater Airlift Challenges of Operation Enduring Freedom," 6-7.

OIF was a different story from the very beginning. With the large number of conventional forces needed to invade Iraq there was a greater need for intra-theater airlift. As military activity in the AOR increased, AFCENT underwent changes to meet increased demand for air assets and to improve its combat and combat support effectiveness. On 3 March 2008, the 609th Air Operations Group was re-designated the 609th Air Operations Center, which is currently the core of the CAOC. Along with the 609th Air Operations Center, the Detachment 1, 609th Air Operations Center was activated and there was also the activation and assumption of command of the Detachment 5, United States Air Forces Central.⁵⁷ The remainder of this chapter will review how CENTCOM's intra-theater air mobility operations have been shaped by continuing activity in support of OEF and OIF and how CENTCOM's TDS is influencing intra-theater movement worldwide.

Command Relationships

CENTCOM is a unified combatant command with no forces of its own. As such, it needs to have forces provided, to include mobility forces. This raises the issue of how, and by whom, those forces are controlled. There are four levels of command authority used to deploy and utilize American troops and assets: Combatant Command (COCOM) which is not transferable from one commander to another, Operational Control (OPCON) which is transferable, Tactical Control (TACON) which is also transferable but in a much more restricted fashion than OPCON, and Support.

COCOM is an authority established by title 10, United States code, section 164.⁵⁸ It can only be exercised by commanders of unified or specified combatant commands or as otherwise directed by the President of the United States or the secretary of defense. JFCs, service commanders, and functional component commanders may all exercise COCOM.⁵⁹ This type of command provides full authority to organize forces as the commander deems necessary to carry out assigned missions. As mentioned previously, CENTCOM does not possess warfighting forces of its own and therefore has to borrow

⁵⁷AFCENT Factsheet, available from <http://www.afcent.af.mil/library/factsheets>.

⁵⁸Joint Publication (JP) 1-02, Department of Defense (DoD) *Dictionary of Military and Associated Terms*, 12 April 2001 (As Amended Through 19 August 2009), 98.

⁵⁹JP 1-02, *DoD Dictionary of Military and Associated Terms*, 98.

them to conduct operations. CENTCOM exercises control of these on-loan assets through OPCON, TACON or Support.

OPCON is inherent in COCOM but it is also a transferrable command authority that may be delegated to and exercised by commanders at echelons below the level of COCOM.⁶⁰ It grants the gaining commander both organizational authority and waiver authority. A commander exercising OPCON may organize and employ forces, assign tasks, designate objectives, and give authoritative direction necessary to accomplish a particular mission.⁶¹ OPCON also includes authority over all aspects of military operations and joint training. Units permanently assigned to service commanders during peacetime can be placed under the OPCON of a theater commander for a contingency operation under a process known as Change Operational Control (CHOP).⁶² Doctrinally, the theater COMAFFOR can gain OPCON over intra-theater mobility forces like C-130s and then delegate TACON to the Joint or Combined Forces Air Component Commander (CFACC).⁶³ The Air Force plans on the COMAFFOR and the CFACC to be the same person.⁶⁴ In the CENTCOM AOR, this is indeed the case.⁶⁵ Moreover, the CFACC, through the CAOC's AMD, is responsible for planning, scheduling, and executing intra-theater air mobility operations.⁶⁶

TACON is a transferable command authority over assigned forces, attached forces, or forces made available for tasking.⁶⁷ It is limited to the detailed and local

⁶⁰JP 1-02, *DoD Dictionary of Military and Associated Terms*, 398.

⁶¹JP 1-02, *DoD Dictionary of Military and Associated Terms*, 398.

⁶²JP 1-02, *DoD Dictionary of Military and Associated Terms*, A-26.

When forces undergo a Change of Operational Control (CHOP), the term commonly used to describe the process is "CHOPped," for example "The Dyess C-130s were CHOPped to CENTCOM."

⁶³Air Force Doctrine Document (AFDD) 2-6, *Air Mobility Operations*, 1 March 2006, viii.

⁶⁴AFDD 2-6, *Air Mobility Operations*, viii.

⁶⁵*Advanced Study of Air Mobility (ASAM) Class XV USCENTCOM Orientation Student Guide*, prepared by the staff of Detachment 1, USAF Mobility Operations School, 11 September 2008, 12. They reference Joint Publication 1, *Doctrine for the Armed Forces of the United States*, 14 May 2007, Joint Publication 3-0, *Joint Operations*, 17 September 2006, Joint Publication 3-30, *Command and Control for Joint Air Operations*, 5 June 2003, Air Force Doctrine Document 2-0, *Operations and Organizations*, 3 April 2007, Air Force Doctrine Document 2-6, *Air Mobility Operations*, 1 March 2006, Air Force Instruction 13-1 AOC Volume 3, *Operational Procedures*, Aerospace Operations Center, 1 August 2005. The Detachment 1, USAF Mobility Operations School, U.S. Air Force Expeditionary Center, Hurlburt Field, Florida is responsible for training all personnel assigned to the AFCENT AMD.

⁶⁶Joint Publication (JP) 3-17, *Air Mobility Operations*, 2 October 2009, xii.

⁶⁷JP 1-02, *DoD Dictionary of Military and Associated Terms*, 537.

direction and control of maneuvers necessary to accomplish an assigned task.⁶⁸ TACON may be delegated and can be exercised at any level at or below the level of COCOM. Though TACON is inherent in OPCON, alone it is significantly more limited in scope and duration and does not include organizational or waiver authority. The CENTCOM CFACC can exercise TACON over air assets assigned to other joint force component commands, such as the Army's rotary and fixed-wing aircraft assigned to the Combined Forces Land Component Commander (CFLCC), depending on availability.⁶⁹

Despite the name, Support is indeed a command authority. Support is established when an organization is designated to assist, protect, complement, or sustain another.⁷⁰ When forces from other combatant commands are involved, the Support relationship is specified by the secretary of defense. A JFC may also establish Support relationships among subordinate units.⁷¹ There are two types of Support relationships which are crucial to mobility operations in the CENTCOM AOR. The first is General Support, which occurs when a functional combatant command, such as the U.S. Joint Forces Command (JFCOM), is designated as the supporting organization for a geographic command like CENTCOM, which would be called the supported command.⁷² As the joint force provider, JFCOM assigns assets to CENTCOM. The second type of Support relationship is Mutual Support, which occurs when two or more commands aid each other in a common endeavor.⁷³

A Mutual Support arrangement in CENTCOM is illustrated by the unique mission conducted by AMC-controlled C-17s. These aircraft operate in CENTCOM under AMC's OPCON but carry personnel and materials as assigned by the CENTCOM J4 through the DDOC.⁷⁴ This arrangement is illustrative of the complex C2 relationship between TRANSCOM and geographic combatant commands like CENTCOM with respect to air mobility operations. Because "centralized control and decentralized execution of air mobility missions are the keys to effective and efficient air mobility

⁶⁸JP 1-02, *DoD Dictionary of Military and Associated Terms*, 537.

⁶⁹JP 3-17, *Air Mobility Operations*, II-4.

⁷⁰JP 1-02, *DoD Dictionary of Military and Associated Terms*, 528.

⁷¹JP 1-02, *DoD Dictionary of Military and Associated Terms*, 528.

⁷²JP 1-02, *DoD Dictionary of Military and Associated Terms*, 227.

⁷³JP 1-02, *DoD Dictionary of Military and Associated Terms*, 364.

⁷⁴ASAM Class XV USCENTCOM Orientation Student Guide, 17.

operations,”⁷⁵ then it is necessary to have “Separate but integrated command structures [to] exercise centralized control over [TRANSCOM-assigned] and theater-assigned and attached air mobility forces.”⁷⁶ This arrangement “ensures a smooth interaction of the inter-theater and intra-theater forces. [Mobility forces] operate as an integrated system of assets, and satisfy the supported [commander’s] mobility requirements through common procedures that bridge the command structures of theater and continental United States (CONUS)-based forces.”⁷⁷

TRANSCOM and CENTCOM DDOC⁷⁸

This thesis previously discussed how TRANSCOM is a unified command with three Service components. Unlike CENTCOM however, TRANSCOM is not specifically assigned to any geographic area. TRANSCOM is referred to as a functional combatant command, providing a unique set of capabilities in support of GCCs worldwide. In its role, TRANSCOM is “charged with the global transportation of personnel and materials using DoD and DoD-contracted assets.”⁷⁹ TRANSCOM was created by the Goldwater-Nichols Department of Defense Reorganization Act of 1986.⁸⁰ When TRANSCOM stood up in 1987, it initially possessed “the wartime responsibility of providing global mobility ... via air, land, and sea transportation.”⁸¹ At first, TRANSCOM’s peacetime authority was limited, with the individual Services acknowledging TRANSCOM’s role only during times of war.⁸² The Services resisted any further efforts at consolidating

⁷⁵JP 3-17, *Air Mobility Operations*, x.

⁷⁶JP 3-17, *Air Mobility Operations*, x-xi.

⁷⁷JP 3-17, *Air Mobility Operations*, xi.

⁷⁸Author’s Note: The General Accounting Office report entitled “Preliminary Observations on Effectiveness of Logistics Activities During Operation Iraqi Freedom” and the associated editorial notes, the TRANSCOM Organization Factsheet, and the congressional testimony offered by General John Handy cited in this chapter were originally found in the SAASS Thesis by Major Jeffrey S. Brown. For more on the TRANSCOM/AMC Command and Control structure, please see Major Jeffrey S. Brown, “Divergent Paths: The Centralization of Airlift Command, Control, and Execution,” Master’s Thesis, School of Advanced Air and Space Studies, June 2005.

⁷⁹Major Jeffrey S. Brown, “Divergent Paths: The Centralization of Airlift Command, Control, and Execution,” Master’s Thesis, School of Advanced Air and Space Studies, June 2005, 6.

⁸⁰Public Law 99-433, *Goldwater-Nichols Department of Defense Reorganization Act of 1986*, 1 October 1986, as quoted in Major Jeffrey S. Brown, “Divergent Paths: The Centralization of Airlift Command, Control, and Execution,” Master’s Thesis, School of Advanced Air and Space Studies, June 2005, 6.

⁸¹Brown, “Divergent Paths: The Centralization of Airlift Command, Control, and Execution,” 6-7.

⁸²U.S. Transportation Command (TRANSCOM) History Factsheet, available from <http://www.transcom.mil/history/history.html>.

functions, electing instead to keep the various logistical resources separated along parochial lines.

However, the onset of Operations DESERT SHIELD/STORM in 1991 forced things to change.⁸³ TRANSCOM faced significant problems during the build up for the first Gulf War, such as poor allocation of adequate logistics resources and incomplete cargo tracking.⁸⁴ As a result, the Secretary of Defense released a policy further expanding TRANSCOM's role, "giving it global responsibility and authority for DoD transportation during wartime and peacetime."⁸⁵ Ultimately, the TRANSCOM Commander gained combatant command authority over the majority of DoD's transportation resources.⁸⁶

For the next 12 years this authority was sufficient for TRANSCOM. However, as previously stated, Secretary of Defense Donald Rumsfeld expanded TRANSCOM's authority once again in the fall of 2003 by designating it as the distribution process owner for the DoD.⁸⁷ With its new authority, TRANSCOM's role moved from one of basic transportation to one of global logistics management.⁸⁸ Why the change? Prior to this designation by Secretary Rumsfeld, DoD worldwide logistical support and distribution activities were marred by gross inadequacies.⁸⁹ The various Services each had unique and incompatible deployment and distribution systems.⁹⁰ General John Handy, then the TRANSCOM Commander, stated in his 2004 congressional testimony that "Prior to this designation [of distribution process owner], end-to-end distribution support to the warfighter was marked by a multitude of process and information technology challenges. Essentially, DOD distribution was a series of stove-piped processes and information systems managed by many discrete owners. Such segmentation caused inefficiencies and

⁸³Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," 7.

⁸⁴Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," 7.

⁸⁵TRANSCOM History Factsheet as quoted in Major Jeffrey S. Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," Master's Thesis, School of Advanced Air and Space Studies, June 2005, 7.

⁸⁶Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," 7.

⁸⁷U.S. Transportation Command (TRANSCOM) Organization Factsheet, available from <http://www.transcom.mil/organization.cfm>.

⁸⁸Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," 7.

⁸⁹Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," 8.

⁹⁰Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," 8.

drove [distribution process owner] designation to promote enterprise solutions.”⁹¹ The most effective of these enterprise solutions was to consolidate all DoD distribution processes under the direction of a single organization.⁹²

To be clear, problems resulting from the ineffectively integrated, Service-specific logistics systems had been known to exist for years. However, shortly after OIF, a move by the Honorable Jerry Lewis, then Chairman of the Subcommittee on Defense of the House Committee on Appropriations, provided the impetus for change. Chairman Lewis asked the General Accounting Office⁹³ (GAO) to investigate problems with logistical support to the warfight in Iraq.⁹⁴ In terms of logistics, OIF was one of the largest efforts ever conducted by the U.S. military, with \$28.1 billion in total obligation authority, including transportation costs of \$4.9 billion.⁹⁵ The GAO began their study with a focus on accountability for the materials shipped to the AOR, but quickly expanded their scope to include broader logistical issues like deployment and transportation.⁹⁶

The results of the GAO study indicated that a number of logistical problems plagued OIF despite the successful combat operations.⁹⁷ Among the most serious of these was “a backlog of hundreds of pallets and containers of materiel at various distribution points due to transportation constraints and inadequate asset visibility [and] a discrepancy of \$1.2 billion between the amount of materiel shipped to Army activities in the [AOR] and the amount of materiel that those activities acknowledged they received.”⁹⁸ As they conducted their investigation, the GAO discovered a number of factors that contributed to these problems.⁹⁹ One of those factors was “poor asset visibility.”¹⁰⁰ CENTCOM had a policy requiring the use of Radio Frequency Identification (RFID) tags to facilitate tracking of materiel but these devices were not

⁹¹General John W. Handy, Commander, U.S. Transportation Command, *Testimony before the House Armed Services Subcommittee on Projected Forces Regarding State of the Command*, 17 March 2004.

⁹²Brown, “Divergent Paths: The Centralization of Airlift Command, Control, and Execution,” 7-8.

⁹³The General Accounting Office is now the Government Accounting Office.

⁹⁴General Accounting Office (GAO) 04-305R, “Preliminary Observations on Effectiveness of Logistics Activities During Operation Iraqi Freedom [OIF],” *Report*, (Washington, D.C.: Government Printing Office, 18 December 2003), 1.

⁹⁵GAO 04-305R, “Preliminary Observations on Effectiveness of Logistics Activities During OIF,” 1.

⁹⁶GAO 04-305R, “Preliminary Observations on Effectiveness of Logistics Activities During OIF,” 1.

⁹⁷GAO 04-305R, “Preliminary Observations on Effectiveness of Logistics Activities During OIF,” 2.

⁹⁸GAO 04-305R, “Preliminary Observations on Effectiveness of Logistics Activities During OIF,” 2.

⁹⁹GAO 04-305R, “Preliminary Observations on Effectiveness of Logistics Activities During OIF,” 3.

¹⁰⁰GAO 04-305R, “Preliminary Observations on Effectiveness of Logistics Activities During OIF,” 3.

used with any consistency.¹⁰¹ RFID technology was developed to aid logistics professionals in maintaining total asset visibility or in-transit visibility, terms used to describe the “ability to accurately know the location and contents of all the cargo and passengers moving ... [within a given transportation] system.”¹⁰² Problems were further exacerbated by the lack of access to, or knowledge of, the various DoD tracking and information systems.¹⁰³

TRANSCOM was using the DoD system of record, the Joint Operations Planning and Execution System (JOPES) for deployment tracking of personnel and equipment.¹⁰⁴ JOPES is a computer information system which encompasses all mobility C2 nodes used by TRANSCOM and which is also accessible at the distribution centers of many of its transportation and logistics customers.¹⁰⁵ The system is versatile but cumbersome to use, requiring trained personnel who have completed a five-day JFCOM training course at the Joint Deployment Training Center, Fort Eustis, Virginia.¹⁰⁶ Since users are theoretically able to update and/or retrieve from the system information concerning cargo and personnel movements on a near real-time basis, JOPES is supposed to provide total asset or in-transit visibility.¹⁰⁷ But shortages in JOPES-trained personnel during OIF resulted in haphazard data entries by some users, and complete abandonment by others, marginalizing the system’s effectiveness as a tracking tool.¹⁰⁸

One of the implications of TRANSCOM becoming the DoD’s distribution process owner was its mandate to “direct and supervise strategic distribution and synchronize all participants in the End-to-End (E2E) supply, transportation, and distribution pipeline ...

¹⁰¹GAO 04-305R, “Preliminary Observations on Effectiveness of Logistics Activities During OIF,” 3.

¹⁰²In his thesis, Major Brown explains that the terms “total asset visibility” and “in-transit visibility” may be used interchangeably within this context. Brown, “Divergent Paths: The Centralization of Airlift Command, Control, and Execution,” 8.

¹⁰³GAO 04-305R, “Preliminary Observations on Effectiveness of Logistics Activities During OIF,” 3.

¹⁰⁴Brown, “Divergent Paths: The Centralization of Airlift Command, Control, and Execution,” 8.

¹⁰⁵Brown, “Divergent Paths: The Centralization of Airlift Command, Control, and Execution,” 8.

¹⁰⁶The author attended a 3-day JOPES orientation course at Fort Eustis in December, 2008, while a student in the ASAM program. For more information, please see the Joint Deployment Training Center website, available from <https://www.jdtc.jfcom.mil/Main.aspx>.

¹⁰⁷Brown, “Divergent Paths: The Centralization of Airlift Command, Control, and Execution,” 8.

¹⁰⁸U.S. Transportation Command [TRANSCOM], “CDDOC-Bridging the Gap between Strategic and Theater Distribution,” 2004 Supply Chain Operational Excellence Award nomination package, submitted to the Office of the Assistant Secretary of Defense for Logistics and Materiel Readiness, February 2005, 36, available from <http://archive.supply-chain.org/galleries/default-filr/USTRANSCOM%20Supply%20Chain%20Award%20Package%20Feb%202005.pdf>.

[to achieve] increased interoperability, efficiency, and effectiveness.”¹⁰⁹ In order to establish the E2E pipeline, as well as address the issues raised by the GAO report, TRANSCOM created the CENTCOM DDOC in December 2003.¹¹⁰ The CENTCOM DDOC was stood up in Kuwait and collocated with the CFLCC, where the JMC had been previously established.¹¹¹ TRANSCOM, working with CENTCOM, DLA, and the Army Material Command, gave CENTCOM DDOC its original mission to “Link strategic deployment and distribution processes to operational and tactical functions in support the warfighter, thereby improving E2E distribution within [CENTCOM’s AOR].”¹¹² It accomplished that original mission by focusing on six specific areas, among these were providing total asset visibility, refining theater distribution architecture, and synchronizing strategic and operational distribution.¹¹³

Because CENTCOM DDOC has control over intra-theater airlift assets assigned to CENTCOM, it can effectively schedule and manage the AOR’s air mobility operations.¹¹⁴ In doing so, it is also able to facilitate the synchronization of strategic distribution carried out by inter-theater airlift missions with operational distribution carried out by those intra-theater assets without external approval.¹¹⁵ In essence, CENTCOM DDOC is able to “bridge the gap” between TRANSCOM’s global distribution system and CENTCOM’s TDS.¹¹⁶ By regulation, the CENTCOM DDOC is TACON to the CENTCOM J4, however in reality its manning and training is managed by TRANSCOM.¹¹⁷

It is widely known that the CENTCOM DDOC was considered to be an overwhelmingly successful organization, so much so that the concept was quickly

¹⁰⁹TRANSCOM, “CDDOC-Bridging the Gap between Strategic and Theater Distribution,” 3.

¹¹⁰CENTCOM *Deployment and Distribution Operations Center (CDDOC) “Spiral 1” Report January-May 2004*, 14 May 2004, 1 as quoted in Major Jeffrey S. Brown, “Divergent Paths: The Centralization of Airlift Command, Control, and Execution,” Master’s Thesis, School of Advanced Air and Space Studies, June 2005, 9.

¹¹¹Brown, “Divergent Paths: The Centralization of Airlift Command, Control, and Execution,” 9.

¹¹²TRANSCOM, “CDDOC-Bridging the Gap between Strategic and Theater Distribution,” 3.

¹¹³TRANSCOM, “CDDOC-Bridging the Gap between Strategic and Theater Distribution,” 4.

¹¹⁴CDDOC *“Spiral 1” Report*, 5 & 7, as quoted in Brown, “Divergent Paths: The Centralization of Airlift Command, Control, and Execution,” 10.

¹¹⁵Brown, “Divergent Paths: The Centralization of Airlift Command, Control, and Execution,” 10.

¹¹⁶TRANSCOM, “CDDOC-Bridging the Gap between Strategic and Theater Distribution,” 2.

¹¹⁷Brown, “Divergent Paths: The Centralization of Airlift Command, Control, and Execution,” 10, also incorporated into U.S. Transportation Command (TRANSCOM) Instruction 36-35, *Joint Deployment Distribution Operations Center (JDDOC) Selection and Training*, 4 June 2009.

exported to other geographic commands.¹¹⁸ In TRANSCOM's 2004 annual report, General Handy stated that the CENTCOM DDOC "shattered the barrier between strategic and theater distribution."¹¹⁹ Indeed there were some notable successes. For example, in the first year after its activation, "the average time passengers waited for onward movement decreased from 72 to 27 hours."¹²⁰ Since 2004, each geographic command across the globe, including PACOM and AFRICOM, has established its own version of the DDOC, generically referred to as Joint DDOCs or JDDOCs.¹²¹ Like the CENTCOM DDOC, these JDDOCs are intended to be theater-level organizations; however, TRANSCOM personnel are responsible for staffing them in much the same manner as is done in CENTCOM.¹²²

Because of the shortage of JOPES-trained personnel available to deploy to CENTCOM's AOR, CENTCOM DDOC is a *de facto* TRANSCOM organization, staffed by TRANSCOM's JOPES operators.¹²³ TRANSCOM personnel have to be JOPES certified in order to accomplish their normal daily operations at TRANSCOM's own DDOC, located at Scott Air Force Base, Illinois.¹²⁴ Most users rotating into CENTCOM come from jobs that do not utilize JOPES; as such they are ill-suited to perform JOPES-related activities.¹²⁵ Without TRANSCOM's assistance, CENTCOM DDOC, or any JDDOC within any other geographic command, would experience difficulties

¹¹⁸Lt Col Mark Czelusta, USTRANSCOM J-3R, 25 January 2005, as quoted in Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," 10, also quoted by Colonel Gregory S. Otey, currently the Wing Commander of the 19th Airlift Wing at Little Rock Air Force Base, Arkansas in Lieutenant Colonel Gregory S. Otey, "Mending a Seam: Joint Theater Logistics," *Air Force Journal of Logistics*, XXX (2), 14.

¹¹⁹*U.S. Transportation Command (TRANSCOM) Annual Command Report 2004*, 2004, 1, on-line, Internet, available from <http://www.transcom.mil/annualrpt/annualreport.cfm>, as quoted in Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," 10.

¹²⁰*CDDOC "Spiral 1" Report*, 7, as quoted in Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," 10.

¹²¹TRANSCOM Instruction 36-35, *JDDOC Selection and Training*, 1.

¹²²Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," 11, also incorporated into TRANSCOM Instruction 36-35, *JDDOC Selection and Training*, 1, 3.

¹²³Czelusta, 25 January 2005, as quoted in Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," 11, also briefed to the author during his August, 2009 visit to TRANSCOM as part of the ASAM program.

¹²⁴Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," 11, also briefed to the author during his August, 2009 visit to TRANSCOM as part of the ASAM program.

¹²⁵*CDDOC "Spiral 1" Report*, 7-8, as quoted in Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," 11.

maintaining an adequate JOPES-trained staff.¹²⁶ The existence of JDDOCs within the various AORs allows TRANSCOM to exercise its authority anywhere in the world because the JDDOC's personnel are trained and supervised by TRANSCOM's global mobility experts.¹²⁷ This assures the smooth transition from the inter-theater to the intra-theater mobility mission. As TRANSCOM's view summarizes:

Every day, across the globe, USTRANSCOM provides transportation, sustainment and distribution to our nation's warfighters. USTRANSCOM fully supports and is on the leading edge of DoD transformation efforts for a seamless, wholly integrated, synchronized end-to-end deployment and distribution system under a single unified commander providing responsive, support to the warfighter throughout the continuum of peace and war. These transformational efforts are at the heart of the command's Distribution Process Owner initiatives.¹²⁸

Since becoming DoD's Distribution Process Owner in September 2003, USTRANSCOM is the single entity to direct and supervise execution of the strategic distribution system. The command also manages the supply chain related Information Technology systems, and has the authority to establish a contracting activity for procurement of commercial transportation services.¹²⁹

In order to synchronize the overall global mobility mission, the TRANSCOM DDOC "is the focal point for integration with the theater command staffs and the [transportation component command] command centers."¹³⁰ Linking the agencies that execute centralized control, such as TRANSCOM DDOC, to CENTCOM DDOC and CAOC is a critical element in the partnership between TRANSCOM and CENTCOM with respect to air mobility operations.¹³¹ TRANSCOM, through the 618th TACC, exercises centralized control to ensure the joint force commander "is supported with responsive, capable, and seamless air mobility."¹³² Simultaneously, air mobility

¹²⁶Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," 11.

¹²⁷Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," 11.

¹²⁸TRANSCOM Organization Factsheet, available from <http://www.transcom.mil/organization.cfm>, also quoted in Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," 11.

¹²⁹TRANSCOM Organization Factsheet, available from <http://www.transcom.mil/organization.cfm>, updated in January, 2010, from verbiage quoted in Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," 11.

¹³⁰U.S. Transportation Command (TRANSCOM) Pamphlet 38-1, *Organization and Mission—General: Organization and Functions*, 1 July 2005, 53.

¹³¹JP 3-17, *Air Mobility Operations*, xi.

¹³²JP 3-17, *Air Mobility Operations*, xi-xii.

commanders in the CENTCOM AOR “practice decentralized execution by delegating execution authority to their subordinate commanders.”¹³³ This is accomplished through the TACS. TACS is the Air Force mechanism for the C2 of theater air power at the disposal of the COMAFFOR, who is dual-hatted as the CFACC in the CENTCOM AOR.¹³⁴ The CAOC is the senior C2 element of TACS in the CENTCOM AOR and consists of personnel possessing the right skills to ensure effective control of air operations.¹³⁵ It is divided up into five divisions, with the AMD being the division tasked with overseeing intra-theater air mobility operations.¹³⁶

609th AOC/AMD¹³⁷

609th AOC/AMD, also known as CENTCOM AMD or AFCENT AMD since there is currently only one in the AOR, “plans, coordinates, tasks, and executes the theater air mobility mission.”¹³⁸ The division oversees the theater's vital air mobility operations, which sustain the air movement portion of the TDS. The AMD Chief ensures that it works as an effective division of the CAOC in the “air and space planning and execution process.”¹³⁹ 609th AOC/AMD coordinates with CENTCOM DDOC at Camp Arifjan, Kuwait as well as the 618th TACC at Scott Air Force Base, Illinois.

609th AOC/AMD is led by the Chief of Air Mobility and is organized into seven functionally oriented teams: the Airlift Control Team (ALCT), Air Refueling Control Team (ARCT), Air Mobility Control Team (AMCT), Aero-medical Evacuation Team (AECT), Theater Direct Delivery (TDD) cell, Aerial Port Control Team (APCT), and the Mobility Support Team (MST).¹⁴⁰ Doctrinally, AMDs normally consist of just the ALCT, ARCT, AMCT and AECT.¹⁴¹ The three additional functional components of the 609th AOC/AMD were developed to improve the effectiveness of air mobility operations

¹³³JP 3-17, *Air Mobility Operations*, xi-xii.

¹³⁴JP 3-17, *Air Mobility Operations*, xi.

¹³⁵JP 3-17, *Air Mobility Operations*, xii.

¹³⁶JP 3-17, *Air Mobility Operations*, xii.

¹³⁷With the stand up of 609th Air Operations Group, the core elements that make up the existing CAOC in the CENTCOM AOR were given a numeric designation as reflected in *Air Force Forces Command and Control Enabling Concept (Change 2)*, 25 May 2006. The 609th AOC is provides the core in terms of personnel and equipment for the CENTCOM CAOC.

¹³⁸U.S. Air Forces Central (AFCENT) CENTCOM AMD Factsheet, available from <http://www.afcent.af.mil/library/factsheets>.

¹³⁹AFCENT CENTCOM AMD Factsheet.

¹⁴⁰AFCENT CENTCOM AMD Factsheet.

¹⁴¹AFDD 2-6, *Air Mobility Operations*, 23.

in the CENTCOM AOR based on lessons learned over the last several years.¹⁴² The AMD may be staffed by members from air mobility operations groups, AMC units, the Air Force Reserve Command, the Air National Guard, the Air Combat Command numbered air forces, and theater air component organizations. The teams integrate their activities to “deliver mobility effects in support of the [CFACC’s] objectives.”¹⁴³

ALCT provides intra-theater airlift functional expertise to “plan, coordinate, and integrate mobility airpower for intra-theater airlift operations in the [CENTCOM AOR]”.¹⁴⁴ The Airlift Plans section is responsible for completing the airlift portion of the Air Tasking Order (ATO) by processing airlift requests that have been validated by the CENTCOM DDOC.¹⁴⁵ These validated airlift requests are merged with forecasted inter-theater airlift movements into the theater.

ARCT plans and directs air refueling missions to support theater air and space operations and coordinates “air refueling planning, tasking, and scheduling to support an air bridge within the [CENTCOM AOR]”.¹⁴⁶ Based on CFACC guidance, theater-assigned tankers may also provide air refueling support to strategic air and space operations. Though inter-theater air refueling missions are normally planned by the 618th TACC, it is possible for the ARCT to be tasked with this responsibility.

AMCT serves as the centralized source for air mobility C2, and communications during execution of all intra-theater airlift operations in the CENTCOM AOR.¹⁴⁷ It directs or redirects air mobility forces to respond to changes in movement requirements and airlift priorities. AMCT integrates and synchronizes all air mobility operations into, out of, and within the CENTCOM AOR.¹⁴⁸ It maintains communications connectivity for tasking, coordinating, and flight following with the CAOC's Combat Operations Division, subordinate air mobility units, and mission forces throughout the theater.

AECT provides operational planning, scheduling, and execution of aero-medical

¹⁴²ASAM Class XV USCENTCOM Orientation Student Guide, 14.

¹⁴³AFCENT CENTCOM AMD Factsheet.

¹⁴⁴AFCENT CENTCOM AMD Factsheet.

¹⁴⁵AFCENT CENTCOM AMD Factsheet.

¹⁴⁶AFCENT CENTCOM AMD Factsheet.

¹⁴⁷ASAM Class XV USCENTCOM Orientation Student Guide, 15.

¹⁴⁸AFCENT CENTCOM AMD Factsheet.

evacuation missions for the CENTCOM AOR.¹⁴⁹ It also advises and briefs the CAOC Director on issues affecting aero-medical evacuation operations. AECT provides centralized control of intra-theater aero-medical evacuation missions within the CENTCOM AOR and assists with inter-theater operations departing or transiting through CENTCOM. Patient movement taskings are received from the Joint Patient Movement Requirements Center.¹⁵⁰

The TDD cell is unique to CENTCOM and provides air mobility integration and coordination of TRANSCOM-assigned air mobility forces.¹⁵¹ It works under ALCT and receives direction from the Director of Mobility Forces-Air (DIRMOBFOR-Air) and is the primary AMD team that coordinates with the 618th TACC. Direct-delivery inter-theater air mobility missions that originate outside of the CENTCOM AOR will be coordinated through TDD and tasked by the 618th TACC.¹⁵² In addition, TDD-specific C-17 missions originating at Incirlik Air Base, Turkey, Al Udeid Air Base, Qatar, and Ali Al Salem Air Base, Kuwait conducting TDD standard air route missions are integrated into the intra-theater system by this cell.¹⁵³ TDD ensures the integration of inter-theater air mobility missions with intra-theater air and space operations planning.¹⁵⁴ TDD also coordinates with the 618th TACC to resolve any problems and provide C2 information on air mobility operations.¹⁵⁵ Finally, TDD works with Theater Express to coordinate the efforts of the local commercial tenders operating under contract in the AOR.¹⁵⁶

APCT plans and schedules the movement of sustainment cargo and passengers using both military and commercial modes and is comprised of four cells: the Aerial Port Control Center, Cargo Management, Theater Express, and the Joint Passenger Movement Center.¹⁵⁷ The Aerial Port Control Center provides a conduit for integrating the theater's twenty-seven aerial ports into the theater movement plans.¹⁵⁸ The Cargo Management

¹⁴⁹AFCENT CENTCOM AMD Factsheet.

¹⁵⁰AFCENT CENTCOM AMD Factsheet.

¹⁵¹AFCENT CENTCOM AMD Factsheet.

¹⁵²*ASAM Class XV USCENTCOM Orientation Student Guide*, 16.

¹⁵³Detachment (Det) 1, Mobility Operations School (MOS), "Theater Air Mobility Operations," Briefing to Advanced Air Mobility Operations Course (Advanced AMOC) Class 2008-E, 15 July 2008, slide 38.

¹⁵⁴AFCENT CENTCOM AMD Factsheet.

¹⁵⁵*ASAM Class XV USCENTCOM Orientation Student Guide*, 16.

¹⁵⁶Det 1, MOS, "Theater Air Mobility Operations," slide 38.

¹⁵⁷AFCENT CENTCOM AMD Factsheet..

¹⁵⁸AFCENT CENTCOM AMD Factsheet.

Cell monitors cargo in the various aerial ports and schedules missions for its movement. They also provide scheduling for AMC-contracted intra-theater airlift, utilizing IL-76 aircraft. The Theater Express Cell manages the Theater Express program, where six commercial carriers bid by the pound to move air cargo.¹⁵⁹ The Joint Passenger Movement Center books passengers for normal duty movements on intra-theater military airlift.¹⁶⁰ The APCT is also a function that is unique to the CENTCOM AOR and it is designed to synchronize sustainment movements with unit movements to ensure all passengers and cargo are delivered in a timely manner.¹⁶¹

MST consists of a pool of intelligence and Force Protection (FP) specialists who provide unique capabilities in support of all other AMD teams.¹⁶² It supports every aspect of the AMD planning, tasking, execution, and analysis cycle. Throughout the cycle process, the MST provides threat analysis, coordination of ISR assets, and tactical review of flight and mission profiles.¹⁶³ MST organizes and runs the CFACC AMD Mobility Asset Protection Working Group in coordination with the DIRMOBFOR-AIR to determine defensive system and security requirements for airfields within the CENTCOM AOR. MST's FP section is also the focal point for CENTAF's Fly Away Security Teams (FAST) which ensures protection of mobility assets flying into austere or unsecured airfields.¹⁶⁴ Additionally, the Tactics section provides detailed mission support planning and analysis to ensure the most efficient utilization of the limited mobility assets in the CENTCOM AOR.

The DIRMOBFOR-Air

609th AOC/AMD is a unique organization within AFCENT CAOC in that it can receive direction from two sources, the CAOC Director and the DIRMOBFOR-AIR. Because the typical CAOC Director does not have a mobility background and does not necessarily have the time to de-conflict disputes about airlift between the various command components, the DIRMOBFOR-Air was created.¹⁶⁵ The DIRMOBFOR-Air is

¹⁵⁹AFCENT CENTCOM AMD Factsheet.

¹⁶⁰AFCENT CENTCOM AMD Factsheet.

¹⁶¹ASAM Class XV USCENTCOM Orientation Student Guide, 16.

¹⁶²AFCENT CENTCOM AMD Factsheet.

¹⁶³AFCENT CENTCOM AMD Factsheet.

¹⁶⁴AFCENT CENTCOM AMD Factsheet.

¹⁶⁵ASAM Class XV USCENTCOM Orientation Student Guide, 19.

“a senior Air Force officer familiar with the AOR who possesses an extensive background in air mobility operations.”¹⁶⁶ At the discretion of the theater commander, or the COMAFFOR, the DIRMOBFOR-Air may be sourced from within the theater or from TRANSCOM. AMC may offer either of the Expeditionary Mobility Task Force (EMTF) commanders, a pre-designated wing commander, or another trained air mobility officer that has completed the DIRMOBFOR course.¹⁶⁷ The Air Force has a training program to prepare designated officers to fulfill DIRMOBFOR-Air duties and maintains a list of trained personnel for each theater to fulfill those responsibilities when contingencies arise.¹⁶⁸

The DIRMOBFOR-Air is “the COMAFFOR’s designated coordinating authority with all agencies affecting air mobility operations.”¹⁶⁹ He or she also advises the COMAFFOR/CFACC on how best to use air mobility assets and is normally attached to the COMAFFOR’s special staff to assist in planning and conducting air mobility operations.¹⁷⁰ The DIRMOBFOR-Air exercises coordinating authority between the CAOC, the 618th TACC, and the CENTCOM DDOC to expedite the resolution of air mobility issues.¹⁷¹ Additionally, the “DIRMOBFOR-Air ensures the effective integration of inter-theater and intra-theater air mobility operations, and facilitates the conduct of intra-theater air mobility operations.”¹⁷²

While the DIRMOBFOR-Air provides guidance to the AMD on air mobility matters on behalf of the COMAFFOR, the AMD remains under the control of the AOC Director who manages the execution of operations for the COMAFFOR.¹⁷³ The DIRMOBFOR-Air is also the primary interface for other air mobility operations occurring in the CENTCOM AOR and is collocated with the 609th AOC/ AMD to maximize effectiveness.¹⁷⁴ He or she has distinct responsibilities in relation to the CENTCOM commander’s staff as well. Since air mobility requirements originate at the

¹⁶⁶AFDD 2-6, *Air Mobility Operations*, 19.

¹⁶⁷ASAM Class XV USCENTCOM Orientation Student Guide, 19.

¹⁶⁸AFDD 2-6, *Air Mobility Operations*, 19.

¹⁶⁹AFDD 2-6, *Air Mobility Operations*, 19.

¹⁷⁰AFDD 2-6, *Air Mobility Operations*, 19.

¹⁷¹AFDD 2-6, *Air Mobility Operations*, 19.

¹⁷²AFDD 2-6, *Air Mobility Operations*, 19-20.

¹⁷³AFDD 2-6, *Air Mobility Operations*, 20.

¹⁷⁴ASAM Class XV USCENTCOM Orientation Student Guide, 19.

component level and are validated by the CENTCOM DDOC, the DIRMOBFOR-Air facilitates the air mobility interface between the CAOC, the CENTCOM J4, and the DDOC to ensure appropriate prioritization of air mobility capability.¹⁷⁵

In essence, the DIRMOBFOR-Air orchestrates and synchronizes air mobility efforts across the theater. As crucial as this function is to the AOR, the role of the DIRMOBFOR-Air is still largely misunderstood and underappreciated. There is a question that is often raised. If there is already an AMD Chief concentrating on air mobility issues in the CAOC, why is there a need for a DIRMOBFOR-Air? The usual argument to address this question centers on the fact that CFACCs are usually not well versed in air mobility operations and therefore need a mobility expert to fill in the gaps. While that argument may certainly have some validity to it, what a DIRMOBFOR-Air does for the theater goes far beyond just advising the CFACC. By sharing his or her air mobility expertise with the various joint components and their staffs, the DIRMOBFOR-Air is able to get a macro view of the theater-wide air mobility needs. Simultaneously, he or she is able to shape how the other joint components understand the theater's air mobility capabilities. The DIRMOBFOR-Air also works with the theater's various components to secure the necessary resources that satisfy unique requirements associated with air mobility operations in the AOR. One of those requirements involves the need to land aircraft at a range of airfields, from full service airports to austere bare bases.

Landing airlift aircraft at austere airfields and FOBs requires a significant coordination effort external to the CAOC and the DIRMOBFOR-Air is the one that conducts that coordination effort with the help of the AFFOR staff. Issues ranging from having enough parking spaces on a ramp to having enough ground crews to support the influx of aircraft during surges must constantly be worked for theater airlift. Additionally, the AMD Chief and DIRMOBFOR-Air have different focuses. Whereas the AMD Chief needs to focus on C2 and de-confliction of air mobility operations from the time movement requests are received through execution, the DIRMOBFOR-Air focuses on air mobility operations before movement requests are generated. The DIRMOBFOR-Air integrates global mobility with the theater through the AMD and synchronizes mobility operations for the entire theater through personal interaction.

¹⁷⁵AFDD 2-6, *Air Mobility Operations*, 20.

Airlift Request, Validation, and Prioritization

The CENTCOM TACS facilitates the DIRMOBFOR-Air's coordination efforts in the AOR. It simultaneously facilitates the decentralized execution of air mobility operations by allowing the AMD to provide the air mobility wings CHOPped to CENTCOM with prioritized taskings based on overall theater movement requirements.¹⁷⁶ The taskings flow from the CAOC to each unit's Wing Operations Center (WOC). The WOC receives orders and taskings from the CAOC, manages and control the wing's assigned/attached resources, and directs operations at the base level.¹⁷⁷ Information from the CAOC also flows to the Air Support Operations Centers (ASOC) that are located with each of the Army Corps. ASOCs respond to the Army's air support requests and integrate air and space operations with ground operations.¹⁷⁸ In addition to ASOCs, each Army Corps possesses Air Mobility Liaison Officers (AMLO) at the corps, division, regiment, and brigade levels. These AMLOs may operate in theater but fall under the OPCON of the Expeditionary Mobility Task Forces in the CONUS.¹⁷⁹ These officers utilize TACS to coordinate with the 618th TACC, the DIRMOBFOR-Air, CENTCOM DDOC, and 609th AOC/AMD to set up intra-theater airlift.

Intra-theater airlift requests submitted to CENTCOM DDOC via TACS arrive as Service Validator requests. There is a Service Validator for each of the service branches represented in the CENTCOM AOR, Air Force, Army, Navy, and Marine Corps.¹⁸⁰ The Service Validators verify the units cannot move themselves, what is called an organic move, and need common-user intra-theater airlift. CENTCOM DDOC validates the request as a common-user intra-theater movement requirement and assigns it an airlift priority based on the list of priorities specified in the CENTCOM Intra-Theater Airlift Letter of Instruction (LOI).¹⁸¹

¹⁷⁶Mr. Todd Coats, Airlift Operations Course Director, and Mr. Al Puentes, Airlift Course Lesson Developer, Detachment 1, Mobility Operations School, U.S. Air Force Expeditionary Center, "Theater Air Ground System (TAGS)," Briefing to Advanced Study of Air Mobility (ASAM) Class XV, 11 September 2008, slide 24.

¹⁷⁷Coats and Puentes, "TAGS," slide 25.

¹⁷⁸Coats and Puentes, "TAGS," slide 31.

¹⁷⁹Coats and Puentes, "TAGS," slide 33.

¹⁸⁰Major Mark Koziol, U.S. Air Force, Air Mobility Logistics Course Director, Detachment 1, Mobility Operations School, U.S. Air Force Expeditionary Center, "Theater Distribution," Briefing to Advanced Study of Air Mobility (ASAM) Class XV, 12 September 2008, slide 22.

¹⁸¹Koziol, "Theater Distribution," slide 22.

The purpose of the Intra-Theater Airlift LOI is to direct the processes and standardize the procedures for validating, prioritizing, and tasking common-user airlift missions in the CENTCOM AOR.¹⁸² It provides the CENTCOM AOR with a structured set of business rules for conducting air mobility operations that facilitate the essential collaboration and coordination efforts between CENTCOM, TRANSCOM, the 618th TACC, the International Security Assistance Force, and 609th AOC/AMD.¹⁸³ The DDOC Mission Director has waiver authority but waiver request require endorsement from a General Officer.¹⁸⁴ CENTCOM uses three intra-theater airlift mission categories: Channel Airlift, Single Ticket, and all other movement requests, which require a Joint Movement Request (JMR).

Channel Airlift is one of the most common forms of recurring airlift missions that can be established in a theater and the Intra-Theater Airlift LOI outlines procedures to optimally schedule this type of mission in the CENTCOM AOR. Channel Airlift is “common-user airlift service provided on a scheduled basis between two points.”¹⁸⁵ There are two types of Channels, Requirements Channels that are scheduled based on the volume of traffic and Frequency Channels scheduled at regular intervals.¹⁸⁶ The Intra-Theater Airlift LOI stipulates the use of an Operational Assessment Strategy Board, also known as the Channel Conference, to review Frequency Channel performance to determine where they are best utilized.¹⁸⁷ The Channel Conference is chaired by the DIRMOBFOR-Air and includes representatives from the DDOC, AFCENT A4, AMD, and military service components.¹⁸⁸ According to the Intra-Theater Airlift LOI, Frequency Channel missions should be scheduled 30 days in advance.¹⁸⁹ With respect to Requirements Channels, the LOI stipulates they should be planned in response to

¹⁸²Master Sergeant Anne Smerekanicz, U.S. Air Force, Air Mobility Logistics Lesson Developer, Detachment 1, Mobility Operations School, U.S. Air Force Expeditionary Center, “CENTCOM Intra-Theater Airlift Letter of Instruction (LOI),” Briefing to Advanced Study of Air Mobility (ASAM) Class XV, 12 September 2008, slide 3.

¹⁸³Smerekanicz, “CENTCOM Intra-Theater Airlift LOI,” slide 4.

¹⁸⁴Smerekanicz, “CENTCOM Intra-Theater Airlift LOI,” slide 4.

¹⁸⁵JP 1-02, *DoD Dictionary of Military and Associated Terms*, 83.

¹⁸⁶JP 1-02, *DoD Dictionary of Military and Associated Terms*, 83.

¹⁸⁷Smerekanicz, “CENTCOM Intra-Theater Airlift LOI,” slide 5.

¹⁸⁸Smerekanicz, “CENTCOM Intra-Theater Airlift LOI,” slide 5.

¹⁸⁹Smerekanicz, “CENTCOM Intra-Theater Airlift LOI,” slide 6.

movements not already addressed by the Frequency Channels and they must meet minimum C-130 load values.¹⁹⁰

Minimum C-130 load requirements are outlined in the Intra-Theater Airlift LOI as a planning tool to quantify airlift requirements using equivalent pallet positions as a means to maximize the utilization of aircraft.¹⁹¹ The mix of passengers and cargo that may be booked on a flight depends on the number of actual cargo pallets scheduled to move. The Intra-Theater Airlift LOI also uses Available to Load Date/Required Delivery Date scheduling windows based on C-130 or C-17 load equivalents to help determine how much time a unit movement will take based on the unit's movement requirement.¹⁹² The Intra-Theater Airlift LOI also outlines the Single Ticket Program. The Single Ticket Program connects inter-theater movements based on Time-Phased Force and Deployment Data (TPFDD) to intra-theater airlift and is used to manage intra-theater airlift from "origination to destination."¹⁹³ The goals of the program are to "synchronize inter-theater and intra-theater airlift ... [and] coordinate deployment/redeployment movement."¹⁹⁴

Even though JOPES-trained personnel staff CENTCOM DDOC to facilitate end-to-end visibility between inter-theater and intra-theater airlift, the preponderance of airlift customers throughout the AOR do not possess personnel with this specialty. A means was therefore needed to allow for a more user-friendly approach to routing air movement request and thus the Intra-Theater Airlift Request System (ITARS) was created.¹⁹⁵ ITARS is a web-based system that allows users to submit JMRs that do not fit into the theater's Channel system. It is part of the Consolidated Air Mobility Planning System (CAMPS). CAMPS is AMC's primary force-level C2 planning and scheduling system that "presents an integrated view of planning and scheduling mobility resources [and] ... provides one-time data entry, enhances usability and minimizes training requirements by using commercial-off-the-shelf products, online help, and a consistent graphical user

¹⁹⁰Smerekanicz, "CENTCOM Intra-Theater Airlift LOI," slide 6.

¹⁹¹Smerekanicz, "CENTCOM Intra-Theater Airlift LOI," slide 15.

¹⁹²Smerekanicz, "CENTCOM Intra-Theater Airlift LOI," slide 16.

¹⁹³Smerekanicz, "CENTCOM Intra-Theater Airlift LOI," slide 8.

¹⁹⁴Smerekanicz, "CENTCOM Intra-Theater Airlift LOI," slide 8.

¹⁹⁵Kozioł, "Theater Distribution," slide 22.

interface across all user functions.”¹⁹⁶ ITARS provides online validation and allocation of prioritized requirements to airlift missions based on the daily ATO planning cycle.

The Intra-Theater Airlift LOI stipulates that JMRs submitted via ITARS must still follow the user-Service Validator-DDOC validation-AMD process.¹⁹⁷ The majority of JMRs become validated airlift requests with 70 requests per day being the historical average.¹⁹⁸ 609th AOC/AMD Requirements Branch will print out the ITARS data once it has been validated by the DDOC, compile it, and then transfer the information to the Requirements tab pulled from JOPES for scheduling. 609th AOC/AMD C-130 Planner normally handles the validated JMRs.¹⁹⁹ Other types of validated airlift requests that may be submitted via ITARS include Distinguished Visitor (DV) requests, detainee movements, Human Remains transport, Aero-medical Evacuation, special operations support, and Leave Program requests.²⁰⁰

Besides the Intra-Theater Airlift LOI, the CENTCOM AOR has also established an Aerial Port LOI to direct the standardization of processes involved with movement of passengers and cargo for all aerial ports supporting airlift operations in the theater.²⁰¹ The Aerial Port LOI supplements policies from Defense Transportation Regulations and provides guidance on C2 relationships that impact the aerial ports throughout CENTCOM, to include the C2 relationship with the APCT that is unique to 609th AOC/AMD.²⁰² The Aerial Port LOI also provides guidance on how to manage operations with the Theater Express contracted commercial tenders. The aerial ports handle all billing actions and must track cargo movements of tendered cargo since these missions are not included in the Global Decision Support System (GDSS) that contains normal cargo movements.²⁰³ The Aerial Port LOI also provides guidance for

¹⁹⁶*Consolidated Air Mobility Planning System (CAMPS): An Air Mobility Planning and Scheduling System*, Center for Transportation Analysis Research Brief, Oak Ridge National Laboratory, available from <http://cta.ornl.gov>.

¹⁹⁷Smerekanicz, “CENTCOM Intra-Theater Airlift LOI,” slide 20.

¹⁹⁸Smerekanicz, “CENTCOM Intra-Theater Airlift LOI,” slide 20.

¹⁹⁹Smerekanicz, “CENTCOM Intra-Theater Airlift LOI,” slide 20.

²⁰⁰Smerekanicz, “CENTCOM Intra-Theater Airlift LOI,” slides 21-23.

²⁰¹Master Sergeant Anne Smerekanicz, Air Mobility Logistics Lesson Developer, Detachment 1, Mobility Operations School, U.S. Air Force Expeditionary Center, “CENTCOM Aerial Port Letter of Instruction (LOI),” Briefing to Advanced Study of Air Mobility (ASAM) Class XV, 12 September 2008, slide 2.

²⁰²Smerekanicz, “CENTCOM Aerial Port LOI,” slides 5-6.

²⁰³Smerekanicz, “CENTCOM Aerial Port LOI,” slide 11.

determining what types of cargo are eligible for Theater Express and outlines the other types of airlift missions managed by 609th AOC/AMD.²⁰⁴

There are two types of airlift requests that 609th AOC/AMD can receive: Planned and Immediate. A Planned Airlift Request is one in which the air movement requirements are known or projected in advance.²⁰⁵ These requirements are identified in time for the normal ATO tasking cycle coordination to occur. This includes TPFDD planned and validated requirements, validated DDOC requests, and Channel missions.²⁰⁶ An Immediate Airlift Request is one in which requirements are identified too late for the normal ATO tasking cycle coordination to take place.²⁰⁷ Usually, an Immediate Airlift Request will only be honored to satisfy pressing tactical requirements, such as evacuation of wounded soldiers or emergency resupply of troops in contact.²⁰⁸ Immediate Airlift Request missions can be accomplished by using an aircraft on Alert status, by diverting an aircraft already airborne, or by re-tasking another mission.²⁰⁹ These missions require high-level oversight and coordination; the CENTCOM DDOC Mission Director must approve the requests before execution and a JMR still needs to be completed.²¹⁰ Whereas the normal Planned Airlift Request window spans three days from requirement to execution, an Immediate Airlift Request can be processed 24 hours from execution.²¹¹

After CENTCOM DDOC validates the airlift request, it is then forwarded to the AMD. This process is set up to optimize for efficiency the use of common-user intra-theater airlift assets. By validating requests before they go to the AMD, CENTCOM DDOC reduces unnecessary air movements. This is necessary because common-user intra-theater airlift is limited and more expensive than other modes of transport. But the validation process also determines if other modes of transport are available and meet the movement requirement thereby avoiding unwanted delays. By the end of 2004, the first year the process was established, 71 percent of the cargo that was given the lowest

²⁰⁴Smerekanicz, "CENTCOM Aerial Port LOI," slides 7, 13.

²⁰⁵Koziol, "Theater Distribution," slide 25.

²⁰⁶Koziol, "Theater Distribution," slide 25.

²⁰⁷Koziol, "Theater Distribution," slide 26.

²⁰⁸Koziol, "Theater Distribution," slide 26.

²⁰⁹Smerekanicz, "CENTCOM Intra-Theater Airlift LOI," slide 13.

²¹⁰Smerekanicz, "CENTCOM Intra-Theater Airlift LOI," slide 13.

²¹¹Det 1, MOS, "Theater Air Mobility Operations," slide 24.

priority for movement was able to be shipped by surface, which is a much less expensive manner than air transport.²¹²

Once 609th AOC/AMD receives the validated requests from CENTCOM DDOC, it books and plans the airlift mission and then publishes the flying schedule to the tasked flying units.²¹³ The entire AMD Airlift Planning Timeline is predicated on approximately a three day cycle.²¹⁴ Three days out from the intended movement, the user requirement arrives at the DDOC. The DDOC validation process is complete 48 to 36 hours out and at 24 hours out inbound inter-theater missions are imported into the scheduling activity.²¹⁵ The Cargo/Flying Fragmentary of the ATO is completed and integrated with the remainder of the ATO 12 hours prior with a revision opportunity available at the 8-10 hours prior mark.²¹⁶

Intra-Theater Airlift Assets

The majority of intra-theater assets available for missions in the CENTCOM AOR are C-130s CHOPped to the theater from the CONUS. Because of the large number of C-130 aircraft CHOPped to the theater, 618th TACC tracks CENTCOM C-130 sorties along with other Channel, exercise, training, and tanker sorties in a daily sortie report. This sortie report summarizes air mobility activity across all geographic commands. Since the number of C-130 aircraft in the CENTCOM AOR varies from month to month based on rotation schedules, the sortie report provides the best indication of their workload. The 618th TACC utilizes a ratio of current daily planned sorties versus a six-month sortie average to provide a picture of how much activity a theater is encountering. As of February 2010, the six-month sortie average for CENTCOM C-130s was 125. The six-month sortie average for all global mobility missions combined was 826, indicating that C-130s CHOPped to CENTCOM conducted 15 percent of the global mobility sorties.²¹⁷ Since July, 2006 there are also 18 C-17s assigned to the 816th and

²¹² CDDOC "Spiral 1" Report, 12, as quoted in Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," 11.

²¹³Coats and Puentes, "TAGS," slide 56.

²¹⁴Coats and Puentes, "TAGS," slide 57.

²¹⁵Coats and Puentes, "TAGS," slide 57.

²¹⁶Coats and Puentes, "TAGS," slide 57.

²¹⁷"618th TACC 'SixPack' Operational Briefing Slide," 18 February 2010, on-line, Internet, available from <https://tacc.scott.af.mil/taccapps>. All other global C-130 sorties are included in the category they

817th Expeditionary Airlift Squadrons (EAS) and operating in the CENTCOM AOR that remain under the OPCON of AMC but carry cargo validated by CENTCOM DDOC as part of the TDD mission.²¹⁸

This arrangement provides the CENTCOM AOR with the increased air movement capacity of the C-17, which can carry up to eighteen pallets as opposed to six on a C-130H model and eight on a C-130J-30.²¹⁹ The increase in theater capacity was evident from the start; in its first month in theater the 816th EAS flew “854 sorties and moved roughly 23 million tons of cargo and 23, 530 passengers.”²²⁰ By maintaining OPCON, AMC can quickly retask those assets if a greater need for them arises elsewhere. An example of this occurred during the Georgian crisis in 2008, when C-17s were diverted out the CENTCOM AOR to delivery personnel and materials to Tbilisi.²²¹

Methods of Aerial Delivery

Mobility aircraft are capable of delivery personnel and equipment in a variety of different ways. The doctrinally preferred method of delivery is Airland and “planners should view Airland delivery as the primary means for most air movements.”²²² In the Airland delivery method, personnel and materiel are unloaded from an aircraft after it has landed. This type of delivery is usually the most efficient delivery method for moving equipment, personnel, and supplies because it allows a greater degree of unit integrity after landing, it carries the least risk of injuring personnel and damaging equipment, it requires minimal specialized training and equipment for transported personnel, and it maximizes the opportunity to backhaul cargo.²²³ There are some disadvantages to Airland delivery as well. It requires airfields or landing zones that are moderately level

support, for example exercises or training. The CENTCOM CHOPped C-130s are the only missions that 619th TACC tracks purely by aircraft type.

²¹⁸Technical Sergeant Chuck Marsh, U.S. Central Command Air Forces-Forward Public Affairs, “C-17 deployment length, efficiency increase,” available from <http://www.af.mil/news/story.asp?id=123023052>.

²¹⁹C-17 Globemaster III Technical Specifications, on-line, Internet, available from <http://www.boeing.com/defense-space/military/c17/c17spec.htm>.

²²⁰Technical Sergeant Chuck Marsh, U.S. Central Command Air Forces-Forward Public Affairs, “C-17 deployment length, efficiency increase,” available from <http://www.af.mil/news/story.asp?id=123023052>.

²²¹Senior Airman James Bollinger, 436th Airlift Wing Public Affairs, “Dover Aircrew flies first C-17 into Georgia,” available from <http://www.amc.af.mil/news/story.asp?id=123110922>.

²²²JP 3-17, *Air Mobility Operations*, IV-13.

²²³JP 3-17, *Air Mobility Operations*, IV-13.

or unobstructed and adequate for the anticipated operation, it may increase mission intervals depending on airfield size, it requires more time for delivery of a given size force than airdrop delivery, and it requires airlift mission support such as ground-handling assets.²²⁴

Airland operations generally fall within one of four concepts: Hub and Spoke, Direct Delivery, Lily Pad, and Air Bridge.²²⁵ Hub and Spoke operations consist of inter-theater operations that offload personnel and materiel at a main operating location within the theater followed by intra-theater airlift movements to forward operating locations.²²⁶ Most of the intra-theater C-130 operations in the CENTCOM AOR support Hub and Spoke operations. Direct Delivery involves airlifting personnel and materiel from ports of embarkation to forward-operating locations in the theater, bypassing intermediary bases and the transshipment of payloads typically associated with Hub and Spoke operations “Direct Delivery shortens in-transit time, reduces congestion at main operating bases, and enhances the sustainment of forward bases.”²²⁷ C-17s routinely conduct Direct Delivery operations to and from the CENTCOM AOR and these types of missions are best for time-sensitive cargo.²²⁸ Aircraft ranges, crew requirements, and mission limitations may dictate the need for intermediate stops, which is referred to as Lily Pad operations.²²⁹ C-130s deploy and redeploy utilizing Lily Pad operations based on their range and crew duty day limits. Air Bridge operations are defined as flights between the CONUS and theater where the receiver aircraft’s range is augmented by an in-flight refueling on designated Air Refueling tracks²³⁰.

Air mobility missions may also utilize Airdrop Delivery methods. In the various Airdrop methods, airlifted personnel and materiel are unloaded from aircraft still in flight.²³¹ An Airdrop operation is often militarily advantageous because it permits sustainment deliveries to units operating away from airfields and it permits the delivery

²²⁴JP 3-17, *Air Mobility Operations*, IV-13, 14.

²²⁵JP 3-17, *Air Mobility Operations*, IV-15.

²²⁶JP 3-17, *Air Mobility Operations*, IV-15.

²²⁷JP 3-17, *Air Mobility Operations*, IV-16.

²²⁸JP 3-17, *Air Mobility Operations*, IV-16.

²²⁹JP 3-17, *Air Mobility Operations*, IV-16.

²³⁰JP 3-17, *Air Mobility Operations*, IV-16.

²³¹JP 3-17, *Air Mobility Operations*, IV-17.

of combat forces and materiel, concentrated and in mass, in minimum space and time.²³² Additionally, airlift aircraft can accurately airdrop personnel and materiel in poor meteorological conditions that would otherwise preclude Airland operations. In relation to Airland Delivery, Airdrop Delivery has some disadvantages. It carries an increased risk of injury to personnel or damage to cargo and it requires special training for the riggers, transported personnel, and the aircrews.²³³

There are several different types of airdrop methods that can be employed. The type of airdrop depends on the threat, the required payload, the required accuracy, and the required mass on the drop zone.²³⁴ Though Personnel and Heavy Equipment Airdrop missions have taken place in the CENTCOM AOR, the most common are Container Delivery System (CDS) Airdrop, Tri-wall Aerial Distribution System (TRIADS) Airdrop, Leaflet Airdrops, Improved CDS Airdrop, and increasingly Joint Precision Aerial Delivery System (JPADS) Airdrops. A CDS Airdrop is a gravity-assisted airdrop of supplies that can withstand high velocity impact.²³⁵ Most of the ammunition that ground troops in the CENTCOM AOR use for their small arms weapons can be delivered via CDS Airdrop. TRIADS Airdrops have been used routinely for humanitarian operations in the CENTCOM AOR, for example, the Kurds in northern Iraq received Meals Ready to Eat via TRIADS. It uses standard CDS procedures with boxes rigged to destruct at the end of a static line as they exit the aircraft, causing their contents to be dispersed into the air.²³⁶ Leaflet Airdrops, which utilize TRIADS procedures, have also been used in the CENTCOM AOR to support psychological operations.

Improved CDS Airdrops uses Global Positioning System (GPS) telemetry to improve the precision of the airdrop accuracy, allowing aircraft to drop from higher altitudes and in virtually any meteorological condition, while JPADS is a family of GPS-guided, self-maneuvering systems that can deliver cargo with a very high degree of accuracy.²³⁷ Increased precision have made Airdrop Delivery methods more lucrative in the CENTCOM AOR. In fact, airdrop operations have steadily increased in the

²³²JP 3-17, *Air Mobility Operations*, IV-17.

²³³JP 3-17, *Air Mobility Operations*, IV-21.

²³⁴JP 3-17, *Air Mobility Operations*, IV-22.

²³⁵JP 3-17, *Air Mobility Operations*, IV-23.

²³⁶JP 3-17, *Air Mobility Operations*, IV-24.

²³⁷JP 3-17, *Air Mobility Operations*, IV-23, 24.

CENTCOM AOR. In comparison to airdrops in 2005, the Air Force dropped more than six times that amount in 2008, and three times the amount airdropped in 2006.²³⁸

U.S. Air Force Direct Support of U.S. Army

With the many improvements in C2, end-to-end visibility, airlift mission validation, airlift scheduling, and delivery options over the last eight years, one may gather that CENTCOM's TDS, utilizing common-user airlift, can meet the needs of all users in the theater. However, the Army continues to experience problems on what is called the "last tactical mile" in the distribution process, typically the portion of the supply chain beyond the POD up to the soldier in the field.²³⁹ At the beginning of OIF, the Army suffered from periodic backlogs in supplies due to constraints on transportation assets that could move supplies to forward locations.²⁴⁰ But even today, it is recognized that re-supplying front-line warriors is an ongoing endeavor with the last portion of the movement, from a TAA to a FOB to a foxhole, being where the intra-theater airlift challenge is the greatest.²⁴¹ The "last tactical mile" became a friction point between the Army and the Air Force on the proper role of airlift at the tactical level and who should control that airlift. According to Brigadier General Stephen D. Mundt, Director of Army Aviation, because "the Air Force does not perform [intra-theater airlift] missions in the tactical spectrum" an Army operated airlifter was needed to bring logistics through the "last tactical mile."²⁴² Beginning in 2005, the Army moved to acquire its own airlift fleet to fill that requirement.

To support its argument for an organic²⁴³ tactical airlifter, the Army pointed to the non-contiguous nature and geographic constraints of the OIF/OEF battle space. The Army argued that due "to the extended mission ranges and high altitudes, the long-term

²³⁸Staff Sergeant Andrea Thacker, AFCENT Public Affairs-Combined Air and Space Operations Center, "Iraq, Afghanistan reach all-time high," available from <http://www.af.mil/news/story.asp?id=123112345>.

²³⁹Kevin F. Daniels, "The Distribution Dilemma: The Last Tactical Mile," *Army Logistician*, September-October 2008, 1.

²⁴⁰GAO 04-305R, 2.

²⁴¹E. McKenna, "Supplying the Last Tactical Mile," *Avionics Magazine*, February 2008, available from http://www.aviationtoday.com/av/issue/feature/Supplying-The-Last-Tactical-Mile_18862.html.

²⁴²U.S. Army Public Affairs, "Army, AF announce joint cargo aircraft program," *Army News Service*, on-line, Internet, 23 March 2006, available from http://www4.army.mil/ocpa/read.php?story_id_key=8731.

²⁴³The term organic is used to represent a Service-owned asset used for Service-specific tasks. In terms of airlift, Army organic airlift represents the Army using assets not assigned to the CFACC or controlled by the AMD, as opposed to common-user airlift.

intra-theater distribution of time sensitive/mission-critical cargo and key personnel by organic Army aviation is not realistic over a long-term given the current rotary and fixed wing fleet.”²⁴⁴ In order to meet its logistics need through the “last tactical mile,” the Army relies heavily on the CH-47 helicopter. But utilizing the CH-47 has proven to be a very expensive and inefficient method of accomplishing the time sensitive/mission-critical movement mission.²⁴⁵ The long distances typically travelled from intermediate staging bases to FOBs “is causing the tasked helicopters to accumulate flight hours well in excess of the planned mission profiles ... This has generated a significant increase in the maintenance required for these aircraft.”²⁴⁶ Moreover, because the CH-47 aircraft have a primary mission function in support of ground combat units, diverting them to airlift missions “creates an adverse operational impact to the ground force command by taking away a highly flexible transportation asset.”²⁴⁷

The Army further argued that possessing its own intra-theater airlift fleet would enable it to meet core logistics functions, providing specialized tactical airlift of time sensitive/mission-critical movement requirements.²⁴⁸ However, the definition of exactly what constituted a time sensitive/mission-critical movement was vaguely understood and was not codified in doctrine. The 2009 Quadrennial Roles and Missions Review report was an attempt, among other things, to remedy that discrepancy. The report supported assignment of the Joint Cargo Aircraft (JCA), the aircraft the Army was pursuing to fill its requirements, to both the Army and Air Force.²⁴⁹ It also made an attempt to further delineate areas within the intra-theater airlift arena. It defined a Point of Need as “A physical location designated by the joint force commander as a receiving point for forces or commodities, for subsequent employment, emplacement, or consumption” and a Point of Effect as “A physical location designated by the functional component commander, Service component commander or a subordinate commander to support operations

²⁴⁴USAF Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment, 13 September 2009, 7 (obtained courtesy of Major Mark C. Keener, HQ AMC/A5QH).

²⁴⁵USAF Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment, 7.

²⁴⁶USAF Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment, 7.

²⁴⁷USAF Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment, 7.

²⁴⁸Memorandum of Agreement between the Department of the Army and the Department of the Air Force, 2006.

²⁴⁹Quadrennial Defense Roles and Missions Review Report, 19.

normally within the combat zone.”²⁵⁰ The geographic area from the Point of Need to the Point of Effect represented the “last tactical mile” and was designated as a “Tactical” level for airlift purposes, a level that should be left solely to the Service component to manage with DS airlift.²⁵¹ Graphically, the complete aerial delivery construct could be understood as depicted below:

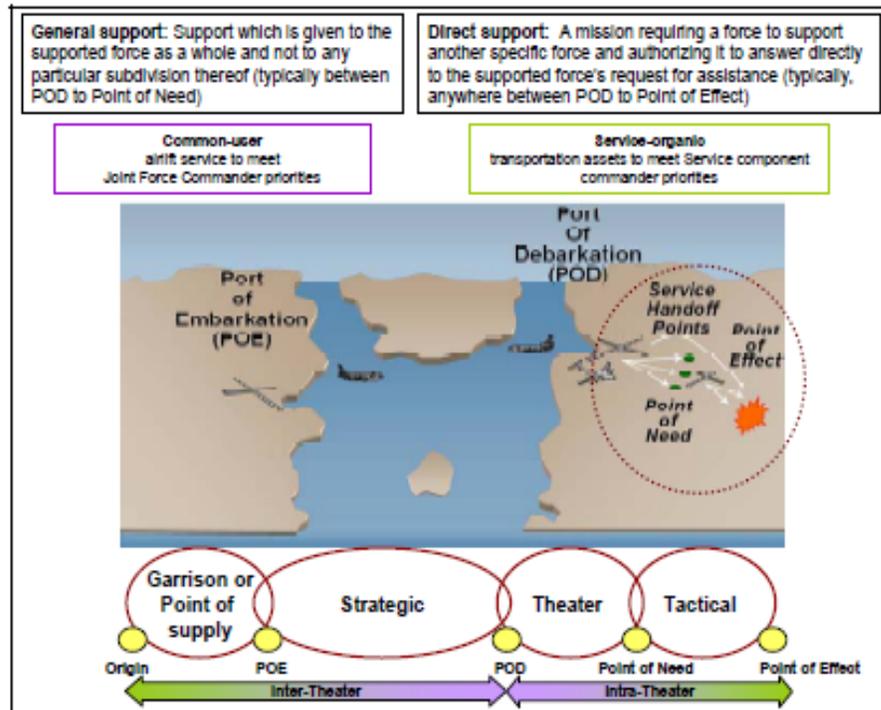


Figure 1 - Aerial Supply Chain: Origin to Point of Effect

SOURCE: Quadrennial Defense Roles and Missions Review Report, 2009

The DS mission was on its way to becoming an Army core competency until the defense secretary issued Resource Management Decision 802, moving both it and the associated aircraft that the Army was going to use, now called the C-27J, to the Air Force.²⁵² In November, 2009 the Air Force fielded a JCA CONOP to explore what would be required to stand up a full DS capability. Since the Air Force’s C-27Js are still in production, the CONOP was tested with C-130s. Aircraft assigned to the 164th EAS were tasked directly by the Army’s 25th Combat Aviation Brigade (CAB), in a similar

²⁵⁰Quadrennial Defense Roles and Missions Review Report, 38.

²⁵¹Quadrennial Defense Roles and Missions Review Report, 38-39.

²⁵² Technical Sergeant Scott T. Sturkol, “Direct Support: Air Force, AMC officials in ‘full support’ of Army’s airlift needs,” available from <http://www.amc.af.mil/news/story.asp?id=123174702>.

manner that helicopter missions were tasked.²⁵³ Though the CONOP was tested in Iraq, eventually the Air Force will utilize what it learned to support Army DS requirements in other geographic commands. The main goals of the CONOP test were to examine the C2 structure that would allow the Air Force to provide DS to the Army while validating Air Force requirements.²⁵⁴

Prior to the CONOP test, the Air Force produced a Concept of Employment (CONEMP) to describe how an Army CAB or Task Force (TF) and an Air Force EAS or Detachment would operate together to provide airlift to transport time sensitive/mission-critical supplies and personnel.²⁵⁵ The Air Force agreed to provide a dedicated EAS and collocate it with an Army aviation unit under the TACON of the Senior Army Aviation Authority (SAAA) for moving time sensitive/mission-critical cargo.²⁵⁶ The SAAA is typically a CAB or TF commander. This Service-to-Service relationship allows a GCC the ability to dedicate assets to the movement priorities defined by the Commander Army Forces (COMARFOR) outside the common-user theater airlift system, bypassing the CENTCOM DDOC.²⁵⁷ The foundation of the CONEMP is based on the proposition that the COMARFOR's Area of Operations is an additional mission area separate and distinct from the traditional inter- and intra-theater airlift process.²⁵⁸ Because of the dynamic nature of the combat operations experienced at the most forward edge of the battle area, the Army feels it needs direct control over assets that are providing direct support to troops there.

Solidifying this mission area is seen as a next logical step for the Air Force based on initiatives active in CENTCOM today, such as the Corps Express dedicated C-130 missions executed in direct support of Army corps commanders.²⁵⁹ For the Air Force, the key to giving the Army the proper degree of responsiveness is in the relationship it can establish with Army ground commanders. In order to foster that relationship to the fullest extent possible, an Air Force EAS TACON to the COMARFOR will be

²⁵³Mark Diamond, Air Mobility Command Public Affairs, "JCA CONOP test finding success in Iraq," available from <http://www.amc.af.mil/news/story.asp?id=123179807>.

²⁵⁴Diamond, Air Mobility Command Public Affairs, "JCA CONOP test finding success in Iraq."

²⁵⁵*USAF Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment*, 4.

²⁵⁶*USAF Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment*, 4.

²⁵⁷*USAF Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment*, 4.

²⁵⁸*USAF Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment*, 4.

²⁵⁹*USAF Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment*, 4.

established.²⁶⁰ This TACON relationship “provides for certainty as to which exact forces are available for the [time sensitive/mission-critical] mission while not disrupting [OPCON] authorities still resident with COMAFFOR.”²⁶¹ GCCs should delegate TACON of specific Air Force forces for the time sensitive/mission-critical mission to the COMARFOR who will exercise TACON of those assets through the designated SAAA. Additionally, the Air Force will provide a liaison officer to advise the SAAA commander and staff on the capabilities of assigned aircraft and crews.²⁶²

CENTCOM CAOC will maintain visibility on all time sensitive/mission-critical missions and assets via 609th AOC/AMD, which will monitor these missions through the Global Support and Decision Support System 2 (GDSS 2).²⁶³ GDSS 2 is the primary scheduling and execution C2 system that AMC uses to disseminate and track airlift and tanker status and movement information worldwide.²⁶⁴ It has the ability to interface with over 30 major C2 and transportation systems, such as CAMPS.²⁶⁵ Information to be entered into GDSS 2 will be coordinated by the SAAA’s liaison officers and the Army’s Battlefield Coordination Detachment at the CAOC.²⁶⁶ Because time sensitive/mission-critical requests will not go through CENTCOM DDOC, it will not have visibility on requests that are not able to be moved by the CAB’s TACON assets. These overflow items will need to be moved via General Support or common-user intra-theater airlift validated in accordance with DDOC procedures. The CAB will regret the mission and send it back to the Army Forces G3 Air for input into ITARS, after coordination with the

²⁶⁰*USAF Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment*, 8.

²⁶¹*USAF Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment*, 8. In 2005, while developing this CONEMP, two possible courses of action were considered. Either attach an Air Force EAS TACON to the COMARFOR or establish an EAS with a Direct Support command relationship to the COMARFOR with TACON retained by the COMAFFOR. The COMARFOR TACON relationship provides greater certainty as to which exact forces are available for the time sensitive/mission-critical mission. The Direct Support relationship provides the potential for access to more and different forces than TACON. TACON provides the advantage of certainty of forces which outweigh the benefit of more forces under Direct Support command relationship.

²⁶²*USAF Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment*, 17.

²⁶³*USAF Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment*, 8-9.

²⁶⁴Mr. Al Puentes, Airlift Course Lesson Developer, Detachment 1, Mobility Operations School, U.S. Air Force Expeditionary Center, “Global Decision Support System 2 (GDSS 2) Introduction Lab,” Briefing presented to Advanced Study of Air Mobility (ASAM) Class XV, 12 September 2008, slide 5.

²⁶⁵Puentes, “GDSS 2 Introduction Lab,” slide 5.

²⁶⁶*USAF Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment*, 17.

requesting unit.²⁶⁷ The SAAA's liaison officer will also notify the AMD, who will coordinate with the CAB to fulfill additional intra-theater airlift requirements.²⁶⁸ When practical, excess capacity in time sensitive/mission-critical assets will be released to AFCENT AMD in support of the common-user airlift pool. Common-user movements will be monitored by AFCENT AMD and CENTCOM DDOC but will not take precedence over Army time sensitive/mission-critical movement requirements.²⁶⁹

Summary

Throughout its history, the CENTCOM AOR has proven to be an effective laboratory for experiments in C2, force structure, and organization. It continues to be a crucible for developing what may be seen as an ideal model for intra-theater airlift and theater distribution. For example, the JDDOC concept is now codified in joint doctrine and DDOCs are now active in all the geographic commands.²⁷⁰ The CENTCOM AOR's TDS is the most tried and tested of all the intra-theater distribution systems after nearly two decades of continuous logistics activity and eight years of sustained combat support. Indeed, of the 10,073,641 passengers and 4,124,526.5 short tons that have been moved by airlift since September, 2001, over half are attributable to CENTCOM alone.²⁷¹ The lessons learned from the efforts expended over that time have undoubtedly yielded better ways of doing business, but are all these improvements exportable beyond the CENTCOM AOR?

The next two chapters will examine the intra-theater air mobility system and TDS in the PACOM and AFRICOM AORs. These are two vastly different geographic areas and are also AORs that have the potential to see a marked increase in American military activity based on unfolding events with respect to American national security. In Chapter 4, comparisons will be made among all of these intra-theater systems, addressing strengths and weaknesses and determining what would be the best option for a future JFC.

²⁶⁷USAF Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment, 28.

²⁶⁸USAF Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment, 28.

²⁶⁹USAF Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment, 28.

²⁷⁰JP 3-17, *Air Mobility Operations*, ix.

²⁷¹"Overseas Contingency Operations Airlift Slide," 18 February 2010, on-line, Internet, available from <https://www.tacc.scott.af.mil/taccapps>. Calculated from data as of 18 February 2010, on Overseas Contingency Operations Airlift totals. Horn of Africa missions after 2008 were excluded due to the stand up of AFRICOM, as were OEF missions that did not originate or terminate in CENTCOM.

Chapter 2

The PACOM Way

There is nothing more common than to find considerations of supply affecting the strategic lines of a campaign and a war.
-Carl von Clausewitz

The previous chapter examined CENTCOM and its intra-theater air mobility and distribution systems, describing how nearly two decades of continuous combat and combat support operations have shaped mobility operations in that theater. It also described how CENTCOM has been used as a crucible for air mobility innovations that have been, or will soon be, exported to other geographic commands. This chapter will examine intra-theater air mobility and theater distribution operations in PACOM. It will begin with a brief historical examination of the Pacific Theater, PACOM, PACOM's sub-unified commands, and the various air component organizations assigned to the AOR. The purpose of this examination is to determine the unique conditions that are inherent to the PACOM AOR in order to understand how and why mobility operations have unfolded there. The vastness of the theater, in conjunction with the multitude of unique missions which the United States has undertaken there, necessitates the existence of several specialized organizations within the overall geographic command. Additionally, the chapter will examine the command relationships between PACOM, U.S. Forces Korea (USFK), U.S. Forces Japan (USFJ), and Special Operations Center Pacific Command (SOCPAC) with respect to intra-theater airlift and theater distribution. The functions and C2 relationships of the 613th AOC/AMD and PACOM DDOC will also be reviewed as well as AMC's en route system for TRANSCOM-assigned missions transiting through the AOR. This will provide an overall picture of the PACOM way of conducting air mobility business.

History of PACOM and its Sub-Unified Commands

PACOM was established as a unified command on 1 January 1947 and “it is currently the oldest and largest of the unified commands.”¹ It is made up of four service components: the Navy’s Pacific Fleet, the Air Force’s Pacific Air Forces (PACAF), the Army’s United States Army Pacific, and the Marine Corps’s Marine Forces Pacific.² Throughout the years, PACOM’s AOR has expanded and contracted as the command took on new roles or relinquished old ones depending on where American national security interests were focused.³ The current AOR extends from the east coast of Africa to the American west coast and from the Antarctic to the Arctic, covering more than 100 million square miles.⁴ The area is home to “36 sovereign nations, containing 50 [percent] of the world’s population and over one-third of the global economic output.”⁵ PACOM is unique in that it contains four long-standing sub-unified commands: USFK, USFJ, SOCPAC, and Alaskan Command (ALCOM).⁶

The mission of USFK is to “defend the Republic of Korea (ROK) against external aggression and to maintain peace and stability in East Asia.”⁷ The American security commitment to the ROK has “legal obligations under the United Nations Security Council Resolutions of 1950,” by which the United States leads the United Nations Command (UNC), and the ROK/U.S. Mutual Security Agreement of 1954, which commits both countries to assist the other in the case of attack from outside aggressors.⁸ The United States is also a partner in the ROK/U.S. Combined Forces Command (CFC), an integrated headquarters established in 1978, and is responsible for planning for the defense of the ROK.⁹ The USFK Commander is “triple-hatted,” also serving as UNC

¹U.S. Pacific Command (PACOM) History Factsheet, available from <http://www.pacom.mil/about/history.shtml>.

²Lieutenant Colonel Joe D. Gann, U.S. Air Force, U.S. Forces Japan J43 Plans and Exercises Branch Chief, “U.S. Forces Japan (USFJ) Command Update Brief,” Briefing for Logistics 399 Course, 31 Jul 2009, slide 26.

³PACOM History Factsheet.

⁴U.S. Pacific Air Forces (PACAF) Factsheet, available from <http://www.pacaf.mil/library/factsheets/index.asp>.

⁵PACAF Factsheet.

⁶Gann, “USFJ Command Update Brief,” slide 26.

⁷General Walter L. Sharp, U.S. Army, Commanding General USFK/UNC/CFC, “Welcome Message,” USFK website, on-line, Internet, available from <http://www.usfk.mil/leadership.aspx>.

⁸History of U.S. Forces Korea (USFK) Factsheet, available from <http://www.usfk.mil/USFK/FKHO.aspx>.

⁹History of USFK Factsheet.

Commander and CFC Commander.¹⁰ As UNC Commander, he or she “is responsible for maintaining the armistice agreement which suspended the Korean War on [27 July 1953].”¹¹

USFK is the joint headquarters through which American combat forces would be sent to the CFC's fighting components.¹² Major elements of USFK include the 8th U.S. Army, U.S. Air Forces Korea, Marine Forces Korea, and U.S. Naval Forces Korea.¹³ CFC's role during the armistice is “to deter war while its wartime role is to defeat external aggression.” In 1994, peacetime OPCON of the ROK military was transferred from CFC to the ROK Joint Chiefs of Staff (ROK JCS).¹⁴ In 2005, then secretary of defense Donald Rumsfeld and his South Korean counterpart Yoon Kwang-ung discussed the transfer of wartime OPCON and in 2007 an agreement was reached to transition from CFC to the ROK JCS on 17 April 2012.¹⁵ After April 2012, CFC will be deactivated and the United States will activate U.S. Korea Command (KORCOM), which will be a supporting command.¹⁶ In the supporting-to-supported construct of 2012, the KORCOM Commander will exercise OPCON over American forces and will place these forces “in supporting roles to Korea Joint Forces Command (KJFC), with command relationships ranging from supporting to [TACON].”¹⁷

Presently, the CFC Commander has wartime OPCON of both American and Korean air forces, which he or she delegates to the Commander of Air Component Command (ACC), who is dual-hatted as the 7th Air Force Commander.¹⁸ After the ROK assumes wartime OPCON in 2012, C2 of air forces will remain under the CFACC through the Korea AOC (KAOC), with the 607th AOC designated as the core element.¹⁹

¹⁰History of USFK Factsheet.

¹¹History of USFK Factsheet.

¹²History of USFK Factsheet.

¹³History of USFK Factsheet.

¹⁴History of USFK Factsheet.

¹⁵History of USFK Factsheet.

¹⁶ Lieutenant General Stephen G. Wood, U.S. Air Force, and Major Christopher A. Johnson, U.S. Air Force, “The Transformation of Air Forces on the Korean Peninsula,” Senior Leader Perspectives, *Air and Space Power Journal Fall 2008*, 1 September 2008.

¹⁷Wood and Johnson, “The Transformation of Air Forces on the Korean Peninsula.”

¹⁸Wood and Johnson, “The Transformation of Air Forces on the Korean Peninsula.”

¹⁹Wood and Johnson, “The Transformation of Air Forces on the Korean Peninsula.”

In Korea, the CFACC is also the COMAFFOR and can delegate TACON of Air Force forces to him or herself, including mobility forces that may be CHOPped to the KTO.

USFJ traces its origin to the headquarters of General of the Army Douglas MacArthur, who “served as Supreme Commander for Allied Powers, Commander-in-Chief, Far East Command, and during the Korean War, as Commander-in-Chief of [UNC].”²⁰ Like USFK, USFJ is a joint command with component elements. The Marine element consists of forces from the 3rd Marine Expeditionary Force, the Navy element is made up of forces from the Pacific Fleet, and the Army element is made up of forces from the Army’s 1st Corps (Forward). The current Commanding Officer of USFJ is triple-hatted, serving also as Commander of U.S. Air Forces Japan and as 5th Air Force Commander.²¹ He is also assigned collateral duties as DoD and PACOM Senior Representative in Japan.²²

USFJ has a unique C2 relationship with forces in Japan similar to USFK’s relationship with forces in Korea. USFJ has OPCON of its four component headquarters units.²³ However, since the commanders of these units also serve as Service commanders, the Service units are OPCON to their respective PACOM Service Components.²⁴ Therefore, although the Commanding Officer of USFJ sets policy for American forces in Japan, he does not exert OPCON over PACOM Service components in Japan.²⁵ Units such as Commander, U.S. 7th Fleet, 13th Air Force Detachment 1, and 10th Support Group are forward deployed to Japan but are not OPCON to USFJ.²⁶ For day-to-day air mobility missions, the 13th Air Force Detachment 1 works with the 5th Air Force staff to coordinate and task assets of the 374th Airlift Wing stationed at Yokota Air Base, Japan.²⁷

Also operating in the Pacific theater under PACOM is SOCPAC. SOCPAC was established 1 November 1965 in Okinawa “to provide unconventional warfare task force

²⁰Gann, “USFJ Command Update Brief,” slide 2.

²¹Gann, “USFJ Command Update Brief,” slide 6.

²²Gann, “USFJ Command Update Brief,” slide 6.

²³Gann, “USFJ Command Update Brief,” slide 26.

²⁴Gann, “USFJ Command Update Brief,” slide 26.

²⁵Gann, “USFJ Command Update Brief,” slide 26.

²⁶Gann, “USFJ Command Update Brief,” slide 26.

²⁷Gann, “USFJ Command Update Brief,” slide 26.

support for operations in Southeast Asia.”²⁸ On 1 July 1969, SOCPAC was disbanded following the transfer of its mission to PACOM.²⁹ In October 1983, the Joint Chiefs of Staff ordered the establishment of Special Operations Commands in the European and Pacific Theaters and subsequently SOCPAC was activated on 1 November 1983.³⁰

As a sub-unified command of PACOM, “SOCPAC and its component units deploy throughout the Pacific, supporting PACOM's Theater Security Cooperation Program, deliberate plans, and real world contingencies.”³¹ The command also maintains a capability to operate as a rapidly deployable Joint Task Force (JTF).³² In January 2002, SOCPAC deployed to the southern Philippines as JTF 510 in order to facilitate the execution of counterterrorist operations with the Philippine Government under OEF-Philippines.³³ JTF 510 redeployed on 1 September 2002, with elements remaining in-place to form Joint Special Operations Task Force-Philippines (JSOTF-P).³⁴ SOCPAC’s special operations airlift capabilities are supplemented by other PACOM assets as needed.³⁵ For example, PACAF provided C-130 tactical airlift support for OEF-Philippines and JSOTF-P, as well as Joint Interagency Task Force West which is currently responsible for drug-related transnational crime across the AOR.³⁶

Yet another sub-unified under PACOM is ALCOM which was reestablished 7 July 1989.³⁷ The current ALCOM traces its origins to the headquarters of the same name established on 1 January 1947, as a unified command under the Joint Chiefs of Staff.³⁸ Following the attacks of 11 September 2001, the Joint Rear Area Coordination-Alaska (JRAC-AK) was established to handle Homeland Defense issues.³⁹ When U.S. Northern Command (NORTHCOM) was established, JRAC-AK was deactivated and JTF-Alaska,

²⁸Special Operations Center Pacific (SOCPAC) Factsheet, available from <http://www.socpac.socom.mil/default.aspx>.

²⁹ SOCPAC Factsheet.

³⁰SOCPAC Factsheet.

³¹SOCPAC Factsheet.

³²SOCPAC Factsheet.

³³SOCPAC Factsheet.

³⁴SOCPAC Factsheet.

³⁵SOCPAC Factsheet.

³⁶Admiral William J. Fallon, U.S. Navy, Commander U.S. Pacific Command, *Testimony before Senate Armed Services Committee on U.S. Pacific Command Posture*, 8 March 2005.

³⁷Alaskan Command (ALCOM) Factsheet, available from <http://www.elmendorf.af.mil/library/factsheets/factsheet.asp?id=5286>.

³⁸ALCOM Factsheet.

³⁹ALCOM Factsheet.

which previously existed in the region albeit in a different role, was reactivated in February 2003 to support it.⁴⁰ U.S. Air Forces Alaska is the ACC to ALCOM and is made up of forces from 11th Air Force, which possesses air mobility assets under the 3rd Wing at Elmendorf Air Force Base in Anchorage, Alaska.⁴¹ PACAF exercises OPCON of 11th Air Force in its role as a Service Component.⁴²

History of PACAF and its Numbered Air Forces

With the history covered on how PACOM and its sub-unified commands developed into the current construct, the lens can now be focused on PACOM's air component. Like its parent command, PACAF's history is woven together from multiple entities. The existence of multiple sub-unified commands has been accompanied by the continued posturing of multiple numbered air forces to provide assets for the various ACCs. PACAF's roots can be traced back to the activation of Far East Air Forces, 3 August 1944, at Brisbane, Queensland, Australia.⁴³ PACAF's primary mission is to provide PACOM "integrated expeditionary Air Force capabilities to defend the Homeland, promote stability, dissuade/deter aggression, and swiftly defeat enemies."⁴⁴ The unique location of the Strategic Triangle (Hawaii-Guam-Alaska) allows the United States to "have persistent presence as well as options to project American airpower from sovereign territory."⁴⁵

Headquarters, 13th Air Force, located at Hickam Air Force Base, Hawaii, is an Air Force component numbered air force (C-NAF) headquarters. Outlined in the Air Force Chief of Staff's *2005 Air Force Forces Command and Control Enabling Concept*, "a component numbered air force provides Combatant Commanders with an operationally-focused organization always ready to execute operations."⁴⁶ The mission of 13th AF is to "plan, command and control, deliver, and assess air, space, and information operations in the Asia-Pacific region [less KTO] across the security spectrum

⁴⁰ALCOM Factsheet.

⁴¹ALCOM Factsheet.

⁴²ALCOM Factsheet.

⁴³PACAF Factsheet.

⁴⁴PACAF Factsheet.

⁴⁵PACAF Factsheet.

⁴⁶13th Air Force Factsheet, available from <http://www.pacaf.af.mil/library/factsheets/factsheet.asp?id=3608>.

from humanitarian assistance to combat operations.”⁴⁷ The 13th Air Force Commander is positioned to be the COMAFFOR, CFACC, or “joint task force commander for operational and contingency missions.”⁴⁸ The headquarters exercises OPCON or TACON over forces that are based throughout the Pacific AOR, primarily in Hawaii, Alaska, Guam or Japan.⁴⁹ The headquarters also exercises C2 over global missions that may involve forces based worldwide supporting the PACOM Commander.⁵⁰

There are two wings permanently assigned to 13th Air Force: the 15th Airlift Wing at Hickam Air Force Base and the 36th Wing at Andersen Air Base, Guam.⁵¹ The 15th Airlift Wing is partnered with the Hawaii Air National Guard and “provides strategic and tactical airlift with its eight C-17 Globemaster III aircraft and command airlift with one specially configured C-40 and one C-37.”⁵² The wing also serves as a critical en-route location for transient aircraft.⁵³ On 5 January 2007, 13th Air Force Detachment 1 was activated at Yokota Air Base, Japan.⁵⁴ It is responsible for “planning, coordinating, and executing air operations around Japan in coordination with the Japan Air Self Defense Force, through the 5th AF staff at Yokota, and the 613th [AOC] at Hickam.”⁵⁵

5th Air Force traces its roots back to the Far East Air Force⁵⁶ that first saw combat in the Philippines within hours of the attack on Pearl Harbor in December, 1941.⁵⁷ Though many of its aircraft were destroyed by the Japanese while still on the ground, those that survived the attack were able to regroup in Australia.⁵⁸ While in Australia, the remnants of the Far East Air Force were re-designated 5th Air Force in

⁴⁷13th Air Force Factsheet.

⁴⁸13th Air Force Factsheet.

⁴⁹13th Air Force Factsheet.

⁵⁰13th Air Force Factsheet.

⁵¹13th Air Force Factsheet

⁵²13th Air Force Factsheet

⁵³13th Air Force Factsheet.

⁵⁴13th Air Force Factsheet.

⁵⁵13th Air Force Factsheet.

⁵⁶ Though similar in name, the Far East Air Force and the Far East Air Forces were distinct organizations, the latter established in 1944 as the war in the Southwest Pacific expanded.

⁵⁷5th Air Force Factsheet, available from <http://www.yokota.af.mil/library/factsheets/factsheet.asp?id=6824>.

⁵⁸5th Air Force Factsheet.

1942 and placed under the command of Major General George C. Kenney.⁵⁹ Kenney was MacArthur's air component commander for all the allied air services and, under his leadership, air power provided the air support for MacArthur's island hopping campaign.⁶⁰ After the defeat of Japan, 5th Air Force served as part of the occupation forces.⁶¹

5th Air Force currently has a three-fold mission.⁶² It “plans, conducts, controls, and coordinates air operations” in accordance with taskings assigned by the PACAF Commander.⁶³ 5th Air Force also maintains a level of readiness necessary to successfully complete directed military operations.⁶⁴ Moreover, 5th Air Force “assists in the mutual defense of Japan and enhances regional stability by planning, exercising, and executing joint air operations in partnership with Japan.”⁶⁵ For day-to-day intra-theater airlift operations, 5th Air Force has permanently assigned to it the 374th Airlift Wing and to conduct C2 operations it has the 605th Air Operations Group which works with 5th Air Force staff and 13th Air Force Detachment 1.⁶⁶

7th Air Force is the Air Force's oldest numbered air force.⁶⁷ The Army Air Corps first activated it on 1 November 1940 as the Hawaiian Air Force.⁶⁸ In the aftermath of World War Two, 7th Air Force was briefly active as the Pacific Air Command before inactivating on 1 June 1949.⁶⁹ Resurrected as an administrative headquarters in the 1950s, 7th Air Force oversaw PACAF's AOR east of 140 degrees east longitude, including the Hawaiian Islands.⁷⁰ But the movement of PACAF from Japan to Hawaii led to its inactivation on 1 July 1957.⁷¹

The Air Force revived 7th Air Force during the Vietnam War to take over the

⁵⁹5th Air Force Factsheet.

⁶⁰5th Air Force Factsheet.

⁶¹5th Air Force Factsheet.

⁶²5th Air Force Factsheet.

⁶³5th Air Force Factsheet.

⁶⁴5th Air Force Factsheet.

⁶⁵5th Air Force Factsheet.

⁶⁶5th Air Force Factsheet.

⁶⁷7th Air Force Factsheet, available from <http://www.7af.pacaf.af.mil/library/factsheets/factsheet.asp?id=6810>.

⁶⁸PACAF Factsheet.

⁶⁹7th Air Force Factsheet.

⁷⁰7th Air Force Factsheet.

⁷¹7th Air Force Factsheet.

expanding functions and activities of the 2d Air Division.⁷² From 1966 through 1973, the command assumed responsibility for most Air Force operations in Vietnam and shared responsibility with 13th Air Force for operations from Thailand as 7th/13th Air Force.⁷³ 7th Air Force was inactivated 30 June 1975 but was reactivated on 8 September 1986 at Osan Air Base, Republic of Korea.⁷⁴ For the past twenty-four years, both as United States Air Forces Korea, under the joint USFK, and the Air Force component to the CFC's ACC, 7th Air Force has been a vital part of deterring aggression from North Korea.⁷⁵

The final numbered air force that falls under PACAF is 11th Air Force. It “plans, conducts, controls, and coordinates air operations in accordance with the tasks assigned by the [PACAF Commander] ... and is the force provider for Alaskan Command, the Alaskan North American Air Defense [NORAD] Region and other unified commanders.”⁷⁶ This is accomplished through the 611th Air Operations Group and 611th Air Support Group. The 611th Air Operations Squadron provides the 11th Air Force AOC's core staff, supporting NORAD and PACAF.⁷⁷ 11th Air Force assets are also assigned as the air component to JTF 519, which is PACOM's standing JTF tasked with being a mobile, tailorable force able to respond to major conflict throughout the PACOM AOR.⁷⁸ The 3rd Wing at Elmendorf Air Force Base, Alaska is 11th Air Force's primary wing and includes in its inventory C-17 Globemaster III aircraft for strategic and tactical air mobility operations.⁷⁹

The preceding two sections have provided a brief historical overview of the unique characteristics inherent in the Pacific Theater. Specifically, the large standing sub-unified commands, with associated air components, represent something far different from what is reflected in CENTCOM. Though OEF and OIF are separate activities and have their own command structures underneath CENTCOM, they do not fall under sub-

⁷²7th Air Force Factsheet.

⁷³7th Air Force Factsheet.

⁷⁴7th Air Force Factsheet.

⁷⁵7th Air Force Factsheet.

⁷⁶11th Air Force Factsheet, available from <http://www.pacaf.af.mil/library/factsheets/factsheet.asp?id=3605>.

⁷⁷11th Air Force Factsheet.

⁷⁸Admiral Tom Fargo, U.S. Navy, Commander, U.S. Pacific Command, Address to AFCEA West (USNI), 14 January 2003, available from <http://www.pacom.mil/speeches/sst2003/030114AFCEA.shtml>.

⁷⁹Elmendorf Air Force Base website, on-line, Internet, available from <http://www.elmendorf.af.mil/units>.

unified commands. Moreover, 9th Air Force is a single C-NAF that supports all of CENTCOM. The situation in PACOM is more complex not only because of the existence of standing sub-unified commands but also because of the multiple numbered air forces (see figure 2 below). Subsequently, command relationships in PACOM are also more complex than in CENTCOM. As an example, for contingencies specifically within the KTO, the 7th Air Force Commander assumes the role of COMAAFOR and CFACC, executing C2 of air mobility assets through the 607th AOC/AMD. In addition to the previously discussed complex command relationships, what follows now is a comprehensive examination of PACAF's command relationships for the presentation of forces within PACOM.

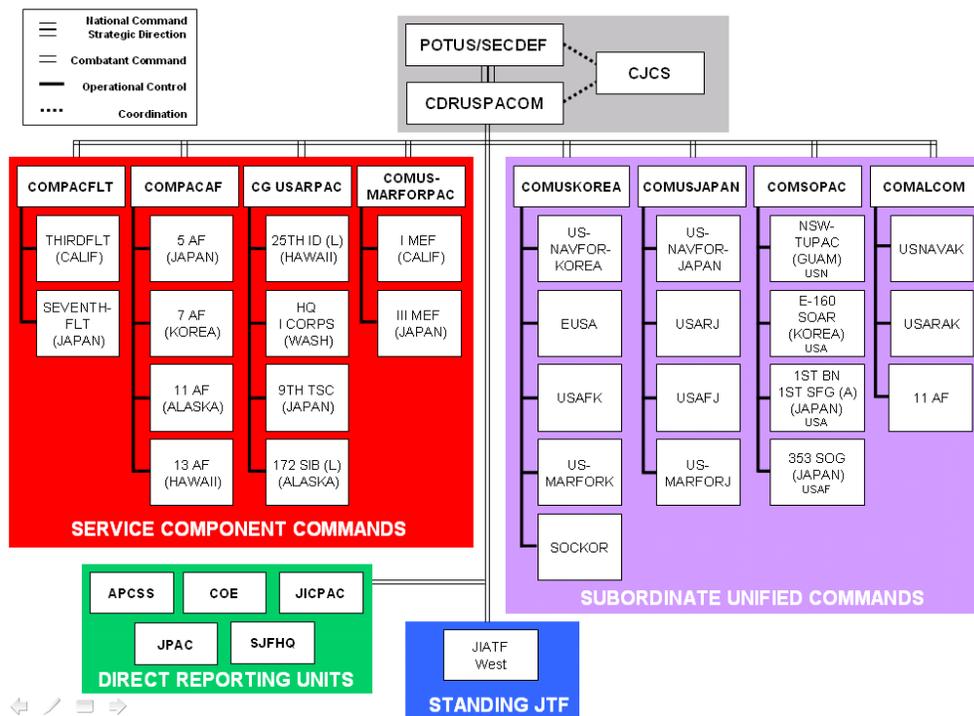


Figure 2 - PACOM Standing Command Relationships

SOURCE: PACAFI 38-101

PACOM and PACAF Command Relationships

As the air component command for the entire Pacific theater, PACAF is responsible for C2 of Air Force forces when the PACAF Commander is designated as the COMAFFOR and for C2 of all air assets in the AOR when the PACAF Commander is

the CFACC. The PACAF Commander may also serve as both the COMAFFOR and the CFACC like the AFCENT commander does. Unlike CENTCOM, PACOM has a significant quantity of forces directly assigned to it, including air mobility forces. When the PACAF Commander is COMAFFOR and CFACC, he or she is able to exercise C2 of all air forces through the 613th AOC. For air mobility forces in particular, the PACAF commander exercises C2 through 613th AOC/AMD.⁸⁰ As the COMAFFOR, the PACAF Commander can delegate TACON of air mobility assets assigned to 13th, 5th, and 11th Air Force to him or herself in the dual-hatted role of CFACC.

As previously mentioned, the PACAF commander is normally the designated COMAFFOR to PACOM, and as such is the senior Airman in the PACOM AOR. The PACAF Commander “will nominate COMAFFORs, as required, to subordinate joint forces established under the authority of [the PACOM Commander].”⁸¹ As the COMAFFOR, the PACAF Commander exercises C2 over Air Force assets in PACOM however the extent of C2 over air mobility forces depends on their status.

Air Force air mobility forces operating in the PACOM AOR normally fall into one of three general categories: TRANSCOM-assigned, PACOM-assigned, or PACOM-attached.⁸² In order to better understand the nuances that distinguish the categories, it is useful to review the doctrinal definitions of assign and attach. To assign a force means “To place units or personnel in an organization where such placement is relatively permanent, and/or where such organization controls and administers the units or personnel for the primary function, or greater portion of the functions, of the unit or personnel; or to detail individuals to specific duties or functions where such duties or functions are primary and/or relatively permanent.”⁸³ To attach a force refers to “The placement of units or personnel in an organization where such placement is relatively temporary; or the detailing of individuals to specific functions where such functions are

⁸⁰Pacific Air Forces Instruction (PACAFI) 10-2101 (Draft), *Pacific Air Mobility Operations*, 2009, 6, (Obtained courtesy of Mr. Andrew Pohl, Deputy Director for Operations, 613th AOC/AMD).

⁸¹Pacific Air Forces Instruction (PACAFI) 38-101, *Command Relationships and Presentation of Forces*, 12 December 2007 (Certified current 14 December 2009), 6.

⁸²PACAFI 38-101, *Command Relationships and Presentation of Forces*, 7.

⁸³PACAFI 38-101, *Command Relationships and Presentation of Forces*, 5.

secondary or relatively temporary, e.g., attached for quarters and rations; attached for flying duty.”⁸⁴

TRANSCOM-assigned forces operate under the control of 618th TACC. PACAF’s 613th AOC/AMD “routinely coordinates with 618th TACC for visibility of TRANSCOM assigned forces operating in the PACOM AOR.”⁸⁵ PACAF’s C-17s are assigned to TRANSCOM, which exercises COCOM, but which also delegates OPCON to PACOM.⁸⁶ PACAF’s C-17s are operated in accordance with the PACOM/TRANSCOM Memorandum of Agreement (MOA) dated 30 June 2006.⁸⁷

PACOM-assigned non-special operations Air Force air mobility forces are controlled by the 613th AOC/AMD, “operating in ATO and non-ATO mission operating environments.”⁸⁸ Subsequently, C2 and mission planning and employment processes vary depending on which environment is in effect. PACAF generally considers air mobility assets best managed as theater assets by the 613th AOC/AMD; however, “consideration will be given to attaching air mobility forces to a subordinate unified command or JTF on a case-by-case basis.”⁸⁹ The PACAF Commander provides input on each case to the PACOM Commander who is responsible for making the decision. PACOM-attached non-special operations Air Force air mobility forces are controlled the same as PACOM-assigned forces.⁹⁰ The PACAF Commander exercises OPCON of all non-special operations Air Force forces assigned to PACOM.⁹¹

For PACAF forces that are stationed in Korea, the PACAF Commander exercises Administrative Control (ADCON) and OPCON through the 7th Air Force Commander. During armistice, any PACAF-assigned or attached forces that are operating inside the KTO are TACON to the 7th Air Force Commander.⁹² For PACAF forces that are

⁸⁴PACAFI 38-101, *Command Relationships and Presentation of Forces*, 5.

⁸⁵PACAFI 38-101, *Command Relationships and Presentation of Forces*, 7.

⁸⁶PACAFI 38-101, *Command Relationships and Presentation of Forces*, 7.

⁸⁷PACAFI 38-101, *Command Relationships and Presentation of Forces*, 7.

⁸⁸PACAFI 38-101, *Command Relationships and Presentation of Forces*, 7.

⁸⁹PACAFI 38-101, *Command Relationships and Presentation of Forces*, 7.

⁹⁰PACAFI 38-101, *Command Relationships and Presentation of Forces*, 7.

⁹¹PACAFI 38-101, *Command Relationships and Presentation of Forces*, 7.

⁹²PACAFI 38-101, *Command Relationships and Presentation of Forces*, 8.

stationed outside of the KTO, the PACAF Commander exercises ADCON through the numbered air forces but exercises OPCON directly over the wings.⁹³

Under the direction of the PACOM Commander, the 13th Air Force Commander acts as a standing JFACC, “assuming day-to-day JFACC duties in the mission areas of air mobility, Joint Theater [Information, Surveillance, and Reconnaissance] Operations, Area Air Defense Commander (AADC), and Joint Personnel Recovery Operations within the PACOM AOR but outside the [KTO].”⁹⁴ The PACAF Commander also delegates OPCON of all PACAF-assigned and attached forces participating in the afore-mentioned missions to the 13th Air Force Commander. Standard mission sets are levied by the PACOM Commander with the PACAF Commander providing the required daily forces to the 13th Air Force Commander who then plans and executes the missions.⁹⁵ On a daily basis, the 13th Air Force Commander also provides support to USFJ in some operational mission areas which is coordinated via 13th Air Force Detachment 1 and the 5th Air Force staff.⁹⁶

If a new mission develops or if a new JTF is established by the PACOM Commander, the PACAF Commander responds by providing 13th Air Force with additional forces to enable the necessary Air Force support. It is PACAF’s position that the most efficient means of bringing Air Force capability to bear on a new mission or to support a JFC is by expanding 13th Air Force’s standing JFACC role.⁹⁷ For this purpose, 613th AOC and the Air Force Forces (AFFOR) staff are focused on around-the-clock operations, enabling them to “respond quickly and efficiently to new mission requirements.”⁹⁸ In other words, PACAF is postured to have one standing theater JFACC, with 13th Air Force providing the core capabilities needed to support that individual.

In order to grow the AFFOR staff to meet the needs of a large contingency, 613th AOC will augment its existing staff utilizing the reachback procedures outlined in the AFFOR C2 enabling concept. 613th AOC will call back to pre-designated active and

⁹³PACAFI 38-101, *Command Relationships and Presentation of Forces*, 8.

⁹⁴PACAFI 38-101, *Command Relationships and Presentation of Forces*, 8.

⁹⁵PACAFI 38-101, *Command Relationships and Presentation of Forces*, 12.

⁹⁶PACAFI 38-101, *Command Relationships and Presentation of Forces*, 12.

⁹⁷PACAFI 38-101, *Command Relationships and Presentation of Forces*, 12.

⁹⁸PACAFI 38-101, *Command Relationships and Presentation of Forces*, 12.

reserve units for the Unit Type Codes necessary to carry forth the new mission.⁹⁹ The Air Reserve Component will develop, in conjunction with a warfighting headquarters such as 613th AOC, a plan to provide an augmentation force.¹⁰⁰ For an AMD specifically, AMC is developing a CONEMP that states:

An AMD augmentation unit provides a rapid, tailored, worldwide, air mobility response to a combatant commander's needs. An AMD augmentation unit extends existing theater AOC's AMD infrastructure, through both in-place employment and rapid forward deployment capabilities, and presents forces to warfighting unified commanders by focusing on meeting our nation's Global Air Mobility requirements. Each AMD augmentation unit presents professionally trained combat mission-ready personnel in the areas of airlift, air refueling, [C2], logistics (airlift requirements/aerial port & aircraft maintenance), and [aero-medical] evacuation planning and execution. Additionally, an active duty augmentation unit (AMOS) can provide combat airspace, intelligence, C2 systems admin, and supply, to augment an AOC's support and specialty teams.¹⁰¹

PACAF uses the theater-wide JFACC concept because "the effective execution of air operations among multiple JTFs [along with] ... the need to prioritize limited theater resources during daily operations beg[s] for unity of command under a single theater JFACC."¹⁰² It is PACAF's policy to endorse the theater JFACC concept for all air operations outside the KTO.¹⁰³ The theater JFACC retains OPCON of Air Force forces and is delegated TACON of other joint forces that are made available. He or she reports directly to the PACOM Commander and operates in direct support of PACOM's subordinate JFCs like the USFJ Commander.

PACAF's policy with regards to the theater JFACC concept also reflects the belief that having a theater JFACC is the most logical choice in a situation where

⁹⁹*Air Force Forces (AFFOR) Command and Control (C2) Enabling Concept (Change 2)*, 25 May 2006, 11-12. Unit Type Codes (UTC) are alpha-numeric designators that represent a capability or asset. UTCs can represent personnel, equipment, or both.

¹⁰⁰*AFFOR C2 Enabling Concept (Change 2)*, 25 May 2006, 12.

¹⁰¹HQ AMC/A3MC, *Air Mobility Division Augmentation Concept of Employment (AMD AUG CONEMP), Version 1.0 (Draft)*.

¹⁰²PACAFI 38-101, *Command Relationships and Presentation of Forces*, 8.

¹⁰³PACAFI 38-101, *Command Relationships and Presentation of Forces*, 8.

multiple crises have developed and multiple joint forces are engaged in the PACOM AOR.¹⁰⁴ Furthermore, PACAF's policy states:

The theater JFACC concept is the current best practice in CENTCOM, tested and proven during hard years of war in Iraq, Afghanistan and the Horn of Africa as the best solution to support multiple JTFs. A theater JFACC with operational control of air forces, and reporting directly to the Theater Commander, can swing support to multiple JTFs as the situation dictates in accordance with the Theater Commander's priorities and apportionment. The theater JFACC is the embodiment of "centralized control" of airpower, a foundational concept in Air Force and Joint doctrine proven in combat from North Africa in 1942 up until today in the CENTCOM AOR. It allows for the most efficient use of limited theater resources, allows the needs of multiple JTFs (and sub-unified commands) to be dynamically prioritized and serviced, and leaves forces best postured to handle the next arising crisis.¹⁰⁵

For day-to-day operations, PACOM's sub-unified commands do not have PACAF forces assigned to them. OPCON of these forces is exercised by the PACAF commander.¹⁰⁶ The PACAF Commander will attach forces with OPCON to sub-unified commanders as required to execute contingency operations. Even though the PACOM Commander has expressly granted OPCON of PACAF forces to the PACAF Commander, there are a series of complex relationships for each sub-unified command and PACAF numbered air force commanders. As was previously mentioned, 7th Air Force Commander is dual-hatted as the commander of U.S. Air Forces Korea. In that role he or she provides Air Force component support to USFK. Per PACOM Instruction 3020.2L, *Command Relationships in United States Pacific Command*, the Service Component commanders in Korea are subordinate to the USFK Commander for joint and combined actions within the KTO.¹⁰⁷

For USFJ, both 5th Air Force and 13th Air Force share responsibility to the commander of USFJ for Air Force forces. Though the 5th Air Force Commander also serves as U.S. Air Forces Japan commander during peacetime, the 13th Air Force Commander serves in that role during exercises and contingencies.¹⁰⁸ The 5th Air Force

¹⁰⁴PACAFI 38-101, *Command Relationships and Presentation of Forces*, 13.

¹⁰⁵PACAFI 38-101, *Command Relationships and Presentation of Forces*, 13.

¹⁰⁶PACAFI 38-101, *Command Relationships and Presentation of Forces*, 9.

¹⁰⁷PACAFI 38-101, *Command Relationships and Presentation of Forces*, 9.

¹⁰⁸PACAFI 38-101, *Command Relationships and Presentation of Forces*, 9.

staff works in direct support of 13th Air Force for specified tasks on a day-to-day basis but will be CHOPped to 13th Air Force for contingency operations and exercises.¹⁰⁹ The PACAF Commander exercises the authority to CHOP in consultation with the PACOM Commander. In order to ensure adequate integration of forces, the 5th Air Force Vice Commander is dual-hatted as a 13th Air Force Deputy Commander.¹¹⁰

The 11th Air Force Commander is also designated as the Commander of ALCOM and wears an additional hat as the Air Force component commander to ALCOM.¹¹¹ Like USFK, Service Component commanders are subordinate to the ALCOM commander for actions in Alaska in accordance with PACOM Instruction 3020.2L.¹¹² Alaska is geographically in the NORTHCOM AOR while the forces in Alaska are predominantly COCOM to the PACOM Commander. Some strategic forces are COCOM to the Commander of United States Element NORAD and the NORAD Commander is responsible for the air defense mission in Alaska.¹¹³ All of these factors combined create a complex operating environment for the 11th Air Force commander and his or her staff. The 11th Air Force Commander is also hatted as the Alaskan NORAD Region Commander. In this role he or she exercises day-to-day OPCON of air warning mission forces assigned COCOM to the commander of U.S. Element NORAD.¹¹⁴ Additionally, the 11th Air Force Commander, as the ALCOM Commander, is also hatted as the JTF-AK Commander. This is a NORTHCOM JTF “charged with homeland defense and civil support missions in Alaska.”¹¹⁵ Finally, the 11th Air Force Commander is also hatted as the Air Force component commander and JFACC for JTF-AK; however, during normal day-to-day operations no forces are assigned or attached to this JTF.¹¹⁶

For contingencies operations in the PACOM AOR, the PACOM Commander employs a “two-tiered” C2 concept, “with the tier-one command echelon being Headquarters PACOM and tier-two being the JTF.”¹¹⁷ PACOM’s sub-unified commands

¹⁰⁹PACAFI 38-101, *Command Relationships and Presentation of Forces*, 9.

¹¹⁰PACAFI 38-101, *Command Relationships and Presentation of Forces*, 10.

¹¹¹PACAFI 38-101, *Command Relationships and Presentation of Forces*, 10.

¹¹²PACAFI 38-101, *Command Relationships and Presentation of Forces*, 10.

¹¹³PACAFI 38-101, *Command Relationships and Presentation of Forces*, 10.

¹¹⁴PACAFI 38-101, *Command Relationships and Presentation of Forces*, 10.

¹¹⁵PACAFI 38-101, *Command Relationships and Presentation of Forces*, 10.

¹¹⁶PACAFI 38-101, *Command Relationships and Presentation of Forces*, 10.

¹¹⁷PACAFI 38-101, *Command Relationships and Presentation of Forces*, 10.

may be considered tier-two command echelons. The PACOM Commander assigns forces as required for mission execution and the PACAF Commander “organizes and provides the Air Force contribution to the joint force and makes recommendations for joint command arrangements.”¹¹⁸ As previously stated, the PACAF Commander has designated the 13th Air Force Commander to act as the theater JFACC for all contingency operations outside the KTO. The PACOM Commander will ultimately approve other subordinate joint organizations as needed.¹¹⁹ In very rare cases, a joint force may require exclusively dedicated forces along with a dedicated C2 capability. In such a case PACAF can be expected to be CHOPped to a dedicated Air Force component to the JTF. This component will include “a COMAFFOR, forces, and the ability to [C2].”¹²⁰ Now that the PACOM and PACAF command relationships have been reviewed, the lens can now be focused on how C2 of air mobility forces is executed within the theater.

613th AOC/AMD

For C2 of PACAF-assigned and attached air mobility forces, less the KTO, there is 613th AOC/AMD. This division is prepared to recommend air mobility support options for both exercises and contingency operations, to include Humanitarian Assistance and Disaster Relief.¹²¹ It operates around-the-clock, providing C2 for 77 PACAF-assigned mobility aircraft at five locations in the AOR, maintains an immediate wartime surge capability, and also tracks non-PACAF mobility aircraft transiting the Pacific Theater.¹²² 613th AOC/AMD “plans, coordinates, tasks, executes and controls the theater air mobility mission across the spectrum of contingency ... from normal, steady-state operations (peacetime) through non-hostile contingencies to hostile contingency (wartime).”¹²³ 613th AOC/AMD will also develop, in conjunction with PACOM J43, TRANSCOM, and 618th TACC, a theater airlift distribution system that supports theater operations plan taskings and complements inter-theater airlift operations

¹¹⁸PACAFI 38-101, *Command Relationships and Presentation of Forces*, 10.

¹¹⁹PACAFI 38-101, *Command Relationships and Presentation of Forces*, 11.

¹²⁰PACAFI 38-101, *Command Relationships and Presentation of Forces*, 14.

¹²¹ PACAFI 38-101, *Command Relationships and Presentation of Forces*, 20.

¹²²Colonel Joe Dague, U.S. Air Force, Chief, Air Mobility Division, 613th Air and Space Operations Center, “AMD Immersion,” Briefing given on 11 Aug 2009, slide 43.

¹²³PACAFI 10-2101 (Draft), *Pacific Air Mobility Operations*, 6.

plan taskings.¹²⁴ In line with the classic AMD structure, 613th AOC/AMD is comprised of four functionally oriented teams: ALCT, ARCT, AMCT, and AECT.¹²⁵ However, it also has two additional specialty teams, the Air Mobility Support Team (AMST) and the Air Mobility Exercise/Training Team (AME/TT).¹²⁶

ALCT provides “intra-theater airlift functional expertise to plan and coordinate intra-theater airlift operations to support contingencies” within the Pacific AOR.¹²⁷ It also “processes validated airlift requirements from [PACOM] and [618th TACC] and develops the intra-theater airlift schedule.”¹²⁸ Of the six sections in which the ALCT is organized, Executive Air Support/Operational Support Aircraft (EAS/OSA), and Pacific Military Airspace Reservation Function (PACMARF) are unique to the PACAF’s AMD.¹²⁹ Two of the other sections, specifically Requirements and Airlift Plans, fill roles larger than their counterparts in CENTCOM. 613th AOC/AMD Requirements branch still houses the common-user airlift experts, manages TPFDDs, recommends air transportation modes, and schedules airlift requirements in a similar fashion to the CENTCOM AMD Requirements branch. However, because 613th AOC is postured to provide C2 for contingencies as well as peacetime operations simultaneously, the AMD Requirements branch manages two scheduling systems. Operations in CENTCOM operate in a wartime mode exclusively.

613th AOC/AMD Requirements branch collaborates with 618th TACC on C-17 Transportation Working Capital Fund (TWCF) taskings. The TWCF is “[a] distinct subset of the Air Force Working Capital Fund (AWCF) budget submission ... [and] It reflects the cost authority needed to meet peacetime operations, Overseas Contingency Operations, and surge/readiness requirements to support the National Military Strategy. Capital funding supports the Department’s In-Transit Visibility and [C2] needs, facilitating continuous process improvement and modernization.”¹³⁰ As previously mentioned, TRANSCOM has COCOM over the C-17s in the Pacific but delegates

¹²⁴AMC/PACAF Command to Command Agreement, July 2007, C-3.

¹²⁵PACAFI 10-2101 (Draft), *Pacific Air Mobility Operations*, 6.

¹²⁶PACAFI 10-2101 (Draft), *Pacific Air Mobility Operations*, 6.

¹²⁷PACAFI 10-2101 (Draft), *Pacific Air Mobility Operations*, 6.

¹²⁸Dague, “AMD Immersion,” slide 9.

¹²⁹Dague, “AMD Immersion,” slide 9.

¹³⁰Air Force Working Capital Fund Fiscal Year (FY) 2011 Budget Estimates, 63, on-line, Internet, available from <http://www.saffm.hq.af.mil/shared/media/document/AFD-100129-089.pdf>.

OPCON to PACOM, which operates those C-17s in accordance with the PACOM/TRANSCOM MOA. For peacetime theater movements, a customer's airlift requirement must be first validated by PACOM J43, also known as PACOM DDOC, as a C-17 eligible movement.¹³¹ As is done with all TWCF missions flown by PACAF-assigned C-17s, PACOM DDOC forwards the request to TRANSCOM which validates the mission and forwards it to 618th TACC for allocation.¹³² 618th TACC and 613th AOC/AMD then collaborate on the mission. If the PACAF-assigned C-17 operates a TWCF mission solely within the PACOM AOR it will be planned and executed by 613th AOC/AMD.¹³³ All other TWCF missions operated by PACAF-assigned C-17s will be planned and executed by 618th TACC and tracked by 613th AOC/AMD.¹³⁴

The Airlift Plans branch assists the Requirements branch by providing "full-spectrum planning for airlift missions."¹³⁵ As with their CENTCOM counterpart, the Airlift Plans branch coordinates mission support, coordinates with the user, and tasks missions to the wings.¹³⁶ Additionally, the branch must ensure all PACAF intra-theater airlift missions are cut into GDSS or GDSS 2.¹³⁷ Because AMC simultaneously schedules and executes both peacetime and wartime missions, it requires a system capable of operating in both the classified and unclassified environment. Furthermore, AMC uses GDSS 2 to facilitate communication with a host of support functions, contract air carriers, and other AMC users who do not have access to classified security systems. In 2007, the Global Cyber Integration Center at Langley Air Force Base, Virginia initiated the release of Service Pack 7 to TBMCS. This was "a critical system upgrade and important milestone to completing seamless interoperability" with AMC's GDSS 2.¹³⁸ With this upgrade, TBMCS can interface with GDSS 2, allowing AMC planners, as

¹³¹Dague, "AMD Immersion," slide 46.

¹³² *AMC/PACAF Command to Command Agreement*, July 2007, C-1.

¹³³Dague, "AMD Immersion," slide 46.

¹³⁴Dague, "AMD Immersion," slide 46.

¹³⁵Dague, "AMD Immersion," slide 11.

¹³⁶Dague, "AMD Immersion," slide 11.

¹³⁷*AMC/PACAF Command to Command Agreement*, July 2007, C-5. GDSS is a less capable legacy system which is being systematically replaced by GDSS 2.

¹³⁸Captain Larry van der Oord, U.S. Air Force, Global Cyberspace Integration Center Public Affairs, "Center delivers interoperability between combat, mobility forces," available from <http://www.af.mil/news/story.asp?id=123061780>.

well as Airlift planners at an AMD, the ability to pull information from TBMCS for mission planning of combat and contingency missions.¹³⁹

Due to the overwhelming need for air travel in the Pacific Theater and the number of DVs with a need to transit large distances in a relatively short amount of time, 613th AOC/AMD has a branch specifically dedicated to missions that fill these requirements. The ESA/OSA section acts as centralized scheduler and coordinates C-12 OSA travel for any DoD authorized traveler.¹⁴⁰ The PACAF vice commander may authorize travel for other PACAF General Officers aboard C-12 aircraft as needed.¹⁴¹ C-40 and C-37 aircraft support is primarily provided for the PACOM commander, USFK commander and PACAF commander, though the PACAF commander needs Vice Chief of Staff of the Air Force or PACOM Chief of Staff approval.¹⁴²

The ESA/OSA section also serves as the PACOM Fusion Cell and Executive Airlift Scheduling Activity for DV support.¹⁴³ The section receives all support requests and de-conflicts the schedule.¹⁴⁴ EAS/OSA planners coordinate with a DV's staff to plan a mission and then dispatch and provide execution C2.¹⁴⁵ When necessary, the section will coordinate with Pacific Fleet or United States Army Pacific for alternate support when PACAF assets are unavailable.¹⁴⁶

PACMARF is the U.S. military agency responsible for developing altitude reservations in the Pacific.¹⁴⁷ Military aircraft sometimes have to deviate from standard air traffic procedures to satisfy military necessity. For example, air refueling operations and air bridges require large blocks of airspace to be free from all but participating military traffic. Airspace is reserved in terms of flight altitude above mean sea level and the implementation of altitude reservation procedures provides a higher level of safety when aircraft have to operate in closer proximity to one another. For the Atlantic, the Federal Aviation Administration Central Altitude Reservation Facility facilitates altitude

¹³⁹ Oord, "Center delivers interoperability between combat, mobility forces."

¹⁴⁰ Dague, "AMD Immersion," slide 12.

¹⁴¹ Dague, "AMD Immersion," slide 12.

¹⁴² Dague, "AMD Immersion," slide 12.

¹⁴³ Dague, "AMD Immersion," slide 13.

¹⁴⁴ Dague, "AMD Immersion," slide 13.

¹⁴⁵ Dague, "AMD Immersion," slide 13.

¹⁴⁶ Dague, "AMD Immersion," slide 13.

¹⁴⁷ Dague, "AMD Immersion," slide 14.

reservation. Since air mobility aircraft conduct the majority of American military air missions over the Pacific, to include tanker escorts of combat aircraft, locating this function within the AMD is a logical decision.

ARCT “plans and tasks air refueling missions to support theater air and space operations and coordinates air refueling planning, tasking, and scheduling to support an air bridge and/or global attack missions” within the Pacific AOR to support contingencies.¹⁴⁸ The AMCT provides “centralized control of all intra-theater airlift operations” within the Pacific AOR.¹⁴⁹ It also maintains execution process and communications connectivity for “tasking, coordinating, and flight following with the [Combat Operations Division of the AOC], subordinate air mobility units and mission forces.”¹⁵⁰ The AMCT also integrates with 618th TACC to provide C2 information on air mobility operations. The AECT provides “operational planning, scheduling, and execution of scheduled and unscheduled aero-medical evacuation missions” within the Pacific AOR to support contingencies.¹⁵¹

AMST is “an ad hoc team that can be tailored to provide various support functions to the AMD Chief and the functional teams within the AMD.”¹⁵² It is based largely on the version that was implemented at the CENTCOM AMD. However, the 613th AOC/AMD’s AMST is notional during most contingencies. When needed, trained personnel are requested and brought in to augment the desired support functions. There are nine of these support functions in particular: intelligence, surveillance and reconnaissance, weather, airspace management, reports and briefs, information management, communications, ground liaison officer, FP, and Contingency Response Group liaison.¹⁵³ For day-to-day operations there is no standing AMST within the 613th AOC/AMD.¹⁵⁴

¹⁴⁸Dague, “AMD Immersion,” slide 20.

¹⁴⁹Dague, “AMD Immersion,” slide 16.

¹⁵⁰Dague, “AMD Immersion,” slide 17.

¹⁵¹Dague, “AMD Immersion,” slide 24.

¹⁵²PACAFI 10-2101 (Draft), *Pacific Air Mobility Operations*, 8.

¹⁵³PACAFI 10-2101 (Draft), *Pacific Air Mobility Operations*, 8.

¹⁵⁴PACAFI 10-2101 (Draft), *Pacific Air Mobility Operations*, 8.

AME/TT is a small cadre of trainers who maintain a high level of expertise in particular functional positions.¹⁵⁵ During peacetime and up through non-hostile contingencies, this team provides initial qualification training, mission qualification training, and continuation training to AMD personnel in accordance with Air Force Instruction 13-1AOC, Volume 1, *Ground Environment Training-Air and Space Operations Center*.¹⁵⁶ Due to the large number of exercises that occur in the Pacific Theater annually, they also provide planning for 613th AOC/AMD participation in these exercises. AME/TT also trains augmentees and coordinates with the other teams to ensure combat mission readiness of 613th AOC/AMD personnel for any exercise participation.¹⁵⁷

PACOM DIRMOBFOR¹⁵⁸ and AMLOs

In PACOM, the DIRMOBFOR is expected to be an advisor to the COMAFFOR, JFACC and the JFACC's AMD Chief, primarily with respect to integration of air mobility forces that have not been CHOPped to the theater.¹⁵⁹ The DIRMOBFOR coordinates with 613th AOC/AMD and will normally be a senior mobility officer familiar with the PACOM AOR.¹⁶⁰ When TRANSCOM inter-theater air mobility forces are employed in support of PACOM, the DIRMOBFOR should also have experience in inter-theater air mobility operations. The duties and responsibilities that the DIRMOBFOR is expected to execute include: directing the integration of strategic air mobility support provided by AMC assigned mobility forces, directing the tasking of AMC strategic air mobility forces TACON to PACOM, directing the tasking of intra-theater air mobility forces OPCON or TACON to PACOM, coordinating with the 613th AOC Director to ensure all air mobility operations supporting the PACOM Commander are fully integrated with the ATO cycle and de-conflicted with all other air operations,

¹⁵⁵PACAFI 10-2101 (Draft), *Pacific Air Mobility Operations*, 9.

¹⁵⁶PACAFI 10-2101 (Draft), *Pacific Air Mobility Operations*, 9

¹⁵⁷PACAFI 10-2101 (Draft), *Pacific Air Mobility Operations*, 9.

¹⁵⁸The suffix "-Air" attached to the DIRMMOBFOR title in CENTCOM is used to distinguish the Air Force position from the Army's DIRMOBFOR-Surface which is a relatively new position the Army is utilizing to help manage the large surface supply chain system in CENTCOM. In theaters where this convention has not been introduced the more generic DIRMOBFOR term is understood to mean the air component.

¹⁵⁹AMC/PACAF *Command to Command Agreement*, July 2007, C-13.

¹⁶⁰AMC/PACAF *Command to Command Agreement*, July 2007, C-13.

and coordinating with 618th TACC all strategic air mobility missions to ensure the most effective use of air mobility resources in accomplishing the necessary missions.¹⁶¹

To assist the DIRMOBFOR in interfacing with air mobility users throughout the AOR, PACAF will provide intra-theater AMLOs in accordance with AMLO-specific directives and theater MOAs. Specifically, PACAF will provide logistical support to assigned AMLOs which will include supplies, mobility equipment, and communications-equipped vehicles. Additionally, PACAF will assign Tactical Air C2 Specialists to assist the AMLOs at forward deployed, austere locations.¹⁶² AMC will provide AMLO augmentation as required during exercise, contingency, and war-time operations.¹⁶³

PACOM DDOC and Airlift Request and Validation

As previously mentioned, PACOM DDOC is incorporated as PACOM J43 on the PACOM Commander's staff. It is made up of Strategic Mobility, Missions, Operations, and Sustainment branches and is responsible for all of PACOM's transportation programs and policies.¹⁶⁴ PACOM DDOC "plans, coordinates, and executes Strategic Mobility and Distribution Initiatives" within the PACOM AOR.¹⁶⁵ It also directs the J4 Joint Operations Center watch standers and acts as the single point of contact for interface with PACOM J3. Moreover, PACOM DDOC acts "to maximize the effective flow of force deployments and movement of sustainment cargo" for contingencies in the PACOM AOR.¹⁶⁶

Peacetime missions that are validated by PACOM DDOC as PACOM-owned C-130 or KC-135 eligible movements will be passed directly to 613th AOC/AMD Requirements branch for planning and execution.¹⁶⁷ For wartime or TPFDD movements, PACOM DDOC validates the airlift requirement and allocates a source code which determines whether it is a TRANSCOM or 613th AOC/AMD requirement.¹⁶⁸ A/K-coded movement requirements are considered strategic or inter-theater. These types of

¹⁶¹AMC/PACAF Command to Command Agreement, July 2007, C-13-14.

¹⁶²AMC/PACAF Command to Command Agreement, July 2007, C-14.

¹⁶³AMC/PACAF Command to Command Agreement, July 2007, C-15.

¹⁶⁴Brigadier General Kenneth S. Dowd, U.S. Army, "PACOM J4 Elevator Brief," Briefing given on 26 September 2006, slide 7.

¹⁶⁵Dowd, "PACOM J4 Elevator Brief," slide 7.

¹⁶⁶Dowd, "PACOM J4 Elevator Brief," slide 7.

¹⁶⁷Dague, "AMD Immersion," slide 46.

¹⁶⁸Dague, "AMD Immersion," slide 45.

requirements are routed to TRANSCOM and are exclusively planned and executed by 618th TACC.¹⁶⁹ A/D-coded movement requirements are considered intra-theater and are routed to the Requirements branch to be eventually planned and executed by 613th AOC/AMD.¹⁷⁰ PACOM DDOC also passes logistical information to TRANSCOM DDOC for air mobility missions transiting the PACOM AOR serviced by AMC's En Route System.

AMC En Route Structure in the PACOM AOR

Though not directly part of PACOM, there are entities operating in the PACOM AOR that facilitate air mobility missions transiting through the AOR. Throughout the Pacific Theater and in the KTO are stationed several Air Mobility Operations Wings, Air Mobility Operations Groups, and Air Mobility Operations Squadrons (AMOS) that are forward units under OPCON of the 15th EMTF at Travis Air Force Base, California. These units are part of AMC's global En Route structure. 15th EMTF is a subordinate of 18th Air Force, AMC's numbered Air Force. The AMOS organizational structure includes an Air Mobility Control Center (AMCC), an Air Terminal Operations Center (ATOC), and a Maintenance Operations Center.¹⁷¹ AMCCs ensure execution of 618th TACC-directed missions, engage in operational interface with 618th TACC, engage in operational interface with host installation, and interface with transient aircrew.¹⁷² AMCCs pass C2 information on arrivals, departures, and cargo loads back to the TRANSCOM DDOC, ultimately providing a link for TRANSCOM-owned missions from the Pacific Theater through 618th TACC.¹⁷³ TRANSCOM DDOC also receives information from PACOM DDOC on logistics-related issues. As with CENTCOM DDOC, PACOM DDOC is staffed with TRANSCOM-trained personnel to help facilitate in-transit visibility requirements.

Summary

This chapter began with a historical examination of the Pacific Theater, PACOM, PACOM's various sub-unified commands, and the multiple numbered air forces in the

¹⁶⁹Dague, "AMD Immersion," slide 45.

¹⁷⁰Dague, "AMD Immersion," slide 45.

¹⁷¹"AMCC C2 for Squadron Commanders," 521st Air Mobility Operations Wing Commander's Conference, Briefing on 26 February 2010, slide 3.

¹⁷²"AMCC C2 for Squadron Commanders," slide 4.

¹⁷³"AMCC C2 for Squadron Commanders," slide 18.

AOR. It was evident that the American military has deep roots in the Pacific and has long standing relationships there. The variety of missions within the AOR has led to a complex arrangement of organizations with an equally complex, but supportive, set of command relationships. The chapter then focused on the intra-theater airlift and theater distribution systems, noting how many of CENTCOM's best practices have been implemented. For example, the designation of a theater JFACC, establishment of a JDDOC, and use of integrated air mobility C2 operations were all concepts that were readily observed. Of particular note, however, were some differences in AMD architecture and in the degree of TRANSCOM and AMC involvement in the theater. These differences, and the reasons behind them, will be discussed in further detail in Chapter 4. Next this thesis will examine the intra-theater airlift and theater distribution systems in the AFRICOM AOR. Following that, this thesis will analyze the core intra-theater air mobility elements that are common to the three AORs and discuss some considerations that a JFC should ponder when looking to implement the best intra-theater airlift system for a given theater.

Chapter 3

The AFRICOM Way

Mobility is the true test of a supply system.
-Captain Sir Basil Liddell Hart, *Thoughts on War* (1944)

The previous chapters provided brief historical examinations of the theaters that they covered in order to frame the discussion of their intra-theater air mobility systems in the appropriate context. This chapter will review a brief history of American interest and involvement on the continent of Africa, examining the reasons why Africa's strategic importance has become so crucial to national security that in 2008 the United States created AFRICOM. This review will provide, like the previous two, a historical context in which to examine the evolution of an air mobility system in AFRICOM. Through much of the years previous to the last decade of the twentieth century, the continent of Africa had only been of slight strategic importance to the United States. However, starting in the 1990s, the strategic landscape began to change and Africa has since steadily become more important to both the U.S. government as well as the U.S. military. The chapter will then examine intra-theater airlift missions within the AOR, the AFRICOM DDOC, 17th Air Force, and the 617th AOC. Of particular interest will be AFRICOM's air component, Air Forces Africa, unique among the geographic commands in that it is almost entirely mobility-centric.

History of U.S. Involvement in Africa¹

American involvement with the African continent spans the centuries, with origins that predate the country's birth.² As colonial expansion took hold in North America, it was the African slave trade that sustained the need for labor, reaching a

¹Author's Note: The source documents by Lauren Ploch and by Walter Kansteiner and J. Stephen Morrison were originally found in the Graduate Research Project by Major Tom R. Ulmer. For more on Africa and AFRICOM, please see Major Tom R. Ulmer, "Using an Adaptive Logistics Network in Africa: How Much and How Far," Graduate Research Project, Air Force Institute of Technology, June 2009.

²Major Tom R. Ulmer, "Using an Adaptive Logistics Network in Africa: How Much and How Far," Graduate Research Project, Air Force Institute of Technology, June 2009, 8.

height of over six million slaves in the years between 1700 and 1800.³ Later, as the fledgling nation strove to assert itself on the global stage during the First Barbary War, the U.S. Marines celebrated their defeat of the Berber pirates “on the shores of Tripoli” after the Battle of Derna, an event that also marked the first time that the American flag was flown over the land of a conquered foe.⁴ For the most part however, the U.S. government had traditionally avoided overt involvement in the internal struggles on the continent, with Angola, South Africa, Somalia, and more recently Sudan as the notable exceptions.⁵ As Lauren Ploch summarizes in her Congressional Research Service (CRS) Report for Congress, “Issues on the African continent have not historically been identified as strategic priorities for the U.S. military.”⁶ Prior to 1952, Africa was not even a part of the American military command construct.⁷ Moreover, for the majority of the Cold War, the U.S. foreign policy with respect to Africa was based primarily on containing the Soviets.⁸ And after the fall of the Soviet Union, the DoD position on much of Africa indicated that there was “very little strategic interest,” though it did acknowledge political and humanitarian interests.⁹

Things began to change with the release of the National Security Strategy (NSS) of 2002, which captured the Bush Administration’s desire “for a more focused strategic approach toward the African continent.”¹⁰ More significant was the release of the 2006

³Paul Lovejoy, *Transformations in Slavery*, (Cambridge: University Press, 2000), quoted in Major Tom R. Ulmer, U.S. Air Force, “Using an Adaptive Logistics Network in Africa: How Much and How Far,” Graduate Research Project, Air Force Institute of Technology, June 2009, 8.

⁴Major Paul F. Spaven, “A U.S. Air Force Strategy for Africa,” SAASS Thesis, May 2005, 25.

⁵Donald Rothchild and Nikolas Emmanuel, *U.S. Intervention in Africa’s Ethnic Conflicts: The Scope for Action*, Draft Copy, University of California Los Angeles Center for African Studies, 2, available from <http://www.international.ucla.edu/africa/grca/publications/article.asp?parentid=107608>.

⁶Lauren Ploch, *Congressional Research Service (CRS) Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, Order Code RL34003, Updated 22 March 2011, 14.

⁷Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 14.

⁸Letitia Lawson, “U.S. Africa Policy Since the Cold War,” *Strategic Insights*, Vol. VI, Issue 1, January 2007, as quoted in Lauren Ploch, *Congressional Research Service (CRS) Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, Order Code RL34003, Updated 22 March 2011, 14.

⁹DoD Office of International Security Affairs, *United States Strategy for Sub-Saharan Africa*, August 1995, as quoted in Lauren Ploch, *Congressional Research Service (CRS) Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, Order Code RL34003, Updated 22 March 2011, 14.

¹⁰Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 14.

NSS, which focused even greater attention on Africa.¹¹ Where the 2002 NSS addressed expected U.S. national security issues dealing with terrorism and regional security, the 2006 NSS went further, also including such things as health and education.¹² What propagated this increase interest in Africa? According to a 2004 report to Congress published by the Center for Strategic and International Studies, American interests in Africa are driven by a number of factors, to include combating transnational terror networks, energy, global economics, regional security, and the HIV/AIDS pandemic.¹³

The threat of future terrorist activity coming from the African continent is real.¹⁴ Within many African countries, conditions exist that make the socioeconomic environment ripe for exploitation by terror leaders. Furthermore, with 300 million Muslims living in a region plagued by religious and ethnic strife, failed states, and economic disparities, Islamic fundamentalist organizations have fertile ground for recruitment and to set up training operations.¹⁵ In light of this, the current Presidential Administration has continued to emphasize Africa's rising strategic interest to the United States.¹⁶ In a speech to the Parliament of Ghana in 2009, President Barack Obama stated that "When there is genocide in Darfur or terrorists in Somalia, these are not simply African problems, they are global security challenges, and they demand a global response ... our Africa Command is now focused not on establishing a foothold on the continent, but on confronting these common challenges to advance the security of America, Africa, and the world."¹⁷

¹¹Spaven, "A U.S. Air Force Strategy for Africa," 36.

¹²Spaven, "A U.S. Air Force Strategy for Africa," 36.

¹³Kansteiner and Morrison, *Rising U.S. Stakes in Africa: Seven Proposals to Strengthen U.S.-Africa Policy*, as quoted in Major Tom R. Ulmer, "Using an Adaptive Logistics Network in Africa: How Much and How Far," Graduate Research Project, Air Force Institute of Technology, June 2009, 8.

¹⁴J. Stephen Morrison and Princeton N. Lyman, "Countering the Terrorist Threat in Africa," in Walter H. Kansteiner III and J. Stephen Morrison, *Rising U.S. Stakes in Africa: Seven Proposals to Strengthen U.S.-Africa Policy*, (Washington D.C.: Center for Strategic and International Studies Press, 2004), 104, available from <http://allafrica.com/sustainable/resource/view/00010230.pdf>.

¹⁵ Morrison and Lyman, "Countering the Terrorist Threat in Africa," in Kansteiner and Morrison, *Rising U.S. Stakes in Africa: Seven Proposals to Strengthen U.S.-Africa Policy*, 104.

¹⁶Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 15.

¹⁷President Barrack H. Obama, Speech to the Ghanaian Parliament, 11 July 2009, as quoted in Lauren Ploch, *Congressional Research Service (CRS) Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, Order Code RL34003, Updated 22 March 2011, 14.

¹⁷Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 15.

Both the current Obama administration and the previous Bush administration have identified counter-terrorism operations on the African continent “as a top national security priority.”¹⁸ The region is a powder keg in terms of violent extremism, with deadly incidents tracing back to the 1998 embassy bombings in Tanzania and Kenya, through the 2002 bombings in Kenya, to the more recent attacks in countries such as Algeria, Morocco, Somalia, and Uganda.¹⁹ Moreover, the Director of National Intelligence has on several occasions provided congressional testimony indicating the growing danger posed by Al Qaeda in the Islamic Maghreb as well as the growing lethality of the East African Al Shabaab.²⁰ The DoD has postured to combat the problem by strengthening relationships with regional partners, stating that “Terrorists’ abilities to remotely plan and coordinate attacks is growing, sometimes facilitated by global illicit trafficking routes, extending their operational reach while rendering targeting of their sanctuaries more difficult ... We must continue to support and facilitate whole-of-nation approaches to countering extremism that seek and sustain regional partnerships with responsible states to erode terrorists’ support and sources of legitimacy.”²¹

Beyond the threat imposed by violent extremism, the growing interdependence of the world’s economies, coupled with the increasing global demand for oil, also increases Africa’s strategic importance for the United States. For example, in the last two decades, trade between the United States and countries on the African continent has increase threefold.²² Part of the catalyst behind that increase has been the African Growth and Opportunity Act (AGOA) introduced by the Clinton Administration in 2000, an investment policy that Congress has continued to amend.²³ The majority of the products

¹⁸Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 18.

¹⁹Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 18.

²⁰Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 18.

²¹The Joint Chiefs of Staff, *The National Military Strategy of the United States of America*, 8 February 2011, as quoted in Lauren Ploch, *Congressional Research Service (CRS) Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, Order Code RL34003, Updated 22 March 2011, 18.

²²Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 16.

²³Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 16.

imported by the United States under AGOA involve energy products such as oil.²⁴ For example, America now gets about as much crude oil from African countries as it does from the Middle East.²⁵

But the United States is not alone in its quest to satisfy energy needs with African resources. In recent years, China has outbid western contractors vying for common natural resources by increasing its competitive advantage through a number of innovative financial measures.²⁶ Though the United States boasts a threefold increase in trade over the last two decades, Chinese trade with African nations has increased as much as tenfold during the same period.²⁷ Additionally, Chinese oil imports from the African continent have grown to twenty-eight percent of its total worldwide oil imports.²⁸ And since China has supported the efforts of partner nations such as Sudan against the United Nations Security Council, other African countries have been emboldened to seek China's allegiance.²⁹

Despite the growing economic opportunities for many African nations, growth of a different kind continues to undermine overall regional stability. The African continent has been more severely affected by the HIV/AIDS epidemic than any other region in the world, sparking a health crisis which makes the disease "a threat to political and economic security."³⁰ By then end of the twentieth century, HIV/AIDS had caused the death of 2.4 million people on the African continent, a figure that equated to 80 percent

²⁴Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 16.

²⁵Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 16.

²⁶Anthony Lake, et al, *More than Humanitarianism: A Strategic U.S. Approach Toward Africa*, Independent Task Force Report No. 56, Council on Foreign Relations, Inc., January 2006, available from http://www.cfr.org/publication/9302/more_than_humanitarianism.html, as quoted in Major Tom R. Ulmer, "Using an Adaptive Logistics Network in Africa: How Much and How Far," Graduate Research Project, Air Force Institute of Technology, June 2009, 12.

²⁷Peter Bosshard, "China's Role in Financing African Infrastructure," *International Rivers Network*, May 2007, available from <http://www.internationalrivers.org/files/ChinaEximBankAfrica.pdf>, as quoted in Major Tom R. Ulmer, "Using an Adaptive Logistics Network in Africa: How Much and How Far," Graduate Research Project, Air Force Institute of Technology, June 2009, 12-13.

²⁸Lake, et al, *More than Humanitarianism: A Strategic U.S. Approach Toward Africa*, as quoted in Ulmer, "Using an Adaptive Logistics Network in Africa: How Much and How Far," 12-13.

²⁹Lake, et al, *More than Humanitarianism: A Strategic U.S. Approach Toward Africa*, as quoted in Ulmer, "Using an Adaptive Logistics Network in Africa: How Much and How Far," 12-13.

³⁰Jean Roth, "HIV/AIDS Crisis in Africa: A Threat to World Peace and Security," University of California Los Angeles African Studies Center, February 2001, available from <http://www.international.ucla.edu/africa/article.asp?parentid=498>.

of the global HIV/AIDS mortality rate.³¹ According to a United Nations report released last fall, the population of HIV-infected people on the African continent has now topped 22 million, a staggering 67 percent of the global HIV-infected population.³² The threat to regional security is exacerbated by the high infection rate in the security forces of some African nations, making their availability to perform peacekeeping roles questionable at best.³³

Colin Powell, Secretary of State during the Bush Administration, referred to the epidemic as “the greatest threat of mankind today.”³⁴ The global health impact of HIV/AIDS prompted the Bush Administration, with the support of Congress, to commit \$48 billion in relief funding “through the President’s Emergency Plan for AIDS Relief (PEPFAR),” a commitment that the Obama Administration has promised to keep.³⁵ Currently, of the fifteen countries receiving support under PEPFAR, twelve are located on the African continent, making it the largest single region to receive this special benefit.³⁶

American Military Involvement in Africa

Like America’s sociopolitical and economic involvement with the African continent, American military involvement saw many years of little effort followed by a significant increase in operations during the last two decades. After defeating the Barbary pirates at the start of the nineteenth century, American military presence on the continent was nearly negligible. This remained so until World War Two, with the United

³¹Roth, “HIV/AIDS Crisis in Africa: A Threat to World Peace and Security.”

³²UNAIDS, *UN Report on the Global AIDS Epidemic*, November 2010, as quoted in Lauren Ploch, *Congressional Research Service (CRS) Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, Order Code RL34003, Updated 22 March 2011, 18.

³³Kevin A. O’Brien, “Headlines over the Horizon: AIDS and African Armies,” *Atlantic Monthly*, Vol. 292, No. 1, July/August 2003, as quoted in Lauren Ploch, *Congressional Research Service (CRS) Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, Order Code RL34003, Updated 22 March 2011, 19.

³⁴Speech by Secretary of State Colin Powell at the Gheskio Clinic, Port-au-Prince, Haiti, 5 April 2004, as quoted in Lauren Ploch, *Congressional Research Service (CRS) Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, Order Code RL34003, Updated 22 March 2011, 19.

³⁵Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 19.

³⁶Nicolas Cook, *Congressional Research Service (CRS) Report for Congress, AIDS in Africa*, Order Code RL33584, as quoted in Lauren Ploch, *Congressional Research Service (CRS) Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, Order Code RL34003, Updated 22 March 2011, 19.

States conducting Operation TORCH in the fall of 1942 to join the Allies in the North African Campaign.³⁷ Later in the war, the Allies used bases along the northern African coast to stage operations in the Mediterranean and Italy.³⁸

After the war was over, the American presence in Africa once again waned, with only a handful of installations left operational, the largest being Wheelus Air Base in Libya with approximately 4,000 personnel.³⁹ Though it was primarily a bomber base in support of the European theater, the base did provide humanitarian missions to North African countries during natural disasters in the 1960s.⁴⁰ In 1952, several North African countries were officially added to the EUCOM's command structure due to the region's "historic relationship with Europe."⁴¹ Nothing else was done with the remainder of the African continent until 1960, when "Cold War concerns over Soviet influence" prompted the United States to add Sub-Saharan Africa to the responsibilities of Atlantic Command.⁴² Later, in 1962, President John F. Kennedy revised the Unified Command Plan, placing Sub-Saharan Africa, along with the Middle East and South Asia, under the new Strike Command.⁴³

The 1980s witnessed a return of American direct military involvement on the African continent; when several confrontations with Libya over the Gulf of Sidra resulted in airstrikes on 15 April 1986.⁴⁴ Operation EL DORADO CANYON, as the airstrike was dubbed, was carried out to "inflict damage to Qadhafi's capability to direct and control

³⁷History of U.S. Military Involvement in Africa Factsheet, available from <http://www.africom.mil/getArticle.asp?art=1796>, as quoted in Major Tom R. Ulmer, "Using an Adaptive Logistics Network in Africa: How Much and How Far," Graduate Research Project, Air Force Institute of Technology, June 2009, 21.

³⁸History of U.S. Military Involvement in Africa Factsheet, as quoted in Ulmer, "Using an Adaptive Logistics Network in Africa: How Much and How Far," 21.

³⁹Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 31.

⁴⁰Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 31.

⁴¹Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 31.

⁴²Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 31.

⁴³Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 31.

⁴⁴Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 31.

the export of international terrorism.”⁴⁵ The next major military involvement on the African continent occurred in 1992, when American forces deployed to Somalia to provide security for humanitarian operations under Operation RESTORE HOPE.⁴⁶ The Somalia deployment saw the greatest level of U.S. military forces on the continent since the Second World War, with over 25,000 troops on the ground.⁴⁷ In March of 1994, President Clinton withdrew American forces from Somalia, due in part to the deaths of 18 soldiers in October of the previous year.⁴⁸ At the same time, 3,600 soldiers were sent to Rwanda to assist with humanitarian operations there.⁴⁹

In the mid-1990s, American strategic interest in Africa once again diminished, with the majority of the military activity limited to Non-Combatant and Repatriation Operations.⁵⁰ After the terror attacks on two American embassies in East Africa in 1998, a military response was conducted in the form of cruise missile attacks.⁵¹ Then, in 2003, the U.S. military was deployed in the form of an Amphibious Ready Group to assist the EUCOM mission in support of Liberia, though only a very small number of troops ever set foot on the continent itself.⁵² Current American military activity on the continent includes peacekeeping operations in Sudan and Somalia, counterterrorism

⁴⁵The White House, “Statement BY Principal Deputy Press Secretary Speaks on the United States Air Strike Against Libya, “ 15 April 1986, as quoted in Lauren Ploch, *Congressional Research Service (CRS) Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, Order Code RL34003, Updated 22 March 2011, 31.

⁴⁶Ted Dagne, Congressional Research Service (CRS) Report for Congress, *Somalia: Background and U.S. Involvement Through the 1990s*, Order Code RL30065, as quoted in Lauren Ploch, *Congressional Research Service (CRS) Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, Order Code RL34003, Updated 22 March 2011, 31.

⁴⁷Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 31-32.

⁴⁸Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 32.

⁴⁹Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 32.

⁵⁰DoD Office of International Security Affairs, United States Security Strategy for Sub-Saharan Africa, August 1995, as quoted in Lauren Ploch, *Congressional Research Service (CRS) Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, Order Code RL34003, Updated 22 March 2011, 32.

⁵¹Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 32.

⁵²Nicolas Cook, Congressional Research Service (CRS) Report for Congress, *Liberia: Transition to Peace*, Order Code RL32243, as quoted in Lauren Ploch, *Congressional Research Service (CRS) Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, Order Code RL34003, Updated 22 March 2011, 32.

training operations in Sahel and East Africa, and logistical support to Uganda, Democratic Republic of the Congo, and Southern Sudan.⁵³

Establishment of AFRICOM

The strategic, political, economic, and military complexities represented by American activity with respect to Africa pointed to the need for a dedicated geographic command. However, despite the call for a separate command by several officials in the DoD over the last decade, it was the multitude of crises in recent years that finally prompted the President to make the necessary changes to the Unified Command Plan.⁵⁴ With three separate geographic commands responsible for different portions of the African continent, coordination issues arose which were problematic for the conduct of effective operations.⁵⁵ Moreover, the conflicts in Iraq and Afghanistan were straining CETNCOM's resources to the brink of failure, and the EUCOM Commander's staff was finding itself spending more time on issues involving the African continent than on issues involving the European one.⁵⁶

Therefore, on 6 February 2007, President George W. Bush stated that a Unified Combatant Command would be created to focus specifically on the continent.⁵⁷ Initially launched as a sub-unified command under EUCOM in October 2007, AFRICOM became a stand-alone command exactly a year later.⁵⁸ Since it was first proposed, AFRICOM's mission statement has continuously changed, but it generally reflects the desire "to promote U.S. strategic objectives by working with African partners to help strengthen

⁵³John Vandiver, "AFRICOM Official Defends U.S. Role in Ugandan Mission," *Stars and Stripes*, 14 February 2009; Jeffrey Gettleman and Eric Schmitt, "U.S. Aided a Failed Plan to Rout Ugandan Rebels," *New York Times*, 6 February 2009, as quoted in Lauren Ploch, *Congressional Research Service (CRS) Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, Order Code RL34003, Updated 22 March 2011, 32.

⁵⁴Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 2.

⁵⁵Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 2.

⁵⁶Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 2.

⁵⁷Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 1.

⁵⁸Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 1.

stability and security in the region through improved security capability and military professionalization.”⁵⁹

AFRICOM has been described by some officials in the DoD as a combatant command “plus.”⁶⁰ Though the command has the traditional responsibilities of a geographic combatant command, it also has a “broader ‘soft power’ mandate aimed at building a stable security environment and incorporates a larger civilian component from other U.S. government agencies to address those challenges.”⁶¹ In terms of mission orientation and command structure, AFRICOM is more closely aligned with U.S. Southern Command (SOUTCOM) than any other geographic command.⁶² In much the same manner as SOUTHCOM, AFRICOM also “supervises an array of operations that relate to U.S. strategic interests but are not combat-related.”⁶³ The other geographic combatant commands all share a common focal point, which is “preparing for potential warfighting operations.”⁶⁴

AFRICOM is distinct from its counterparts in other AORs by intentional design as well. When the Bush Administration conceptualized its proposal for AFRICOM, it purposely looked for “an evolution in the involvement of other U.S. government agencies in the DoD planning process.”⁶⁵ In Washington, D.C., interagency coordination is critical in order to produce coherent American security policy.⁶⁶ AFRICOM has been shaped to mirror Washington’s interagency environment as it is structurally integrated with “the

⁵⁹Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 1.

⁶⁰“Pentagon: AFRICOM Won’t Boost U.S. Troop Presence on the Continent,” *Inside Army*, 12 February 2007, as quoted in Lauren Ploch, *Congressional Research Service (CRS) Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, Order Code RL34003, Updated 22 March 2011, 4.

⁶¹Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 4.

⁶²Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 6.

⁶³Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 6.

⁶⁴Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 6.

⁶⁵Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 7.

⁶⁶Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 7.

State Department, [U.S. Agency for International Development (USAID)], and other governmental agencies, including a larger non-DOD civilian staff.”⁶⁷

AFRICOM’s AOR covers fifty-three nations, to include island nations, placing the entire continent, with the exception of Egypt, under a single unified combatant command.⁶⁸ However, besides the headquarters staff, it does not have forces which are permanently assigned.⁶⁹ Consequently, the forces necessary to conduct operations will have to be requested through JFCOM and CHOPped to the AOR. The one exception within the command is Combined Joint Task Force-Horn of Africa (CJTF-HOA) which actually have sixty percent of its forces assigned via a Joint Manning Document.⁷⁰

17th Air Force and Air Forces Africa

When needed, TRANSCOM-owned air mobility assets may be tasked in the same manner in which they are tasked in CENTCOM and PACOM. For example, AFRICOM’s first large scale operation was in support of humanitarian operations in Darfur, Sudan and concluded on 16 January 2009.⁷¹ Air Force C-17s OPCON to TRANSCOM and staged out of Camp Lemonier “lifted nine 20,000 pound trucks from Rwanda to Sudan” in order to facilitate movement for NATO peacekeeping forces located in Darfur.⁷²

Like other unified commands, AFRICOM has an ACC, Air Forces Africa (AFAFRICA). The numbered air force that provides forces to AFAFRICA is 17th Air Force at Ramstein Air Base, Germany. And like its other numbered air forces, 17th Air Force has also enjoyed a rich heritage and significant place in history. The establishment of the North Atlantic Treaty Organization in 1949 led to an increase in the Air Force’s responsibilities in Europe.⁷³ Consequently, 17th Air Force was “designated and activated on [25 April 1953] at Rabat, Morocco.”⁷⁴ 17th Air Force supported a geographic area

⁶⁷Ploch, *CRS Report for Congress, Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, 7.

⁶⁸Ulmer, “Using an Adaptive Logistics Network in Africa: How Much and How Far,” 25.

⁶⁹Ulmer, “Using an Adaptive Logistics Network in Africa: How Much and How Far,” 25.

⁷⁰Lieutenant Colonel Tom R. Ulmer, 617th AOC/AMD, e-mail correspondence with author, 6 March 2010.

⁷¹David Rising, “US AFRICOM begins First Peacekeeper Supply Operation,” Associated Press Article on U.S Air Force AIM Points website, on-line, Internet, 15 January 2009, available from <http://aimpoints.hq.af.mil/display.cfm?id=31311>.

⁷²Rising, “US AFRICOM begins First Peacekeeper Supply Operation.”

⁷³History of 17th Air Force Factsheet, available from <http://www.17af.usafe.af.mil>.

⁷⁴History of 17th Air Force Factsheet.

that encompassed “North Africa, Portugal, the Middle East, Pakistan, India, Ceylon, and the Mediterranean islands.”⁷⁵ Its units and resources steadily increased through the 1950s and in August 1956, 17th Air Force was moved to a more central location at Wheelus Air Base, Libya to “facilitate the expanded role of also supporting Italy, Greece and Turkey.”⁷⁶ In 1959, 17th Air Force changed from a support mission posture to one that was oriented towards combat missions in Central Europe and was relocated to Ramstein Air Base, Germany.⁷⁷ Then, in 1972, a reorganization of American air forces on the European continent caused 17th Air Force to again be relocated, this time to Sembach Air Base, Germany.⁷⁸

From 1984 to 1985, 17th Air Force “activated the 485th and 38th Tactical Missile Wings at Florennes Air Base, Belgium, and Wischheim Air Station, Germany ... [and] on 1 June 1992 the 65th Air Division and 66th Electronic Combat Wing were activated at Sembach Air Base.”⁷⁹ 17th Air Force continued its role in “electronic combat and air defense” until 30 September 1996, when it was inactivated, due to mission realignments as a result of the end of the Cold War.⁸⁰

In February 2007, the establishment of AFRICOM was announced and by December the Air Force had begun organizing its ACC. It was only fitting that 17th Air Force was reactivated as the numbered air force in support of AFRICOM, restoring it to the African roots that were first planted in 1953. The 17th Air Force of today supports AFRICOM via C2 of air forces “to conduct sustained security engagement and operations as directed to promote air safety, security and development.”⁸¹ For now, 17th Air Force will operate as a functional staff, without any assigned weapon systems, and it will be headquartered at Ramstein Air Base, Germany.

17th Air Force contains the doctrinal A-staff functions which are “responsible for developing strategy and plans to execute air and space operations in support of

⁷⁵History of 17th Air Force Factsheet.

⁷⁶History of 17th Air Force Factsheet.

⁷⁷History of 17th Air Force Factsheet.

⁷⁸History of 17th Air Force Factsheet.

⁷⁹History of 17th Air Force Factsheet.

⁸⁰History of 17th Air Force Factsheet.

⁸¹Air Forces Africa (AFAFRICA) Factsheet, available from <http://www.17af.usafe.af.mil/library/factsheets/index.asp>.

[AFRICOM's] objectives.”⁸² Additionally, 17th Air Force also contains the 617th AOC, which provides C2 capabilities “for the planning and execution of aerial missions on the continent.”⁸³ 17th Air Force also has a close working relationship with the 110th Air Operations Group of the Michigan Air National Guard, which can augment 617th AOC during contingency operations.⁸⁴

AFAFRICA “conducts sustained security engagement and operations as directed to promote air safety, security and development on the African continent.”⁸⁵ Through its Theater Security Cooperation activities, AFAFRICA executes AFRICOM's policy of “seeking long-term partnership with the African Union and regional organizations as well as individual nations on the continent.”⁸⁶ AFAFRICA is also responsible for conducting a number of air and space operations in the AFRICOM AOR.⁸⁷ To meet that responsibility, it employs a full array of capabilities, to include intra-theater airlift.⁸⁸

AFAFRICA executes OPCON or TACON over “assigned Air Force assets and operates one [FOB].”⁸⁹ The 449th Air Expeditionary Group (AEG) at Camp Lemonier, Djibouti, “provides combat search and rescue for the CJTF-HOA.”⁹⁰ It is equipped with HC-130Ps from the 81st Expeditionary Rescue Squadron and manned by para-rescuemen from the 82nd Expeditionary Rescue Squadron.⁹¹ The 404th AEG is also co-located with AFAFRICA at Ramstein Air Base.⁹² During contingencies, the group “forward-deploys to facilitate air and support operations for varied missions on the continent, ranging from humanitarian airlift to presidential support.”⁹³ For example, the 404th AEG deployed to Rwanda in January 2009 to provide airlift support for the United Nations mission in Darfur.⁹⁴

⁸²AFAFRICA Factsheet.

⁸³AFAFRICA Factsheet.

⁸⁴AFAFRICA Factsheet.

⁸⁵AFAFRICA Factsheet.

⁸⁶AFAFRICA Factsheet.

⁸⁷AFAFRICA Factsheet.

⁸⁸AFAFRICA Factsheet.

⁸⁹AFAFRICA Factsheet.

⁹⁰AFAFRICA Factsheet.

⁹¹AFAFRICA Factsheet.

⁹²AFAFRICA Factsheet.

⁹³AFAFRICA Factsheet.

⁹⁴AFAFRICA Factsheet.

617th AOC/AMD

Similar to the arrangement in CENTCOM, the 17th Air Force Commander is the COMAFFOR and the CFACC. As the CFACC, he executes C2 of air forces through 617th AOC. 617th AOC was first activated in 2009 and in January 2010 it achieved full airspace authority for United States military missions in African airspace.⁹⁵ Up to then AFCENT still exercised oversight for missions in the AFRICOM AOR. Major Randy Naylor, 617th ATO Production Chief, commented, "Now that we have the lead, we can work in a better partnership with forces operating in Africa."⁹⁶ The AFAFRICA team had to build new policies and procedures with a focus on airlift and intelligence gathering, as opposed to combat as with AFCENT.⁹⁷ Because AFRICOM's mission focus is on non-kinetic support operations facilitated by air mobility, the AMD at 617th AOC is the most robust division in the organization.⁹⁸

However, 617th AOC/AMD is still smaller than its counterpart AMDs in other geographic commands, with the exception of 607th AOC/AMD in Korea which is not at full operating capacity.⁹⁹ And like 617th AOC, the AMD is also "tailored" to meet the specific needs of this geographic theater.¹⁰⁰ 617th AOC/AMD has four functional teams in accordance with doctrine, ALCT to plan missions, AMCT to execute missions, a small ARCT due to lack of tanker assets, and an AECT.¹⁰¹ The AMD does not have any aerial porters assigned and therefore has no APCT.¹⁰² The large aerial port at Ramstein Air Base is operated by United States Air Forces Europe (USAFE). There is an ATOC in Djibouti but it is run by contractors working for PAE, a division of Lockheed.¹⁰³ Most of the locations on the continent that airlifters transit through do not have ports, though some do have warehouses. Warehouse operations at those locations are not centrally

⁹⁵Staff Sergeant Stefanie Torres, 17th Air Force Public Affairs, "AFAFRICA expands its capabilities," 1 February 2010, available from <http://www.17af.usafe.af.mil>.

⁹⁶Major Randy Naylor, quoted in Torres, "AFAFRICA expands its capabilities."

⁹⁷Torres, "AFAFRICA expands its capabilities."

⁹⁸Ulmer, e-mail correspondence with author, 6 March 2010.

⁹⁹Ulmer, e-mail correspondence with author, 6 March 2010.

¹⁰⁰There are three types of AOCs: the Falconer weapon system, the tailored, and the functional AOC. Tailored AOCs are variants of the AOC adapted for a specific or unique functionality and are usually found in component numbered air force headquarters. The last type, a functional AOC, is a C2 center that supports global functional requirements, such as transportation.

¹⁰¹Ulmer, e-mail correspondence with author, 6 March 2010.

¹⁰²Ulmer, e-mail correspondence with author, 6 March 2010.

¹⁰³Ulmer, e-mail correspondence with author, 6 March 2010.

managed and are left largely to local civilians to control. 617th AOC/AMD does use commercial tenders; there is an IL-76 and two L-100s available to move cargo within the AOR and they are typically utilized for exercises. ALCT plans and AMCT executes C2 of these missions as needed.

Air Mobility Assets

AFAFRICA's only Air Force airlift assets are two C-130 aircraft which USAFE maintains OPCON over but that are TACON to AFAFRICA for at least two missions per day.¹⁰⁴ Initially AFAFRICA had two C-130 aircraft CHOPped to it directly but that arrangement did not provide an adequate utilization rate, mainly due to maintenance issues. On a case-by-case basis the AFRICOM DDOC may get an additional C-130 from the European Theater. AFAFRICA has two more C-130s that are postured to prepare to deploy in ninety-six hours, but the request for those assets has to come from the AFRICOM commander and would normally only be done in an emergency situation.¹⁰⁵ Large scale contingencies operations would probably require reach back to TRANSCOM for additional support. There are other airlift assets operating in the AOR which are used specifically for OSA missions. Two Army C-12 aircraft are attached to CJTF-HOA along with their ground support units from the Army National Guard.¹⁰⁶ The aircraft operate primarily in Ethiopia, Kenya, Uganda, and the Seychelles.

AFRICOM DDOC and Airlift Request and Validation

AFRICOM has a combined J34 Operations and Logistics Directorate led by an Army Major General of which the AFRICOM DDOC is a part.¹⁰⁷ AFRICOM DDOC has a direct line to TRANSCOM, which is particularly necessary since it has relatively few assets to move cargo on its own. It validates passenger and cargo movements within the AOR in the same manner that the CENTCOM DDOC does for its theater, determining priorities.¹⁰⁸ All movement requirements are entered into JOPES and AFRICOM DDOC chooses the mode of transport, recommending alternate modes if available.¹⁰⁹

¹⁰⁴Ulmer, e-mail correspondence with author, 6 March 2010.

¹⁰⁵Ulmer, e-mail correspondence with author, 6 March 2010.

¹⁰⁶CJTF-HOA Factsheet, available from <http://www.hoa.africom.mil>.

¹⁰⁷Ulmer, e-mail correspondence with author, 6 March 2010.

¹⁰⁸Ulmer, e-mail correspondence with author, 6 March 2010.

¹⁰⁹Ulmer, e-mail correspondence with author, 6 March 2010.

The overwhelming majority of airlift missions in the AOR are Airland. However, a small Airdrop capability does exist in terms of the HC-130s that are required to be manned by Airdrop qualified crews and can drop CDS if needed. Much of the operations executed under CJTF-HOA involve small teams with small amounts of cargo. C-130 missions executed to support these teams are utilized as efficiently as possible; usually scheduled for two or three stops with loads consolidated among two or three different teams.¹¹⁰

If AFRICOM DDOC decides a movement is appropriate for a C-130 mission, the JOPES input gets pushed to ALCT Requirements branch which confirms the cargo with the user and ensures it can fit on a C-130 or C-130J-30.¹¹¹ If the load will not fit on any C-130 model the requirement is pushed back to AFRICOM DDOC which will then engage with TRANSCOM to facilitate movement. If TRANSCOM decides to pick up the requirement then 618th TACC will plan, enter into GDSS 2, and execute C2 with 617th AOC/AMD and AFRICOM DDOC flight following. Validated C-130 movements are entered into GDSS 2 to facilitate in-transit visibility and then turned over to the Airlift Plans branch. C2 is executed via AMCT and 617th AOC Operations watch.¹¹²

Cooperative Security Locations and Adaptive Logistics Networks

As previously mentioned, the American military covers the continent with one permanent facility in Djibouti. However, the United States does have other bare-base facilities on the continent called Cooperative Security Locations (CSL). A CSL is “a facility located outside the United States with little or no permanent U.S. presence, maintained with periodic Service, contractor, or host nation support.”¹¹³ By utilizing a CSL, military forces gain quick access to a remote area and can have a focal point for logistical and security operations as needed on a rotational basis.¹¹⁴ In essence, CSLs have an expeditionary flavor, and can be rapidly expanded to become a full fledged FOB

¹¹⁰CJTF-HOA Factsheet.

¹¹¹Ulmer, e-mail correspondence with author, 6 March 2010.

¹¹²Ulmer, e-mail correspondence with author, 6 March 2010.

¹¹³Joint Publication (JP) 1-02, *DoD Dictionary of Military and Associated Terms*, 12 April 2001 (As Amended through 19 August 2009), 126, as quoted in Major Tom R. Ulmer, “Using an Adaptive Logistics Network in Africa: How Much and How Far,” Graduate Research Project, Air Force Institute of Technology, June 2009, 26.

¹¹⁴ Ulmer, “Using an Adaptive Logistics Network in Africa: How Much and How Far,” 26.

if the situation dictates.¹¹⁵ A 2005 report to congress stated “The series of CSLs provide, in time of need, a foothold for conducting the full range of military options, forced entry, humanitarian relief, NEO, peacemaking, peace keeping, and other stabilization operations. In many cases, the CSLs provide deployment support for forces or transport deployment and throughput. They may contain pre-positioned equipment and/or provide for logistical arrangements. The cooperative security locations serve both security cooperation activities and contingency access.”¹¹⁶ CSLs require little or no permanent military presence, thus lowering operating and maintenance costs normally associated with larger facilities.¹¹⁷ There are currently a number of CSLs in place on the African continent, located “in Algeria, Botswana, Gabon, Ghana, Kenya, Mali, Namibia, Sao Tome and Principe, Senegal, Sierra Leone, Tunisia, Uganda, and Zambia.”¹¹⁸

While AFRICOM wants to keep a small footprint on the African continent, maintaining a minimal presence has a cost for AFRICOM DDOC. Like CENTCOM DDOC, it is in charge of logistics movement throughout the AOR. But unlike CENTCOM, it does not have an array of transportation assets assigned to it. Without permanent transportation assets, and with only a pair of C-130 airlift aircraft on loan, AFRICOM DDOC has to creatively improvise to move cargo throughout the AOR. One of the tools being utilized to aid in solving their logistics problem is called an Adaptive Logistics Network (ALN).¹¹⁹ The idea behind an ALN is to utilize transportation resources already available within Africa, via local freight hauling businesses, and

¹¹⁵Al Cornella et al, *Congressional Report from Commission on Review of Overseas Military Facility Structure of the United States*, (Arlington, Virginia, 9 May 2005), available from <http://www.fas.org/irp/agency/dod/obc.pdf>, as quoted in Major Tom R. Ulmer, “Using an Adaptive Logistics Network in Africa: How Much and How Far,” Graduate Research Project, Air Force Institute of Technology, June 2009, 28.

¹¹⁶Cornella et al, *Congressional Report from Commission on Review of Overseas Military Facility Structure of the United States*, as quoted in Ulmer, “Using an Adaptive Logistics Network in Africa: How Much and How Far,” 28.

¹¹⁷Cornella et al, *Congressional Report from Commission on Review of Overseas Military Facility Structure of the United States*, as quoted in Ulmer, “Using an Adaptive Logistics Network in Africa: How Much and How Far,” 28-29.

¹¹⁸Cornella et al, *Congressional Report from Commission on Review of Overseas Military Facility Structure of the United States*, as quoted in Ulmer, “Using an Adaptive Logistics Network in Africa: How Much and How Far,” 29.

¹¹⁹Dennis L. D’Angelo, *Background Paper on Adaptive Logistics Network*, U.S. Africa Command Africa DDOC, 28 September 2008, quoted in Major Tom R. Ulmer, “Using an Adaptive Logistics Network in Africa: How Much and How Far,” Graduate Research Paper, Air Force Institute of Technology, June 2009, 31.

contract them when necessary for cargo movement. The network could shrink or expand as needed and cover the entire continent, negating the need for additional military transportation assets. Theoretically, this would also stimulate the economy of the African continent by offering commercial opportunities for the transportation sector.

Summary

This chapter began with a historical examination of U.S. involvement on the African continent with particular attention paid to the evolution of American military involvement there. It was evident that the African continent has gained significant strategic value for the United States. However, it was also clear that the United States wants to keep its military footprint as small as practical while promoting other U.S. government programs aimed at putting a nonaggressive face on American presence in the region. The chapter then focused on the intra-theater airlift and theater distribution systems, noting once again how many of CENTCOM's best practices, such as the theater CFACC, JDDOC, and integrated air mobility C2, have been implemented. As with the PACOM AOR, there were some differences which will be examined further in the next chapter. There was also a unique innovation in terms of the ALN which will also be examined further. In the chapter that follows, this thesis will now analyze the core intra-theater air mobility elements found to be common among the three AORs and discuss what intra-theater air mobility ultimately means to the JFC.

Chapter 4

Is the CENTCOM Way the Best Way?

We have learned and must not forget that from now on air transport is an essential element of air power, in fact, of all national power. We must have an air transport organization in being, capable of tremendous expansion.

-General of the Air Force Henry H. "Hap" Arnold

The preceding chapters examined the intra-theater air mobility and theater distribution systems of three combatant commands. First, this thesis began with CENTCOM, tracing its evolution in becoming the *de facto* standard for other combatant commands with a number of best practices exported for use by GCC staffs worldwide. Next, this thesis reviewed air mobility and theater distribution operations in PACOM, noting the successful employment of CENTCOM best practices such as the theater JFACC/CFACC concept with a theater-focused AOC, JDDOC operations, and the synchronization of air mobility C2 operations with TRANSCOM. Also noteworthy were PACOM's points of departure from CENTCOM's model, such as the absence of certain AMD teams and the addition of other teams based on unique requirements within the region. Furthermore, the existence of AMC's En Route structure for inter-theater airlift missions transiting the Pacific was a distinguishing feature for PACOM as well. Finally, this thesis looked at AFRICOM, the newest geographic command. The initial implementation of many CENTCOM best practices were also readily apparent there, with a single theater CFACC and AOC, an established JDDOC, and C2 connectivity between its AMD and TRANSCOM. Yet, like with PACOM, there were differences in AMD architecture due to specific regional requirements. Moreover, this thesis discovered that due to the unique geo-political and economic conditions within that AOR, AFRICOM DDOC is pursuing innovative adaptations to its intra-theater mobility system, which will lead to a further departure from the CENTCOM model.

Based on these differences, does it necessarily follow that the universal applicability of the CENTCOM model is inappropriate? Are there elements of CENTCOM's model that could be generalized? What, if any, are the limitations of the CENTCOM approach to intra-theater air mobility? What should the JFC ultimately be

concerned with? To address these questions adequately this chapter will first review how CENTCOM best practices developed in the first place. The chapter will determine what, if any, are the generalizable elements of intra-theater air mobility and theater distribution that can be gleaned from CENTCOM's model. Next, this chapter will examine the differences found in the PACOM and AFRICOM intra-theater air mobility systems, and summarize advantages and limitations for all three approaches. From there, this chapter will conduct an examination of the factors that led to the development of CENTCOM's latest innovation, the Air Force's DS mission in support of the Army, as well as explore the merits of that mission set outside of CENTCOM. Then the chapter will move to an examination of a current development in the CENTCOM AOR, the expansion of the Air Component Coordination Element (ACCE), and the impact it may have on intra-theater air mobility operations worldwide. Finally, this chapter will arrive at a determination of what the CENTCOM model really represents for the JFC.

CENTCOM Intra-Theater Air Mobility: From Lessons Observed to Best Practices

Of all the geographic theaters worldwide, CENTCOM has experienced the most robust combat and combat support activity since 2001, with ongoing operations in Iraq and Afghanistan. But air mobility operations in the region were already underway in support of OSW and United Nations missions in the Horn of Africa. At the onset of OEF, CENTCOM was able to capitalize on some lessons learned from DESERT SHIELD/STORM. These included centralized management of airlift and tanker aircraft under a single command run by mobility experts and improved distribution and quality of material handling equipment.¹

However, CENTCOM encountered different problems during OEF and revisited some of the previous ones. For example, the lack of basic infrastructure at bases in Afghanistan presented challenges to sustaining throughput that were not encountered during DESERT SHIELD/STORM as the bases in SWA were essentially modern facilities.² The result was congestion and backlogs as bases like the ones at Kandahar and Bagram Air Bases were quickly overwhelmed. Furthermore, as it did during DESERT SHIELD/STORM, CENTCOM again encountered deficiencies with TPFDDs

¹Dr. Daniel L. Haulman, "Intertheater Airlift Challenges of Operation Enduring Freedom," *Research Paper*, Air Force Historical Agency, 14 November 2002, 2.

²Haulman, "Intertheater Airlift Challenges of Operation Enduring Freedom," 3.

and JOPES due to the lack of experienced personnel working for users in the AOR.³ Moreover, in-transit visibility, the ability to track loads being transported, was also insufficient. There were 29 distinct systems which fed TRANSCOM's Global Transportation Network (GTN), and some of these systems had no direct or automated feeds.⁴ Manual data entry resulted in poor documentation of airlift loads, and with more than 2,500 sites feeding information into the system, data integrity and accuracy could not be sustained.⁵ When OIF joined OEF in the AOR, the strain on the intra-theater airlift system increased tremendously. Problems with backlogs persisted and the lack of enough airlift assets to conduct onward movement from Aerial PODs frustrated Army commanders on the ground.

As Lieutenant Colonel Gregory S. Otey aptly argues, the intra-theater air mobility problems that were encountered in CENTCOM from DESERT SHIELD/STORM to OEF and OIF were not problems that had never been seen before with respect to intra-theater movement.⁶ In September 1944, after the invasion of Normandy, Allied armies were forced to halt their march to Germany due to the lack of adequate logistics support making its way forward, even though there plenty of supplies were at the beaches not more than 300 miles back.⁷ Then, during the Korean War, "supplies were landed [in theater] in such an excess of tonnage over the capabilities of the local logistic organization [that the system's capacity was quickly overwhelmed]."⁸ It took two years after the initial landings of supplies at Pusan for the logistics system to sort through most of the stores, and even then it had only completed around 75 percent of the task.⁹ Once

³Haulman, "Intertheater Airlift Challenges of Operation Enduring Freedom," 5.

⁴Haulman, "Intertheater Airlift Challenges of Operation Enduring Freedom," 6.

⁵Haulman, "Intertheater Airlift Challenges of Operation Enduring Freedom," 6.

⁶ Lieutenant Colonel Gregory S. Otey, "Mending a Seam: Joint Theater Logistics," *Air Force Journal of Logistics*, XXX (2), 12.

⁷Rear Admiral Henry E. Eccles, *Logistics in the National Defense*, (Harrisburg, PA: The Stackpole Company, 1959), 136, as quoted in Lieutenant Colonel Gregory S. Otey, "Mending a Seam: Joint Theater Logistics," *Air Force Journal of Logistics*, XXX (2), 12.

⁸Joint Publication (JP) 4-01.3, *Joint Tactics, Techniques, and Procedures for Movement Control*, 9 April 2002, 113, as quoted in Lieutenant Colonel Gregory S. Otey, "Mending a Seam: Joint Theater Logistics," *Air Force Journal of Logistics*, XXX (2), 12.

⁹JP 4-01.3, *Joint Tactics, Techniques, and Procedures for Movement Control*, 113, as quoted in Otey, "Mending a Seam: Joint Theater Logistics," 12.

again, during the Vietnam War, supply lines and transportation systems in country were so saturated that for a time there was a “complete lack of control at [supply] depots.”¹⁰

Otey summarizes that, up through OEF and OIF, a look at history reveals there were plenty of lessons observed with respect to operational level logistics but not lessons learned as the same mistakes continued to be encountered.¹¹ As military activity in the CENTCOM AOR continued, the CENTCOM staff, with help from TRANSCOM and AMC, began innovating solutions to counter the intra-theater air mobility problems that had surfaced. Intra-theater air mobility operations also benefited from solutions to problems that were not just mobility-centric to begin with, but instead dealt with the C2 of all theater air assets in general. As problems in the CENTCOM AOR were solved, lessons observed became lessons learned. And as the lessons learned in CENTCOM were exported to other geographic commands and incorporated into doctrine, lessons learned became best practices.

One of the most enduring best practices to come out of CENTCOM is the use of a theater JFACC or CFACC. The theater JFACC/CFACC model “retains the [GCC]’s agility and flexibility of airpower, enabling centralized planning, and allowing for rapid shifting of airpower throughout the AOR.”¹² The Air Force instituted the theater JFACC/CFACC concept because “a requirement [existed] to optimize airpower across multiple JTFs in an AOR ... a requirement [existed] to optimize low density/high demand airpower assets in general ... and insufficient Air Force resources [were available] to establish additional [AOCs] ... below theater JFACC level.”¹³

A single JFACC/CFACC in a theater translates into a single AOC to handle C2 of all air assets in general and therefore a single AMD to handle C2 of air mobility assets in particular. In other words, a theater-focused AMD is a CENTCOM intra-theater best practice derived from the theater JFACC/CFACC concept. 609th AOC/AMD, as well as its predecessors at Riyadh and PSAB, adapted operations to meet the complex and

¹⁰Joseph M. Heiser, *A Soldier Supporting Soldiers*, (Washington DC: Center for Military History, U.S. Army, 1991), 150, as cited in Lieutenant Colonel Gregory S. Otey, “Mending a Seam: Joint Theater Logistics,” *Air Force Journal of Logistics*, XXX (2), 12.

¹¹Otey, “Mending Seams: Joint Theater Logistics,” 12.

¹²General (retired) Gary Luck, Colonel (retired) Mike Findlay, and the JWFC Joint Training Division, *Joint Operations Insights and Best Practices, Second Edition*, Joint Warfighting Center, U.S. Joint Forces Command, July 2008, 43-44.

¹³Luck et al, *Joint Operations Insights and Best Practices, Second Edition*, 44.

changing intra-theater airlift requirements of the AOR. In order to support the common-user intra-theater airlift needs for both OIF and OEF simultaneously, 609th AOC/AMD established several teams and branches in addition to the Air Force doctrinally required architecture for an AMD.

The TDD cell was added to ALCT in order to synchronize CENTCOM's intra-theater airlift system with the large influx of TDD inter-theater airlift missions entering CENTCOM from CONUS. This synchronization was necessary to manage spikes in throughput that traditionally led to backlogs of personnel at the Aerial PODs. TDD missions were implemented to address the concerns of ground commanders who wanted to get convoys off the roads because surface units were suffering unacceptable losses of personnel transiting the AOR.¹⁴ TDD missions completed over 13,000 sorties in the first year alone. Since its inception, TDD typically moves nearly 75 percent of all theater cargo and 50 percent of all theater passengers.¹⁵ To further support TDD missions and provide additional airlift capacity in the theater to mitigate the convoy issue, AMC-owned C-17s were positioned in CENTCOM in the form of two EASs to pick up missions as determined by CENTCOM DDOC.¹⁶ The aircraft and crews assigned to the EASs retained the ability to be tasked by TRANSCOM for global missions like the redeployment of Georgian troops back to Georgia during the crisis in South Ossetia.¹⁷ Integrating a theater's air mobility capacity with TRANSCOM's global capacity is a second CENTCOM intra-theater air mobility best practice.

The backlogs that plagued OEF once large numbers of troops and large quantities of equipment began moving into theater were rooted in the same two problems that caused the backlog, which caused Army commanders to voice their concerns during the early days of OIF. The throughput of personnel and materials into and out of the Aerial PODs could not be sustained at a quick enough pace because of the lack of air

¹⁴General Duncan J. McNabb, U.S. Air Force, Commander, Air Mobility Command, "Mobility on the Move," Briefing given on 26 October 2006, slide 23.

¹⁵Detachment (Det) 1, Mobility Operations School (MOS), "Theater Air Mobility Operations," Briefing to Advanced Air Mobility Operations Course (Advanced AMOC) Class 2008-E, 15 July 2008, slide 40.

¹⁶McNabb, "Mobility on the Move," slide 23.

¹⁷ Technical Sergeant Chuck Marsh, "C-17 deployment length, efficiency increase," available from <http://www.af.mil/news/story.asp?id=123023052>.

¹⁷ Senior Airman James Bollinger, 436th Airlift Wing Public Affairs, "Dover Aircrew flies first C-17 into Georgia," available from <http://www.amc.af.mil/news/story.asp?id=123110922>.

transportation assets and because of the TDS's inability to deal with the extremely high volume of items shipped by air. To solve the first problem, Theater Express was established to augment the air mobility assets in the AOR. The lack of sufficient DoD air mobility assets to meet the daily air movement needs necessitated outsourcing to contract air carriers in the AOR. In order to manage Theater Express contractors, as well as facilitate in-transit visibility of contracted cargo and facilitate the movement of personnel throughout the AOR, APCT was established. Under APCT, all 27 of the theater's aerial ports were synchronized, providing greater visibility on the forward movement of cargo and allowing for the centralized management of the six contracted commercial carriers. Contracting additional airlift and providing a means to manage that airlift across the entire theater is a third CENTCOM intra-theater air mobility best practice.

To solve the second problem, CENTCOM DDOC was established. CENTCOM DDOC aimed to solve overall movement problems by validating the mode of travel for cargo and personnel throughout the theater. Unnecessary movement delays were reduced as alternative modes of transport were determined for cargo, allowing greater velocity for passenger movements. This was all based on a theater prioritization plan instituted by the CENTCOM Commander's J4 staff working in conjunction with the DIRMOMFOR-Air, air mobility experts at the AMD, and TRANSCOM. In the first year alone after CENTCOM DDOC's activation, the average time passengers waited for movement was reduced by 62.5 percent while 71 percent of the cargo that was given the lowest movement priority was able to be shipped surface methods that were much less expensive.¹⁸ Finally, changes were made to TACS with the addition of ITARS in order to establish a user-friendly and less cumbersome method of routing airlift requests to CENTCOM DDOC, overcoming the theater's lack of JOPES-trained personnel. ITARS in essence helped to make the intra-theater air mobility system more responsive to the needs of local ground commanders. Establishing a JDDOC in a theater with the ability to receive and validate user air movement requests and select appropriate modes of transport based on JFC-directed priorities is a fourth best practice^[RM1].

¹⁸CENTCOM Deployment and Distribution Operations Center (CDDOC) "Spiral 1" Report January-May 2004, 14 May 2004, 7, 11, 12, as quoted in Major Jeffrey S. Brown, "Divergent Paths: The Centralization of Airlift Command, Control, and Execution," SAASS Thesis, June, 2005, 11.

From what has been examined in this thesis, the author proposes that the CENTCOM intra-theater air mobility and theater distribution model is made up of four best practices. These best practices evolved from an intra-theater air mobility system engaged for nearly two decades in continuous air mobility operations, shaped especially by requirements over the last eight years. When taken as a whole, the CENTCOM intra-theater air mobility and theater distribution model exhibits certain general characteristics. The characteristics of the current CENTCOM model are: (1) the ability to synchronize with TRANSCOM, AMC, and 618th TACC to facilitate a sustained level of throughput velocity to meet the theater's needs, (2) the ability to manage efficiently the fungible common-user air mobility assets while responding to user requests, (3) the capability to execute theater-wide C2 of air mobility assets, and (4) the capability to facilitate in-transit visibility of personnel and equipment throughout the system to the maximum extent possible.

The components of the CENTCOM model include a theater-level AMD, a JDDOC, a DIRMOBFOR-Air, air mobility assets assigned to the theater, and TRANSCOM-assigned air mobility assets. To be sure, there are certainly other components of CENTCOM's system that are important and one can also derive other noteworthy characteristics, but what has been mentioned here most adequately captures the essence of CENTCOM's best practices. When put into action, 609th AOC/AMD and CENTCOM DDOC collaborate with 618th TACC and TRANSCOM to produce synergistic efforts with respect to air mobility and theater distribution while the DIRMOBFOR-Air orchestrates and synchronizes air mobility operations across the operational level of war throughout the theater.

The PACOM Way versus the CENTCOM Way

Though PACOM has adopted many of CENTCOM's best practices, there are some differences. Absent from 613th AOC/AMD is an APCT and a TDD cell. As mentioned above, APCT was established in CENTCOM to coordinate the activities among aerial ports, primarily for passenger movement and to facilitate the Theater Express mission. 613th AOC/AMD does not utilize contract airlift like CENTCOM does for intra-theater movement and has no Theater Express mission. Furthermore, intra-theater passenger movement of large groups throughout the PACOM AOR does not

occur with the frequency with which it occurs in CENTCOM and the normal Channel schedule accommodates routine movements for unit training events. For large exercises, airlift support is scheduled specifically for the units that will be involved in the exercises and the ESA/OSA branch handles all other passenger travel needs. TDD was established specifically to handle the influx of TRANSCOM missions into CENTCOM to eliminate passengers traveling in convoys which is currently not a concern in the PACOM AOR.

Additionally, 613th AOC/AMD tracks non-PACAF originating missions as they transit the theater, but those missions are primarily controlled by TRANSCOM through AMC's En Route structure. TRANSCOM missions may be transiting the PACOM AOR with a final destination outside the theater, may be supporting routine peacetime CONUS-to-AOR sustainment activity, or may be supporting an exercise that PACOM could not support. In all these cases, they are TRANSCOM missions that do not require the kind of synchronization and integration with the Pacific Theater that TDD missions require in CENTCOM.

In addition to the ESA/OSA branch, 613th AOC/AMD included another function that was neither part of the doctrinal AMD construct nor part of CENTCOM's model. PACMARF's role in altitude reservation is a civil aviation function, appropriately located within the AMD because of the large volume of U.S. air mobility traffic transiting the Pacific. Even when combat fighter aircraft transit the Pacific, they do so in close contact with tanker aircraft that are under the control of the AMD. As was mentioned above, the ESA/OSA branch handles passenger travel. An especially important portion of that mission is the movement of DVs throughout the AOR. This is a special function based on the geographic separation of the units throughout the Pacific, the number of DVs that routinely need to travel to those units, and the type of aircraft necessary to carry out that mission. These sub-components in 613th AOC/AMD are therefore specifically targeted to address requirements inherent to that AOR, indicating that the AMD can be further modified beyond the doctrinal architecture or CENTCOM model to meet specific needs of a JFC.

As with the AMDs, similarities and differences exist with JDDOC operations. PACOM DDOC validates air transport requirements for PACOM users in a similar fashion to CENTCOM DDOC. And PACOM DDOC is also involved in Channel

mission management as is CENTCOM DDOC. PACOM DDOC determines Frequency Channel mission requirements within the PACOM AOR in coordination with its Service components and 618th TACC.¹⁹ These requirements include routing and frequency of missions based on customer requirements. However, not all Channels need to be determined directly through PACOM DDOC. 618th TACC can notify the Requirements branch at 613th AOC/AMD directly if it receives word via an AMOS of excessive backlog at an En Route station.²⁰ 613th AOC/AMD Airlift Planners will schedule a Requirements Channel when requested by 618th TACC and coordinated with the Requirements branch.²¹

Unlike CENTCOM DDOC, PACOM DDOC also has a large role in Humanitarian Relief operations. As part of the Theater Security Plan, PACOM is postured to execute Disaster Relief and other types of support to sovereign nations within the AOR at the behest of the U.S. government. PACOM DDOC is tasked with determining available relief supplies within the PACOM AOR, to include Service component owned stocks, pre-positioned stocks, and DLA stocks.²² Additionally, it is tasked to determine availability for contracted relief supplies and local purchase of supplies in the affected country.²³ Once relief supplies have been located, it is PACOM DDOC's task to push them to the JTF for distribution.²⁴ PACOM DDOC also establishes distribution routes within the PACOM Theater, identifies logistics hubs and nodes to support relief operations, and ensures distribution from airfield to Supply Distribution Point.²⁵

PACOM began joint logistics experiments in 2006 under the umbrella of the Joint Experimental Deployment and Support (JxDS) concept, which was meant to examine a full range of logistics C2 options.²⁶ JxDS was to assess four organizational structures:

¹⁹PACAFI 10-2101 (Draft), *Pacific Air Mobility Operations*, 24.

²⁰PACAFI 10-2101 (Draft), *Pacific Air Mobility Operations*, 24.

²¹PACAFI 10-2101 (Draft), *Pacific Air Mobility Operations*, 24.

²² Mr. Kerry Nicholls, Humanitarian Assistance Branch, U.S. Pacific Command (PACOM) J45 and Major Jeanne Benfield, Branch Chief, Supplies and Service, U.S. Pacific Command (PACOM) J424, "USPACOM Disaster Relief Operations," Briefing presented on 27 September 2006, slide 11.

²³Nicholls and Benfield, "USPACOM Disaster Relief Operations," slide 11.

²⁴Nicholls and Benfield, "USPACOM Disaster Relief Operations," slide 11.

²⁵Nicholls and Benfield, "USPACOM Disaster Relief Operations," slide 14.

²⁶Mr. John J. Ryneska, "An Expeditionary Mindset," Briefing presented at Pinnacle 2006-2, U.S. Joint Forces

JDDOC, Enabled J4 (eJ4), Joint Force Support Command Component (JFSCC), and Combined Logistics Command (CLC). With JDDOC operations already underway, PACOM decided to exercise the eJ4. The eJ4 experiment was to provide enhanced joint theater logistics capabilities to improve coordination, integration, and synchronization of theater logistics functions and processes for the combatant command J4.²⁷ The effort targeted more effective integration of PACOM DDOC, PACOM J4, and other logistics providers, as well as improved coordination between PACOM J3 and J4 by redesigning staff processes.²⁸ The eJ4 concept aimed to address the overlapping functions among the Services that resulted when CENTCOM DDOC was established.²⁹ The portion of the experiment affecting the Mobility branch at PACOM DDOC was supposed to improve management of all aspects of theater strategic movements, policies, and plans. During Exercise ULCHI FOCUS LENS 2006 however, the initiative received lukewarm support from logistics personnel, who concluded from the exercise that JxDS provided valuable insight into a commander's requirements, but that it was not applicable for PACOM-wide use.³⁰ On the other hand, in 2008, during Exercise TERMINAL FURY 07, JTF 519's JMC was merged with PACOM DDOC to explore leveraging the expertise of the latter in prioritizing movement requirements for the JTF's rapid deployment mission.³¹

Another difference between CENTCOM and PACOM is the existence of multiple JDDOCs. There is a Korea DDOC and a Japan DDOC as well, though they are much smaller in scale and possesses narrower responsibilities. The Japan DDOC resides as a sub-function of the USFJ J43 Plans and Exercises branch.³² The J43 Plans and Exercises branch's primary areas of focus are "joint and bilateral logistics planning through

Command, Joint Deployment, Employment, and Sustainment Department, 5 June 2005.

²⁷Colonel Mark Akin, U.S. Army, "CENTCOM Staff Update on Joint Experimentation Deployment and Support (JxDS)," Briefing presented at USCENTCOM, MacDill Air Force Base, 18 September 2006, slide 42.

²⁸Akin, "CENTCOM Staff Update on JxDS," slide 47.

²⁹USJFCOM Briefing Team, "Enhanced J-4 (eJ4)Pre-Assessment Brief," Briefing to Brigadier General Dowd, USPACOM J4, USJFCOM, 11 December 2006.

³⁰U.S. PACOM J4 Exercise Briefing Team, "U.S. Pacific Command Experimentation Activities Key Results," Briefing presented on 18 September 2006, slide 2.

³¹Donna Miles, American Forces Press Service, "Terminal Fury Prepares PACOM to Confront Crisis, Threats," 6 April 2008, available from <http://www.defense.gov/News/newsarticle.aspx?id=49484>.

³²Lieutenant Colonel Joe D. Gann, U.S. Air Force, U.S. Forces Japan J43 Plans and Exercises Branch Chief, "U.S. Forces Japan (USFJ) Command Update Brief," Briefing for Logistics 399 Course, 31 Jul 2009, slide 23.

coordination with the Japan Joint Staff Office, and exercise participation.”³³ As the warm base foundation of the Japan DDOC, the Plans and Exercises branch also provides leadership for the USFJ J4 Crisis Action Organization during exercises and contingencies.³⁴ The J43 maintains a close working relationship with the DLA Liaison Officer to Japan to ensure American forces in Japan maintain overall readiness and sustainability in a time of crisis.³⁵

The Korea DDOC was actually established as a JDDOC in August 2004, prior to the establishment of PACOM DDOC, and currently acts partially as a PACOM DDOC Forward in Korea.³⁶ USFK J4 is responsible for the Korea Distribution System which is primarily managed by the 19th Sustainment Command (Expeditionary) (ESC).³⁷ The Korea DDOC primarily handles in-transit visibility reporting back to PACOM DDOC, which is accomplished through a generated weekly report.³⁸ However, logistics activity on the Korean peninsula is being redesigned as preparations are made for the stand up of KORCOM in 2012. Current options that have been considered include augmenting the Korea DDOC in order to make it a more viable entity under KORCOM, establishing a JFSCC under the JxDS concept, or establishing a CLC, also under the JxDS concept.

The JFSCC was designed to provide a single logistics command with enhanced joint capabilities to coordinate, integrate, and synchronize theater logistics functions.³⁹ The CLC concept is just an extension of the JFSCC concept in a combined or coalition environment. The idea is to have operational level logistics management able to shift from staff to command across the spectrum, from distribution management, to fusion at the DDOC level, to commodity management at the JFSCC level, to coalition logistics integration at the CLC level.⁴⁰ The JFSCC effort and the development of a CLC concept

³³Gann, “USFJ Command Update Brief,” slide 23.

³⁴Gann, “USFJ Command Update Brief,” slide 23.

³⁵Gann, “USFJ Command Update Brief,” slide 23.

³⁶Keith W. Lippert, “Defense Logistics Agency,” *Defense Transportation Journal*, 1 April 2005, available from <http://www.allbusiness.com/government/412494-1.html>.

³⁷U.S. Forces Korea (USFK) Regulation 4-1, *Korea Distribution*, 9 February 2009, 5.

³⁸USFK Regulation 4-1, *Korea Distribution*, 14.

³⁹U.S. Force Korea (USFK), *Standard Operating Procedures, Joint Force Support Component Command (JFSCC)*, 8 January 2007, 6-12.

⁴⁰Colonel Mark W. Akin and Mr. George L. Topic, “Transforming Joint Operational Level Logistics,” *CHIPS Magazine January-March 2008*, available from http://www.chips.navy.mil/archives/08_jan/web_pages/JxDS.html.

within USFK have been periodically exercised utilizing the existing logistics structure of the 19th ESC.⁴¹ Planning conferences for several exercises on the Korean peninsula, including KEY RESOLVE 2009, FOAL EAGLE 2009, and ULCHI FREEDOM GUARDIAN 2009 incorporated into their scenarios the concept of a fully operational Korea DDOC working under a KORCOM J4 versus the concept of a JFSCC or a CLC, to continue to evaluate what organizational construct would be best.⁴²

The unique situation in the KTO, where the U.S is partnered with a host nation capable of leveraging an advanced logistics enterprise in support of its own defense, requires USFK to explore more complex arrangements than what is found in CENTCOM currently. Similarly, the Japan DDOC has a very highly specialized role which is necessary to support a sub-unified command with a specialized mission. Japan DDOC exists to meet the unique needs of USFJ and tailors its efforts to integrate with a host nation that also possesses an advanced logistics enterprise. Additionally, the frequency of exercises specific to that sub-unified command requires an organization that is uniquely tailored to handle periodic, large-scale, exercises. Korea DDOC currently serves as a DDOC Forward to facilitate joint logistics integration for the KTO on behalf of PACOM DDOC. When KORCOM eventually reaches full operational capability, Korea DDOC will probably take on a role much like Japan DDOC.

Along with multiple JDDOCs, PACOM also contains two standing AOCs. The KAOC, with 607th AOC as its core unit, falls under USFK to handle C2 of missions within the KTO.⁴³ 607th AOC/AMD is a small, minimally-manned core organization which provides air mobility planning expertise within the 607th AOC, but does not handle day-to-day C2 of air mobility missions transiting the Korean peninsula.⁴⁴ Its staff is partially augmented for exercises and in the event of a major contingency in the KTO, 607th AOC/AMD would be fully augmented to exert the total efforts of a fully functional AMD. For a Major Contingency Operation, 607th AOC would require just fewer than

⁴¹Akin and Topic, "Transforming Joint Operational Level Logistics."

⁴²Mr. Chuck Cotterell, *Report for Key Resolve/Foal Eagle 2009 (KR/FE 09) Final Planning Conferences and Ulchi Freedom Guardian 2009 (UFG09) Initial Planning Conferences*, LeMay Center, 22 December 2008.

⁴³The operations plans for the employment of U.S. forces on the Korean peninsula, along with the types of missions 607th AOC/AMD would execute C2 over, are classified and therefore beyond the scope of this thesis.

⁴⁴Lieutenant Colonel Daniel May, Chief, 607th AOC/AMD, e-mail correspondence with the author, 8 March 2010.

800 personnel in a variety of specialties to meet full operating requirements.⁴⁵ The U.S. Air Forces Korea Commander would have OPCON over intra-theater airlift assets. He would then delegate TACON of those mobility forces to him or herself as the CFACC for the KTO. C2 of those mobility forces would be executed through the fully operational 607th AOC/AMD.

PACOM's AMD is clearly tailored to facilitate the current peacetime day-to-day operations while maintaining the ability to spool up for contingencies. On 9 May 2008, JTF-Caring Response was established to aid Burma in relief operations following a devastating cyclone.⁴⁶ 613th AOC/AMD scheduled and executed missions for two Air Force C-130s from the 374th Airlift Wing at Yokota Air Base, Japan as well as five Marine KC-130s and three CH-53 helicopters from Kadena Air Base, Okinawa. Throughout the operation, nearly five relief missions per day were directed by 613th AOC/AMD, resulting in the delivery of over three million pounds of supplies.⁴⁷ Nearly simultaneously, 613th AOC/AMD planned and executed C2 of operations in support of the earthquake relief effort in Sichuan, China, utilizing two C-17s forward deployed to Kadena Air Base, Japan from Hickam Air Force Base, Hawaii.⁴⁸ These C-17s, although TRANSCOM-owned, were able to be directed by 613th AOC/AMD based on the PACOM/TRANSCOM MOA. PACOM C-17 operations differ from CENTCOM C-17 operations, where 618th TACC retains planning and C2, CENTCOM DDOC provides cargo, and TDD cell provides coordination, verification of cargo requirements, and tactics support for airdrops, because PACOM's C-17s are permanently based in the AOR.⁴⁹

The AFRICOM Way versus the CENTCOM Way

AFRICOM's intra-theater air mobility system is relatively new, with 617th AOC becoming fully operational in early 2010. As with the other two geographic commands examined in this thesis, the theater JFACC/CFACC concept has been embraced in this

⁴⁵Robert S. Tripp, et al, "A Strategic Analysis of Air and Space Operations Center Force Posture Options (U)," *Project Air Force*, (Arlington, CA: RAND Corporation, 2008), 32.

⁴⁶Nicholls and Benfield, "USPACOM Disaster Relief Operations," slide 29.

⁴⁷Nicholls and Benfield, "USPACOM Disaster Relief Operations," slides 33-34.

⁴⁸Nicholls and Benfield, "USPACOM Disaster Relief Operations," slide 35.

⁴⁹"Theater Air Mobility Operations," Briefing to Advance Air Mobility Operations Course (Advanced AMOC) Class 2008-E, 15 July 2008, slide 37.

AOR, with one AOC and one AMD centrally controlling air operations for the entire theater. It is, however, a much smaller operation than other geographic theaters, not solely because of its infancy, but also because of AFRICOM's desire to keep the American footprint on the continent relatively small. AFRICOM DDOC and 617th AOC/AMD have the same type of reach-back capability with TRANSCOM to request air assets for missions that cannot be supported solely with the theater's available assets. The theater's airlift assets are allocated via a unique relationship with EUCOM and USAFE. USAFE TACONs two C-130s daily to AFAFRICA where 617th AOC/AMD plans and coordinates taskings for operations internal to the AOR, including airlift support for CJTF-HOA. 617th AOC/AMD Requirements branch engages with users to verify C-130 capable missions in much the same way as CENTCOM Requirements branch does. JOPES is utilized to communicate data and, due to the low volume of air movement requirements, sufficient expertise is available in the theater to preclude the need for supplemental systems such as ITARS.⁵⁰ 617th AOC/AMD does not have a Theater Express branch, though the AFRICOM DDOC initially tried to have one established in accordance with CENTCOM's model.⁵¹ However, there was insufficient cargo throughput and with only three contract carrier aircraft to manage the initiative was not fiscally sustainable.⁵² The lack of a Theater Express mission—combined with the fact that there are not aerial ports operated by AFRICOM—eliminates the need for 617th AOC/AMD to have an APCT.

AFRICOM's main concern is in developing relationships with the various countries in the African Union. This helps explain both the interagency structure inherent to the command as well as the desire to keep the perception of American military presence to a minimum. For example, in Fiscal Year 2008, AFRICOM led several civil service initiatives in the hopes of positively influencing conditions on the continent. These initiatives covered a wide range of disciplines, from Training Area Management in the Cape Verde Islands to Waste Management in Botswana to Environmental Security in

⁵⁰Lieutenant Colonel Thomas Ulmer, Chief, 617th AOC/AMD, e-mail correspondence with author, 6 March 2010.

⁵¹Ulmer, e-mail correspondence with author, 6 March 2010.

⁵²Ulmer, e-mail correspondence with author, 6 March 2010.

South Africa.⁵³ These types of civil development, along with developments in infrastructure modernization and transportation management, indicate opportunities to economically incentivize commercial enterprises on the continent.

AFRICOM DDOC plans on taking advantage of this situation to establish an ALN to help with movement requirements throughout the AOR. This ALN will provide AFRICOM DDOC with flexible options to accomplish a wide range of theater movement within the constraints of its operating environment. It is not just the lack of military transportation assets which creates a problem for AFRICOM DDOC. Africa's meager transportation infrastructure creates a complicated problem as well. While already contending with what is often called "the tyranny of distance," as evident in the figure below, AFRICOM DDOC relies primarily on two C-130s that are woefully insufficient at covering the AOR with their limited range, and once a delivery is made, there is almost no ground support to move anything forward. To overcome this difficult dilemma, AFRICOM DDOC is going beyond the traditional military logistics network, in a manner far beyond the Theater Express concept in CENTCOM. The ALN concept "capitalizes on the entire logistics capability available in Africa. This includes access to and use of the logistics capabilities of [DoD], U.S. government agencies, partner nations, allies and industry working in Africa."⁵⁴

⁵³ Art Kolodziejcki, Environmental Security Program Manager, U.S. Africa Command, "AFRICOM Environmental Security and Sustainability Program overview: Environmental Security Concerns prior to and during Peace Support and/or Crisis Management Operations," Briefing presented at Umea, Sweden, 25-26 November 2008, slide 13.

⁵⁴Dennis L. D'Angelo, *Background Paper on Adaptive Logistics Network*, U.S. Africa Command Africa DDOC, 28 September 2008, quoted in Major Tom R. Ulmer, U.S. Air Force, "Using An Adaptive Logistics Network in Africa: How Much and How Far," Graduate Research Paper, Air Force Institute of Technology, June 2009, 30.

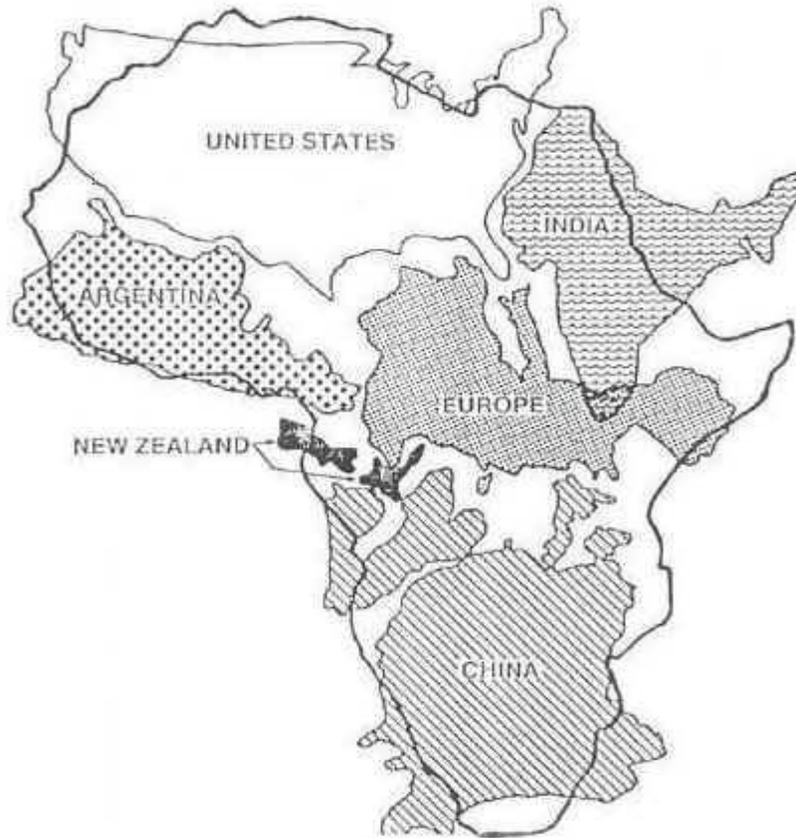


Figure 3 - Size of Africa Comparison

SOURCE: The Times Atlas⁵⁵

Since it is a commercially contracted operation, AFRICOM’s ALN concept is useful across the full spectrum of logistics requirements, from small packages to multiple cargo pallets and large passenger movement. An ALN has the flexibility to expeditiously morph to meet the needs of AFRICOM’s demands. It represents “the seamless connecting of supply, planning, contracting, and distribution operations and rapid decision making capability driven by real time visibility across the [entire] logistics process.”⁵⁶ However, even though the ALN concept is an innovative way to solve AFRICOM DDOC’s problems, implementing it will have to overcome problems of its

⁵⁵Author’s Note: This figure was originally found in the Graduate Research Project by Major Tom R. Ulmer. For more on Africa and AFRICOM, please see Major Tom R. Ulmer, “Using an Adaptive Logistics Network in Africa: How Much and How Far,” Graduate Research Project, Air Force Institute of Technology, June 2009.

⁵⁶D’Angelo, *Background Paper on Adaptive Logistics Network*, quoted in Ulmer, “Using An Adaptive Logistics Network in Africa,” 31.

own. It will require comprehensive knowledge of all available logistics capabilities, such as distribution capacity, supply items, locations of resources, and costs associated with acquiring and accessing these resources.⁵⁷ Beyond understanding what resources could potentially be at AFRICOM DDOC's disposal, there is the requirement to have some semblance of real-time visibility on the condition of those resources when the need arises. There is also the issue of overcoming the rigid DoD contracting procedures. As they are now, DoD contracting procedures are not completely compatible with the rapid degree of response that the AFRICOM DDOC wants to be able to provide in its ALN's execution.⁵⁸

Assessing the Universality of the CENTCOM Way

This thesis's examination of intra-theater air mobility and theater distribution operations in CENTCOM, PACOM, and AFRICOM revealed that CENTCOM's model not only possessed best practices but that some of those best practices were put into action in the other two AORs. As discussed above, CENTCOM's intra-theater air mobility and theater distribution model is best described as a system that possesses desirable characteristics for a JFC's intra-theater air movement capabilities, made up of a series of four best practices and executed by the combined efforts of certain components. However, in terms of the components that make up CENTCOM's model, neither PACOM nor AFRICOM demonstrated a complete replication of them, despite having intra-theater air mobility systems that were operating effectively. On the surface, one may conclude that the CENTCOM model need not be universally applicable to other geographic commands in order to have an effective intra-theater air mobility system.

Earlier in this chapter, the author summarized four characteristics that captured the essence of the CENTCOM model's best practices. The author now offers that the applicability of CENTCOM's model to other AORs does not require replication of every component, or subcomponent, but instead just replication of the components or subcomponents necessary to achieve the *characteristics* of CENTCOM's model. This approach allows a JFC to meet the needs of his or her particular situation without

⁵⁷D'Angelo, *Background Paper on Adaptive Logistics Network*, quoted in Ulmer, "Using An Adaptive Logistics Network in Africa," 31.

⁵⁸D'Angelo, *Background Paper on Adaptive Logistics Network*, quoted in Ulmer, "Using An Adaptive Logistics Network in Africa," 32.

instituting teams or functions that do not provide any real value. Furthermore, it allows for modifications to be made to components or subcomponents in theater in order to meet new or emerging challenges. Focusing on the characteristics of CENTCOM's model instead of the components, it can be demonstrated that both PACOM and AFRICOM have indeed successfully applied the CENTCOM model to meet the intra-theater air mobility and theater distribution needs in those AORs.

The first characteristic of CENTCOM's model was the ability to synchronize with TRANSCOM and AMC to facilitate a sustained level of throughput velocity to meet the theater's needs. All four of CENTCOM's intra-theater air mobility best practices come together to produce this characteristic. This characteristic is also present in both PACOM and AFRICOM; however those AORs are able to achieve it without the use of one of the best practices: contracting additional airlift. AMC's OPCON of global air mobility assets, with C2 of air mobility operations through 618th TACC, provided reachback capabilities in both PACOM and AFRICOM. In the Pacific, 618th TACC works with 613th AOC/AMD to determine and schedule the Frequency Channel missions necessary to satisfy the requirements of PACOM users. Additionally, 618th TACC can act on information received through the En Route system to prompt 613th AOC/AMD to schedule a Requirements Channel if a potential backlog is identified somewhere in the AOR. In AFRICOM, 617th AOC/AMD has the reachback capability to engage with TRANSCOM and 618th TACC to pass mission requirements for cargo that cannot be handled with intra-theater assets to ensure user needs are met.

Though neither AMD possessed a TDD cell within their respective ALCTs, the cell's absence was not indicative of a flaw with the concept of having one. Rather, it was based on the unique combat surge requirements the branch was designed to support. In the event of a major contingency operation in either AOR, both these AMDs could be augmented in accordance with the AMD AUG CONEMP and a TDD cell may be established. Similarly, the lack of a Theater Express cell or an APCT was not indicative of flaws with those concepts. They were also specifically tailored to meet increased throughput velocity needs inherent in having a large ground combat force. Indeed, AFRICOM actually attempted to institute a Theater Express cell but the AOR did not have sufficient throughput velocity to make the concept cost effective.

The second characteristic of CENTCOM's intra-theater air mobility and theater distribution system is the ability to manage efficiently the AOR's fungible common-user air mobility assets while responding to user requests. Two of the four best practices combine to produce this characteristic: the theater-focused AMD and JDDOC concept. Like other forms of air power, such as close air support or ISR, air mobility is a limited commodity, typically with demand that exceeds capacity. Both 613th AOC/AMD and 617th AOC/AMD centrally planned and executed intra-theater airlift missions to provide the JFACC/CFACC, and ultimately the JFC, with the most efficient use of intra-theater air mobility assets. This process mirrors 618th TACC's ability to centrally plan and execute global mobility missions, making the most efficient use of the inter-theater assets. Moreover, PACOM and AFRICOM DDOCs' ability to validate cargo transport mode, selecting C-17s versus C-130s or KC-135s in the Pacific or selecting air transport versus surface transport in Africa, reduces unnecessary strain on intra-theater airlift assets. CJTF-HOA, one of 617th AOC/AMD's primary customers, has numerous small teams in various geographically separated areas. These teams require very little in terms of supplies. The planners at 617th AOC/AMD optimize routing and cargo capacity so that one aircraft has the ability to service multiple locations.

Many customers often automatically assumed that air transport is the only appropriate mode of travel. Through communication with users, mobility experts versed in all modes of transportation work together to ensure the right method is used to meet velocity and throughout requirements while at the same time ensuring the best use of the theater's intra-theater air assets. Sometimes the situation on the ground drives greater air transport needs for passenger movements to mitigate threats. JDDOCs can centrally prioritize movement requirements across the entire theater to ensure mobility assets are available to facilitate that. The result of these JDDOC operations is an increase in efficiency at the operational level of war in an AOR. Not only are the costs of transportation reduced by eliminating unnecessary air movements, the available cargo carrying capacity of intra-theater air assets is able to be optimized.

The third characteristic of CENTCOM's intra-theater air mobility and theater distribution model is the capability to execute theater-wide C2 of air mobility assets. Three of the four best practices combine to achieve this characteristic: the theater-

focused AMD, contracting airlift and providing a means to manage airlift across an entire theater, and integrating a theater's air mobility capacity with TRANSCOM's global capacity. Both 613th AOC and 617th AOC have robust C2 capabilities by definition. Their AMD's leverage each theater's TACS along with AMC's GDSS 2 to provide C2 of intra-theater air mobility missions throughout each AOR. Missions flow to the ALCTs of both AMDs via JOPEs and are cut into GDSS 2 once the missions are planned. The AMCTs of both AMDs then collaborate with the Operations watch officers at their respective AOCs and 618th TACC to flight follow each mission. Neither PACOM nor AFRICOM utilize an APCT. PACOM leverages instead AMC's En Route system in the Pacific. Because GDSS 2 is universal to TRANSCOM, 618th TACC, and 613th AOC/AMD, they all have visibility on mission movement which in turn allows the AMCCs at the En Route locations to make updates that everyone will see.

AFRICOM wants to keep as small a military footprint as possible on the continent and therefore there are no AMC En Route facilities or aerial ports to report mission status on intra-theater missions, except for the contracted ATOC back at Djibouti. However, since there are so few missions and only two aircraft, a robust capability is not required. If a major contingency operation were to commence somewhere on the continent, those sub-components of CENTCOM's model, such as an APCT, can be stood up once 617th AOC/AMD is augmented in accordance with the AMD AUG CONEMP.

The fourth characteristic of CENTCOM's intra-theater air mobility and theater distribution model is the capability to facilitate in-transit visibility of personnel and equipment throughout the system to the maximum extent possible. All four best practices combine to deliver this characteristic. Just like in CENTCOM, PACOM and AFRICOM AMDs both provide a central location for the planning and scheduling of airlift missions based on a validated set of requirements. Therefore, every movement planned and executed from an AMD can be tracked with visibility on what each aircraft is moving. Additionally, because AMC's GDSS 2 is able to communicate with over 30 global transportation C2 systems both commercial and military and from unclassified to classified, 613th and 617th AMDs have visibility on items entered by 618th TACC and vice versa. Aerial ports, AMCCs and ATOCs can access GDSS 2 as well, providing updates on offload and on-load information.

Both PACOM and AFRICOM DDOCs receive, prioritize, and validate user movement requests. This validation and prioritization process provides visibility on assets in the theater as well as information the location of these assets. When CENTCOM DDOC was first established, among its goals were to improve theater asset and in-transit visibility for forces and supplies and to synchronize strategic and operational distribution systems. PACOM and AFRICOM DDOCs accomplish these goals as well by maintaining C2 connectivity with TRANSCOM to coordinate on movement requirements which cannot be supported by intra-theater assets so that they can flight follow. Requirements that are validated and planned by 613th and 617th AOC/AMDs are tracked via GDSS 2 and arrivals at the point of consumption are closed out in JOPES after mission completion. Neither PACOM nor AFRICOM utilize ITARS due to the relatively low volume of movement requests in each AOR. However, in the event of a major contingency operation the capability may prove useful as the number of requests will more than likely see a substantial increase. Since ITARS is based on CAMPS, a C2 system both PACOM and AFRICOM have access to, it would be relatively simple for those AORs to standup an ITARS in order for the JDDOCs to receive and prioritize requests as well as maintain visibility on the increased amount of cargo that would be transiting the theaters.

Based on the comparisons above, the author concludes that with respect to the essential characteristics of CENTCOM's intra-theater air mobility and theater distribution model, operations in PACOM and AFRICOM support the universal applicability of the CENTCOM way. Each AOR demonstrated the application of the necessary best practices, utilizing the appropriate components and sub-components, to achieve an intra-theater air mobility system to meet the respective GCC's needs. Because of the scalability of each theater's AMD, the application of other CENTCOM best practices and procedures, along with the establishment of the necessary components and sub-components, can be quickly facilitated. There is much that the CENTCOM model has to offer, considering that its best practices have been developed in austere as well as urban environments and in contiguous as well as noncontiguous operational areas.⁵⁹ However,

⁵⁹Joint Publication (JP) 3-0, *Joint Operations (Incorporating Change 1)*, 13 February 2008, II-9. A contiguous operational area is one in which adjacent, subordinate command's operational areas share

a best practice is not necessarily a perfect practice. There are usually contextual limitations with any best practice as is the case with CENTCOM's intra-theater model. Those limitations will be discussed below.

Limitations to the CENTCOM Way

Though CENTCOM's intra-theater air mobility and theater distribution system has been codified under combat conditions spanning over eight years with OEF and OIF (and nearly 20 years of combat support conditions if one counts OSW and Horn of Africa), there are still several limitations to it. First, with the exception of shoulder-fired surface-to-air missiles, small arms fire, and light anti-aircraft artillery, air mobility aircraft operating in CENTCOM have done so in a permissive medium-threat to low-threat environment. U.S. forces have benefited from air supremacy for so long that it may be taken for granted in future conflicts. An existing air-to-air threat or a more significant surface-to-air threat would severely limit air mobility operations, making the velocity of throughput difficult to predict and manage. Contractors would more than likely either not want to fly in those conditions or make such flights cost prohibitive. Any aircraft losses would exacerbate strains on the air mobility system as replacements would be difficult to come by with the limited number of global assets available to TRANSCOM.

A non-permissive physical environment is not the only threat to air mobility operations. GDSS 2 is susceptible to cyber attacks, especially because of the multiple unclassified interfaces with civilian contractors worldwide. The global air mobility system's reliance on networked operations would be severely affected by the loss of C2 capabilities offered by GDSS 2 and other associated AMC systems. Throughput velocity would be difficult to maintain at current rates. C2 of air mobility assets would be hampered, as the efficiencies gained by theater-wide management of air mobility assets would not be sustainable without the ability to centrally disseminate movement requirements.

A second limitation is that despite the establishment of a JDDOC, Service differences in logistics systems still cause problems that erode customer confidence in the

boundaries. A noncontiguous operational area is one in which boundaries are not shared. Lines of Communication in a non-contiguous environment may not be secure.

intra-theater mobility system.⁶⁰ When units have problems meeting supply needs, they attempt workarounds that burden the distribution system. Customer may order twice the quantity required, or submit more than one request for an item. On the other hand, a unit's immediate theater supplier, in an attempt to better support a unit, may push unneeded materials forward when not requested. More complete and accurate in-transit visibility, down to the "last tactical mile," would help stem some of these issues.⁶¹

The current logistics system suffers from parochialism. According to the Lieutenant General Claude V. Christianson, then head of logistics for the Army, "When the Army, Navy, Air Force, and Marines work side-by-side in the same region, as they did in Iraq, the combined supply system is a clashing mismatch of different cultures, incompatible communications systems, different stock numbers for similar items, even different vocabularies. Keeping track of a spare Marine Corps tank transmission as it moves from a Marine Corps depot to an Air Force cargo plane to an Army truck, for instance, is one of our biggest challenges."⁶² Not only are logistics systems overly parochial, there are also compatibility issues within the logistics community itself as well as with the warfighters the systems are supposed to support.⁶³ Retired Vice Admiral Arthur K. Cebrowski, Director of the Pentagon's Office of Force Transformation, stated that "Supply problems in Iraq resulted, in part, because logisticians use separate information and command and control systems apart from those that the warfighters use."⁶⁴ The JxDS concept was an attempt to determine solutions to some of the compatibility problems and CENTCOM was briefed on the results of experiments in the Pacific.⁶⁵ The issue of how best to accomplish joint logistics continues to be an important topic that will have future implications for intra-theater air mobility operations.

⁶⁰Otey, "Mending Seams: Joint Theater Logistics," 15.

⁶¹Otey, "Mending Seams: Joint Theater Logistics," 16.

⁶²David Wood, "Military Acknowledges Massive Supply Problem in Iraq War," Newhouse News Service, January 2004, B-1-2, quoted in Lieutenant Colonel Gregory S. Otey, "Mending a Seam: Joint Theater Logistics," *Air Force Journal of Logistics*, XXX (2), 16.

⁶³Otey, "Mending Seams: Joint Theater Logistics," 16.

⁶⁴Gerry J. Gilmore, "Partnership Integrates, Improves Combat Supply System," American Forces Press Service, March 2004, 2, quoted in Lieutenant Colonel Gregory S. Otey, "Mending a Seam: Joint Theater Logistics," *Air Force Journal of Logistics*, XXX (2), 16.

⁶⁵Colonel Mark Akin, U.S. Army, "CENTCOM Staff Update on Joint Experimentation Deployment and Support (JxDS)," Briefing presented at USCENTCOM, MacDill Air Force Base, 18 September 2006.

A third limitation to the CENTCOM intra-theater air mobility model is that air mobility leaders tend to focus on trying to optimize air mobility operations at the strategic and operational levels of war. It is common to see the term “optimize” when senior AMC leadership discuss enduring issues with inter- and intra-theater air mobility.⁶⁶ A review of the various mobility models reveals that two areas in particular are targeted: capacity and scheduling.⁶⁷ Capacity is a measure of how much cargo can be carried in terms of pallet positions aboard air mobility aircraft. As described in Chapter 1, CENTCOM uses C-130 equivalent pallet positions when calculating cargo capacity. Optimizing the scheduling of aircraft means determining the most efficient routing between the locations the aircraft is servicing. CENTCOM utilizes standard air routes computed based on a number of factors, such as demand, frequency of requests, travel times, and ground on-load/offload times. An optimization process in essence attempts to linearize operations utilizing linear programming. Since inter-theater airlift is leveraged globally, the optimization efforts affect the strategic level of war. Similarly, since intra-theater airlift is leveraged across an entire theater, any optimization that is conducted occurs at the operational level of war. With limited assets and the demand for airlift nearly always exceeding demand, this drive towards maximizing efficiency is a hallmark of the Air Force way of doing business.

With the constant simulation and modeling that occurs at the Air Staff and at Headquarters AMC, it may surprise the casual observer that optimization remains an enduring issue, with continual attempts at determining the best solution. However, a deeper look reveals that working against these linear optimization efforts is friction, a concept best described by the Prussian theorist Carl von Clausewitz. Clausewitz describes friction as the "only concept that more or less corresponds to the factors that

⁶⁶Brigadier General A.J. Stewart, Director of Mobility Forces for AEF 9_10, “DIRMOBFOR AAR AEF 9_10: Sep 2, 2007-Jan 5, 2008,” Briefing on 26 February 2008, slide 16.

⁶⁷Major Kaye McKinzie et al, “A Review of Strategic Mobility Models Supporting the Defense Transportation System,” USTRANSCOM, 5 September 2003, 8-9. There are several models used by mobility analysts at the Air Staff and Headquarters Air Mobility Command, to include Model for Inter-theater Deployment by Air and Sea (MIDAS), Joint Flow and Analysis System for Transportation (JFAST), Air Mobility Command Deployment Analysis System (ADANS), and Air Tasking Efficiency Model (ATEM). These are integer, linear programming models which generate linearly optimized solutions.

distinguish real war from war on paper."⁶⁸ One can extrapolate from that statement that friction also distinguishes real logistics and supply chain management from logistics and supply chain management on paper when it comes to supporting a war. As Alan Beyerchen puts it, the concept of friction is usually interpreted as a form of "Murphy's Law;" the implication being that operations can be optimized up to a certain point until something external to the process causes a disruption.⁶⁹ However, Clausewitz argued that friction was not just caused by some external action or event. He states:

Everything in war is simple, but the simplest thing is difficult. The difficulties accumulate and end by producing a kind of friction that is inconceivable unless one has experienced war ... Countless minor incidents--the kind you can never really foresee--combine to lower the general level of performance, so that one always falls far short of the intended goal ... The military machine--the army and everything related to it--is basically very simple and therefore seems easy to manage. But we should bear in mind that none of its components is of one piece: each part is composed of individuals ... the least important of whom may chance to delay things or somehow make them go wrong ... This tremendous friction, which cannot, as in mechanics, be reduced to a few points, is everywhere in contact with chance, and brings about effects that cannot be measured, just because they are largely due to chance.⁷⁰

Beyerchen postulates that Clausewitzian friction is generated through the nonlinearity of interaction.⁷¹ Interaction is nonlinear in that an input to the system does not necessarily correspond to a predicted and measured output. One cannot predict exactly how some things are going to affect operations. Though "military friction is counteracted by training, discipline, inspections, regulations, orders, and other means," the interactive nature of the parts of the system will nevertheless cause operations to not go as planned. The air mobility system is not immune to the effects of friction. The nonlinearity of interaction caused by weather, obtaining diplomatic clearances, maintenance issues, crew duty day, and conflicting air traffic, among other things are all factors inherent to the air mobility system that can cause friction. Friction in the air mobility system works against optimization. For Army ground commanders, friction is

⁶⁸Carl von Clausewitz, *On War*, ed. and trans. by Michael Howard and Peter Paret, (Princeton, NJ: Princeton University Press, 1976), 119.

⁶⁹Alan Beyerchen, "Clausewitz, Nonlinearity and the Unpredictability of War," *International Security*, 17:3 (Winter, 1992), 59-90.

⁷⁰Clausewitz, *On War*, 119-120.

⁷¹Beyerchen, "Clausewitz, Nonlinearity and the Unpredictability of War," 59-90.

something that must be overcome in order to continue the fight. Depending on the situation, troops on the ground rarely have time to ponder what factors are degrading the optimization of their efforts. The sense of urgency necessary to deal with situations that can unfold very quickly at the front causes ground units to focus more on effectiveness than efficiency. In terms of logistics or supply chain management, ground units are not concerned with what will be the most efficient means of receiving their goods; they just want to receive them. This tension between efficiency and effectiveness plays negatively for the Air Force in a supporting role for the Army. The Air Force as a whole, and the air mobility system in particular, is seen as slow to respond, especially at the tactical level of war. This perception was the genesis for the Air Force's new DS mission set.

The Air Force Direct Support Mission Revisited

The CENTCOM intra-theater air mobility system's lack of responsiveness as perceived by Army ground commanders at the tactical level of war coupled with the intra-theater air mobility system's difficulties in overcoming friction in the "last tactical mile" has led to a radical departure from the Air Force's master tenet. This decision was not an easy one to reach and there were several options implemented and considered as the CONEMP was being developed.⁷² The C-130 Corps Express mission was implemented to provide Corps Commanders with a dedicated asset but it was still under the C2 of 609th AOC/AMD. More recently, Corps Commanders were given the authority to declare certain cargo a higher priority than what was assigned by CENTCOM DDOC, in essence overruling CENTCOM DDOC. If a Corps Commander elected to use this option, the only movement requirements of higher priority would be Presidential Direction missions, Congressional Delegation missions, aero-medical evacuation missions, emergency medical missions, combat operational requirements, or

⁷²USAF *Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment*, 13 September 2009, 7 (obtained courtesy of Major Mark C. Keener, HQ AMC/A5QH). In 2005, while developing this CONEMP, two possible courses of action were considered. Either attach an Air Force EAS TACON to the COMARFOR or establish an EAS with a Direct Support command relationship to the COMARFOR with TACON retained by the COMAFFOR. The COMARFOR TACON relationship provides greater certainty as to which exact forces are available for the time sensitive/mission-critical mission. The Direct Support relationship provides the potential for access to more and different forces than TACON. TACON provides the advantage of certainty of forces which outweigh the benefit of more forces under Direct Support command relationship.

Coalition Human Remains missions.⁷³ Unfortunately, because decisions were still being made at the corps level, the Army commanders continued to argue that tactical level needs were not being adequately addressed. The TACON issue continued to be a point of contention between the Air Force and the Army. The Air Force argued that maintaining TACON offered the Army maximum flexibility as the Air Force could pick the asset that best matched the movement requirement. The Army on the other hand preferred the risk of not being able to move certain things with the assigned DS aircraft as long as it could have TACON.

To get a better understanding of what the Army argument is in terms of level of responsiveness, it would be beneficial to examine Army organic airlift request procedures. For Army units currently in the CENTCOM AOR, there are two separate intra-theater airlift systems that can be selected to satisfy movement requirements. The first is the Army Air-Ground System Air Movement Request (AMR), which uses organic Army assets like the UH-60 Blackhawk, CH-47 Chinook, or C-23 Sherpa.⁷⁴ The requesting unit sends the request directly to the CAB. Because AMR is an internal ground component process, it enables short notice execution, typically in 24 hours or less.⁷⁵ Cargo loads are limited, usually less than 18,000 pounds for a Chinook and no more than 3,000 pounds for the Sherpa.⁷⁶ The other requests system is via the TACS.

As described in Chapter 1, common-user airlift support in CENTCOM is accomplished via a JMR using ITARS. Prior to reaching CENTCOM DDOC however, initial validation has to be accomplished by the servicing Movement Control Team (MCT).⁷⁷ The JMR then goes to an Area MCT, collocated with the Sustainment Brigade

⁷³Master Sergeant Anne Smerekanicz, AFCENT AMD Air Mobility Logistics Lesson Developer, Detachment 1, Mobility Operations School, U.S. Air Force Expeditionary Center, "CENTCOM Intra-Theater Airlift Letter of Instruction (LOI)," Briefing to Advanced Study of Air Mobility (ASAM) Class XV, 12 September 2008, slide 9. Prioritization information is from the Intra-Theater Airlift Letter of Instruction. The 3B intra-theater airlift priority code was a recent modification to the CENTCOM Intra-Theater Airlift Letter of Instruction as directed by the current CFACC, Lieutenant General Gilmary M. Hostage, III.

⁷⁴*Intra-Theater Airlift Standard Operating Procedure*, Enclosure 1 to Tab D (Air Standard Operating Procedures) to Appendix 4 (Transportation) to Annex D (Logistics) to 316 Expeditionary Sustainment Command, OPORD 08-01, U.S. Central Command 2008, 3.

⁷⁵*Intra-Theater Airlift Standard Operating Procedure*, 3-4.

⁷⁶*Intra-Theater Airlift Standard Operating Procedure*, 4.

⁷⁷*Intra-Theater Airlift Standard Operating Procedure*, 4.

under the ESC.⁷⁸ The Area MCT validates the request as a joint-eligible requirement and sends it to the CENTCOM DDOC for Service Validator validation as a joint requirement. If the JMR is validated at CENTCOM DDOC and approved for air transport, it is routed to 609th AOC/AMD and then to the airlift wings as described in Chapter 1. The Army complains that a tactical level request must move up into the operational level to get filled. Furthermore, because CENTCOM DDOC can deny the JMR or assign another form of transport according to the intra-theater airlift prioritization rules, the requesting unit may not get the airlift it wanted after having waited several days for the request to be approved. To be clear, the JMR spends a significant portion of its routing time in the Army component system, having to get through a unit level MCT and Area MCT before reaching the Service Validator at CENTCOM DDOC. The Army has the option to utilize the Immediate Airlift Request option as detailed in Chapter 1 that will expedite the process once the JMR is received at CENTCOM DDOC, but the request still has to go through the Army component system.

Why then does the perception persist among Army units that the extended timeline is caused by the Air Force, thus making the Air Force slow to respond? Part of the problem is rooted in the efficiency versus effectiveness debate discussed earlier. However, the fact that CENTCOM DDOC and 609th AOC/AMD are seen as being “in the rear,” disconnected from the front lines, exacerbates the issue. Without Air Force members having “boots on the ground,” providing an Air Force face to Army units at the tactical level of war, it is difficult to build the type of trust needed for an Army unit to believe in the air mobility system. At the theater/operational level, the DIRMOBFOR-Air builds those types of relationships. In addition to orchestrating and synchronizing air mobility operations, the DIRMOBFOR-Air reaches out to the J4, the Service components, coalition partners on the International Security Assistance Force, and other entities in the theater.⁷⁹ In doing so he or she acts as an honest broker, working to meet user requirements while at the same time informing and educating leadership across the theater about the intra-theater air mobility.

⁷⁸*Intra-Theater Airlift Standard Operating Procedure*, 4.

⁷⁹Stewart, “DIRMOBFOR AAR AEF 9_10: Sep 2, 2007-Jan 5, 2008,” slide 6.

This need to capture trust at the tactical level was the biggest driving factor in ultimately giving TACON of DS aircraft to the Army. However, if AMC had taken a more proactive approach in building relationships with the Army from an earlier stage, the lack of trust may not have developed like it has over the last several years. Obviously that is a counterfactual; however, there is another option worth mentioning which should be explored in earnest for future operations. AMC can institute a more robust AMLO program, modeled perhaps on the combat air forces Air Liaison Officer (ALO) system that is part of the ASOC.⁸⁰ These ALOs are embedded with Army units at every level from the battalion to the corps and spend much of their time with the units they are supporting in the field.⁸¹ Not only would the Army have air mobility experts that it could put eyes below the brigade level, those air mobility experts could screen JMRs on their way up the Army chain, providing feedback on an airlift request's suitability for airlift and saving time for the requesting unit.

As the DS CONEMP stands now, with DS aircraft and aircrews TACON to the COMARFOR, there are two different but related concerns. The first concern lies with the inherent risk of having TACON of assets for a particular mission. If those assets cannot satisfy movement requirements, the Army has to default back to the common-user system. The concern is that for regretted AMRs, the CAB will have to send the request back to the Army G-3 Air for ITARS input after coordination with the requesting unit, which will add more time to the routing process than would have originally been encountered had a JMR already been in the system.⁸² The second concern lies with the number of aircraft the Air Force is pursuing for the DS mission. In March 2009 General Arthur Lichte, then Commander of Air Mobility Command, offered in his testimony before congress that the Air Force did not need more than the 24 C-27Js it had originally identified for that mission.⁸³ That was later amended to 38 per the Air Force's *FY11 Force Structure Announcement*.⁸⁴ However, a CAB can typically consists of somewhere

⁸⁰705th Training Squadron, "Corps ALO/TACP and the Air Support Operations Center," Briefing to SASSC on 16 April 2010, slide 9.

⁸¹705th Training Squadron, "Corps ALO/TACP and the Air Support Operations Center," slide 9.

⁸²USAF *Direct Support of USA Time Sensitive/Mission Critical Mission Concept of Employment*, 28.

⁸³General Arthur Lichte, U.S. Air Force, Commander, Air Mobility Command, *Testimony before the House Appropriations Committee Subcommittee on Defense*, 5 March 2009.

⁸⁴"FY11 Force Structure Announcement," slide 10, available from <http://www.af.mil>.

in the order of 60 aircraft, to include C-23s, Ch-47s, and UH-60s. Moreover, when the Army first conceived the idea for the Future Cargo Aircraft program, it planned on acquiring 78 aircraft to replace its 44 C-23Bs.⁸⁵ The C-27J is indeed a more capable aircraft than anything in the current CAB inventory, able to carry over three times the C-23 Sherpa's load.⁸⁶ But it is highly unlikely that all 38 aircraft will be deployed at one time. With some aircraft needed for training missions and with regularly scheduled phase maintenance and depot inspections, which are lengthy, it would be prudent to expect much fewer than 38 aircraft in the AOR. It is difficult to foresee what type of arrangement would be needed to adequately C2 these aircraft and meet all the tactical level requirements that may be potentially received without a more robust C2 system than a series of liaison officers working for the SAAA Commander.

Is there a way to apply the characteristics of the CENTCOM model from the operational level of war to this tactical level? In essence, it looks like there is another air mobility seam that needs mending. Just like CENTCOM's current model solved problems between the strategic and the operational levels of war, a capability can be established to bridge the gap between the operational level and the tactical level of war. This author proposes exploring the capability that an AMOS could provide as demonstrated in the Pacific during multiple disaster relief and humanitarian operations.

An AMOS is essentially a deployable and scalable AMD.⁸⁷ It could work with the AMLOs to provide local, tactical-level customer support while maintaining C2 connectivity with the AMD, 618th TACC, and TRANSCOM. An AMOS could deploy to an AOR on a rotational basis, remain OPCON to the EMTF but be co-located with a corps-level headquarters, and utilize the AMLOs as its agents with units below the corps level. Moreover, validation authority for DS missions could rest with the AMOS, keeping time sensitive/mission-critical movement requirements out of the JDDOC but allowing for a JMR to be submitted into the system. If a JMR were already in the system

⁸⁵Stephen Trimble, "C-130s to demonstrate Spartan mission in Iraq," *Flight International*, 21 September 2009, available from <http://www.flightglobal.com/articles/2009/09/21/332413/c-130s-to-demonstrate-Spartan-mission-in-Iraq.html>.

⁸⁶C-27J Essential Facts, C-27J website, on-line, Internet, available from <http://www.c27j.com/essential-facts>.

⁸⁷Colonel Kim Cocoran, U.S. Air Force, Vice Commander, 21st Expeditionary Mobility Task Force, "21st Expeditionary Mobility Task Force," Briefing to Advanced Air Mobility Operations Course (Advanced AMOC) Class 2008-E, 26 June 2008, slide 10.

and a DS asset was unable to fulfill the movement requirement, then the movement request could be forwarded to the JDDOC without having the user initiate a new request. This construct would facilitate more responsive throughput velocity, maintain integration with the AMD, 618th TACC, and TRANSCOM via GDSS 2, facilitate C2, and facilitate in-transit visibility. At the same time, a tactical-level capability like this would facilitate the type of relationship between Army and Air Force units that builds trust while allowing the Air Force unit to remain plugged into, and thus able to exploit, the global air mobility system. Conducting air mobility operations in this fashion would preclude the need to release TACON of DS assets to the COMAFFOR.

The Impact on Air Mobility of Expanding the Role of the ACCE

In the previous section, this thesis discovered the need for establishing a cohesive relationship between Air Force air mobility experts and Army units below the corps level. This effort would be in addition to another innovation to come out of CENTCOM in recent years: the ACCE. Originally established to be a liaison and coordinator, recent discussion about the ACCE has centered on the issue of whether or not its role needs expansion. If the role of the ACCE is expanded to be a more authoritative position, it will certainly have an impact on intra-theater air mobility operations. To better understand what that impact may look like, a review of the ACCE concept, from initial implementation to current events, will now be conducted.

In April 2001, an Air Force Doctrine Center tasker was initiated to explore the development of an air and space coordination detachment construct, as a JFACC liaison to the other joint component commanders or equivalent for exercises, experiments and wargames.⁸⁸ There was a strong historical precedent for the role of liaison officers at the operational level of war, with the AOC typically hosting representatives from the other Service components. Liaison officers are expected to perform four basic functions: monitor, coordinate, advice, and assist.⁸⁹ In February 2002 an ACCE White Paper was forwarded to Joint Warfighting Component Commanders for review, but then in March

⁸⁸705th Training Squadron, "Air Component Coordination Element," Briefing to SASSC on 16 April 2010, slide 7.

⁸⁹705th Training Squadron, "Air Component Coordination Element," slide 4.

2002 Operation ANACONDA took place, highlighting a breakdown in coordination between the Air Force and Army components.⁹⁰

When the plan for ANACONDA was first conceived, there was no established C2 for air support. The 10th Mountain Division was handed the plan and it elected to execute without Army organic artillery support or ALOs.⁹¹ There was also a confusing chain of command, with the established JTF reporting to the CFLCC instead of the JFC. This arrangement hindered coordination, and that lack of coordination was further exacerbated by the fact that the 10th Mountain Division Commander never spoke with the CFACC.⁹² Once ANACONDA moved into the execution phase, a series of problems developed highlighting the lack of coordination between the Army and Air Force components. After ANACONDA, it was decided that the existence of an ACCE to advise the JTF on the need to integrate air power into the planning process would have avoided some of the problems that were encountered.⁹³

Prior to the commencement of OIF, ACCEs were dispatched to all component commands. The ACCE concept was envisioned to improve cross-component coordination and provide greater insight into upcoming operations for the CFACC, recognizing that coalition and joint warfighting had to be built on professional competence, trust, and confidence, generating effectiveness based on relationships.⁹⁴ The ACCE has evolved into being the JFACC/CFACC's primary representative to the other components, a liaison *from* the JFACC/CFACC to the other component commanders.⁹⁵ The ACCE Director acts as the principal advisor to the component commander on the role of air power and should be an expert in the application of air assets within the assigned area.⁹⁶ He or she should facilitate the representation and synchronization of airpower on behalf of the JFACC/CFACC, represent the JFACC/CFACC's interests, and facilitate accurate information flow between the AOC,

⁹⁰705th Training Squadron, "Air Component Coordination Element," slide 7.

⁹¹705th Training Squadron, "Air Component Coordination Element," slide 8.

⁹²705th Training Squadron, "Air Component Coordination Element," slide 8.

⁹³705th Training Squadron, "Air Component Coordination Element," slide 8.

⁹⁴705th Training Squadron, "Air Component Coordination Element," slide 8.

⁹⁵Air Force Doctrine Center Handbook (AFDCH) 10-03, *Air Component Coordination Element Handbook*, 6 September 2005, 9.

⁹⁶AFDCH 10-03, *Air Component Coordination Element Handbook*, 6 September 2005, 9.

JFACC/CFACC Staff and component staffs.⁹⁷ The ACCE Director should also ensure that his staff remains focused on conceptual, long range, upper operational level planning.⁹⁸ More than anything else, the ACCE Director is to build and foster a personal relationship with the component commander.⁹⁹ The JFACC/CFACC may delegate decision-making authority to the ACCE Director for specific events or situations.¹⁰⁰ However, the ACCE staff does not and should not perform normal staff functions for the other components nor should the ACCE be considered augmentees. It should remain absolutely clear that the ACCE works for the CFACC.¹⁰¹

Despite the seemingly clear guidance, there have been some struggles with implementation of the ACCE concept. During Operation UNIFIED ASSISTANCE, the ACCE was improperly employed.¹⁰² At one time, nearly half of the ACCE was assigned to other positions within the staff which prevented them from being a more effective forward representative of the JFACC.¹⁰³ Furthermore, though Operation UNIFIED ASSISTANCE was almost exclusively an air mobility operation, Marine Corps action officers within the JMC were unfamiliar with the AOC/AMD system and how to use it effectively.¹⁰⁴ ACCE personnel could have better advocated for the proper role of air mobility had they not been distracted by other duties. However, even when the ACCE Director is a strong advocate for air power, it can have a difficult time fostering the right kind of relationship with the component commander her or she is liaising with. In CENTCOM, the unique organizational structure has created a complicated environment requiring special attention to liaison relationships.

The CFACC who is dual-hatted as the 9th AETF Commander, works for the JFC as does the commander of multi-national forces in Iraq and the commander of combined forces in Afghanistan.¹⁰⁵ As the supporting commander to both of those ground

⁹⁷705th Training Squadron, "Air Component Coordination Element," slide 10.

⁹⁸705th Training Squadron, "Air Component Coordination Element," slide 27.

⁹⁹705th Training Squadron, "Air Component Coordination Element," slide 9.

¹⁰⁰705th Training Squadron, "Air Component Coordination Element," slide 10.

¹⁰¹705th Training Squadron, "Air Component Coordination Element," slide 10.

¹⁰²Air Mobility Command Lessons Learned Oversight Board (AMC LLOB), *Lessons Learned Oversight Board (LLOB) Meeting Minutes*, 22 August 2005, 3.

¹⁰³AMC LLOB, *LLOB Meeting Minutes*, 22 August 2005, 3.

¹⁰⁴AMC LLOB, *LLOB Meeting Minutes*, 22 August 2005, 3.

¹⁰⁵Lieutenant Colonel Patrick F. Fogarty, "Joint Operations: Organizational Flaws in Goldwater-Nichols," U.S. Army War College Strategic Research Project, U.S. Army War College, 15 March 2006, 5.

commanders, the CFACC utilizes a single theater-focused CAOC to execute the necessary air support for each operation and provides ACCEs to liaise with each commander to coordinate specific requirements. In order to better meet the needs of the individual ground commanders with respect to air power, the ACCE Director working with each ground commander has been given greater discretionary latitude over the types of commitments that can be made.

What are the implications for intra-theater air mobility of an ACCE Director having the power to make commitments? One must begin with the assumption that the commitment being requested not only satisfies the ground commander's objectives but the overall JFC's objectives as well. Furthermore, if there are not enough resources to satisfy competing commitments, in a case where ACCE Directors need the same type of assets at the same time, there needs to be a mechanism in place to make the final call on which commitment ultimately meets the JFC's overall objectives. There will be times when the only resolution to a situation like this will come from the JFC. However, in order to de-conflict the intra-theater air mobility efforts of multiple ACCE Directors in a single theater in order to minimize the need for direct JFC involvement, the role of the DIRMOBFOR-Air can be expanded.

This thesis has already discussed how critical the DIRMOBFOR-Air is to intra-theater air mobility operations by orchestrating and synchronizing those operations across the AOR. One of the ways the DIRMOBFOR-Air is able to accomplish that is through establishing interpersonal relationships with the various components in the theater. The DIRMOBFOR-Air is plugged into the various components operating in the AOR and subsequently has a macro perspective of the theater-wide air mobility needs. Furthermore, he or she understands what resources are available to handle those needs. This information is crucial in being able to advise the CFACC on the best courses of action with respect to air mobility operations. The DIRMOBFOR-Air is also able to utilize his or her insights as the Channel Conference Chairman, working with CENTCOM DDOC, 609th AOC/AMD, and the AFCENT A4 to determine Frequency Channels. If an ACCE Director is going to make a commitment to a component, multinational forces, or combined forces commander regarding air mobility assets, he or she will need the DIRMOBFOR-Air's insight and advice. Even if the ACCE Director has a

mobility background, the DIRMOBFOR-Air's theater-wide air mobility insight would be invaluable. The ACCE Director has a different focus than the DIRMOBFOR-Air, concentrating on the air support needs of a single portion of the theater.

The DIRMOBFOR-Air is located in the CAOC to help facilitate his or her relationship with the CFACC. In order to facilitate a similar relationship with the ACCE Director, a Deputy DIRMOBFOR-Air should be located with the ACCE. The DIRMOBFOR-Air would need to communicate frequently with his or her Deputies to ensure that the theater-wide air mobility perspective being presented to the ACCE Director, and subsequently to the component, multi-national forces, or combined forces commander, is based on the most current information. Either as part of the Channel Conference, or as an additional formal meeting, the long range picture on mobility requirements from the various JTFs, multi-national force commands, or combined forces commands can be presented to facilitate long range mobility planning in order to leverage the appropriate air mobility assets against future requirements.

Summary

This chapter began with a review of how CENTCOM's intra-theater air mobility lessons observed became lessons learned and then best practices. The chapter presented the CENTCOM model as a codification of those intra-theater air mobility best practices and then discussed the four essential characteristics of that model. The CENTCOM way was compared with the PACOM and AFRICOM ways respectively, highlighting the similarities and differences. The author demonstrated the general applicability^[RM2] of CENTCOM's intra-theater air mobility and theater distribution model to other geographic commands by focusing on the essential characteristics on the CENTCOM model. The chapter determined that a JFC can use the characteristics of the CENTCOM model to build an intra-theater system that satisfies the theater's unique needs, utilizing only the components of CENTCOM's model that are necessary. The chapter then discussed the limitations of the CENTCOM model and used that discussion to illuminate the need to shore up a seam between the operational and tactical levels of war with respect to air mobility. Finally, the chapter reviewed the ACCE concept and discussed the air mobility implications that would result from the ACCE Director having a more authoritative role, ultimately recommending an expanded role for the DIRMOBFOR-Air.

Conclusion

Aptitude for war is aptitude for movement.
-Napoleon I

Logistics comprises the means and arrangements which work out the plans of strategy and tactics. Strategy decides where to act; logistics brings the troops to this point.
-General Antoine Henri De Jomini, *Precis de l'Art de la Guerre*, 1838

Logistic considerations belong not only in the highest echelons of military planning during the process of preparation for war and for specific wartime operations, but may well become the controlling element with relation to timing and successful operation.
-Vice Admiral Oscar C. Badger, U.S. Navy

This thesis supports the notion that CENTCOM's intra-theater air mobility and theater distribution system is indeed a beneficial model to meet the needs of JFCs. Over 8 years of continuous combat engagements, and nearly 20 years of air mobility operations in the AOR, have produced a number of best practices in terms of intra-theater air movement. These best practices combine to form a model with characteristics essential to successful intra-theater air mobility: (1) the ability to synchronize with TRANSCOM, AMC, and 618th TACC to facilitate a sustained level of throughput velocity to meet the theater's needs, (2) the ability to manage efficiently the fungible common-user air mobility assets while responding to user requests, (3) the capability to execute theater-wide C2 of air mobility assets, and (4) the capability to facilitate in-transit visibility of personnel and equipment throughout the system to the maximum extent possible. However, the CENTCOM model is by no means a panacea. Best practices are not perfect practices and CENTCOM's model did exhibit certain limitations.

Because air mobility is a fungible resource, air mobility Airmen tend to focus on optimizing efficiencies across a theater. Ground commanders, because of the friction that constantly erodes their plans, tend to focus on effectiveness. This tension between efficiency and effectiveness comes to a head most prominently at the tactical level of war and it is at this level that intra-theater air mobility operations demonstrate the greatest limitation. In order to overcome that limitation, air mobility leaders have consciously elected to choose effectiveness over efficiency for a number of airlift missions in direct support of the Army. In doing so, they also elected to utilize how well the Army ground

commander's requirements were being met as the measure of success, as opposed to how well the intra-theater air mobility system was optimized. This does not mean however that air mobility leaders have forsaken any further attempts at optimizing efficiencies. The hard reality is that air mobility assets are indeed limited and competing requirements need to be prioritized. Optimizing air mobility operations to the maximum extent possible generates the most effectiveness at the theater's operational level of war and CENTCOM's model is an example of that. At the same time, accepting a certain level of inefficiency at the tactical level of war is necessary at times.

Ultimately, the JFC's objectives are the ones that must be met. The JFC therefore needs to be well informed on the capabilities and limitations of his or her intra-theater air mobility and theater distribution system. What does it mean for the air mobility system when a Corps Commander exercises his or her authority to re-prioritize a movement request and deviate from a JDDOC's decision? What has to occur within the air mobility system when a surge of ground troops is required? What happens to the air mobility system when ground commanders in separate portions of the theater all want the maximum number of airlift sorties to support their own operations? Air mobility leaders need to provide the JFC hard and fast answers to these and other questions in order for him or her to adequately weigh the risks and conduct the appropriate cost benefit analysis.

Air mobility leaders also need to understand the costs and benefits of the way they do business. Globally linked operations from 618th TACC in Illinois to 609th AOC/AMD in Qatar provide advantages for integration and synchronization of global and theater air mobility operations. However, it is difficult to replicate the sense of urgency that Army ground commanders are experiencing in a theater of operations within the theater of war when one is geographically separated from the fight. Interpersonal relationships earn great dividends for the DIRMOBFOR-Air at the operational level of war. But air mobility leaders also need to understand how the lack of interpersonal relationships at the tactical level of war led to the Army's perception of non-responsiveness that negatively affected confidence in the intra-theater mobility system. The beauty of the DS mission is not in the COMARFOR having TACON of Air Force air

mobility assets and aircrews; it is in the establishment of personal relationships that can only be achieved by being co-located with the customer.

Why else should a JFC be concerned with intra-theater air mobility operations and theater distribution? Across the full spectrum of operations in any AOR, from shaping to enabling civil authority, logistical movement control and distribution are necessary to sustain the effort. And in every type of operational area, from contiguous to noncontiguous, air mobility operations provide theater-wide, operational level effects. In terms of developing strategy¹⁰⁶, strategic theorists from Sun Tzu to Colin Gray have preached the inseparability of logistics and strategy.¹⁰⁷

When a JFC directs his or her staff to plan for a contingency, air mobility and movement control will most certainly come into play at some point in the planning process. Certainly theater operations plans have TPFDDs associated with them that dictate how forces will flow into the theater. The breakdown usually occurs after forces arrive. The same theater operations plans that indicate how forces and equipment are to arrive in theater rarely address adequately how those forces and equipment will flow through the theater once operations commence. The job of theater movement is left to the logistics experts who are more than well equipped to determine solutions. However, if a JFC incorporated logistical considerations in general, and air movement considerations in particular, into the development of theater strategy, he or she would be in a better position to leverage the best practices developed in CENTCOM from the start of planning, rather than waiting for recommendations from his or her logistics experts after the fact.

Logistical Considerations for Developing Theater Strategy

What follows are some recommendations on the types of logistical concerns JFCs should address when developing a strategy for their theaters. This is by no means an all inclusive list due to the limitations of this study and it is not in any particular order, but

¹⁰⁶The author uses the term strategy in this context to mean *the utilization of military art and science in developing a process for the employment of the appropriate kinetic and/or non-kinetic force, for a specifically identified and analyzed environment, to achieve conditions favorable to U.S. National Security interests* (author's personal definition).

¹⁰⁷Sun Tzu included logistics as one of the five factors in the art of warfare. Dr. Colin S. Gray, renowned professor of International Relations and Strategic Studies at the University of Reading, includes logistics as 1 of his 17 elements of strategy.

the author hopes it will generate the type of discussion necessary to guide more completely the development of strategy for a theater campaign plan.

Type of the Contingency

Carl von Clausewitz stated that, “The first, the supreme, the most far-reaching act of judgment that the statesman and commander have to make is to establish ... the kind of war on which they are embarking.”¹⁰⁸ The type of contingency that the JFC will be dealing with in the AOR, whether it will encompass the entire AOR, or encompass a smaller theater of war within the AOR, and whether or not there will be multiple theaters of operation will shape how he or she will be able to utilize intra-theater air mobility. Large distances between Aerial PODs and FOBs will affect frequency and scheduling. If it is a non-permissive environment, large-scale air mobility operations forward into the theater of operations will be hindered until air supremacy can be achieved. Furthermore, the ability to contract commercial tenders in the AOR will be adversely affected until the air situation is more secure. If it is a conventional engagement with clearly defined and secure lines of communication, there will be greater freedom of movement. A counterinsurgency effort in remote areas may require a very robust air bridge to sustain operations. Multiple theaters of operation may require some sacrifices in one to secure objectives in the others with the limited amount of air mobility assets available. Because of these potential differences, a JFC needs to understand that “a one size fits all” approach to intra-theater air mobility operations will not work. The CENTCOM model offers the tools he or she will need, but those tools will need to be arranged in the right configuration to be useful.

The AOR’s Historical, Geo-Political, and Economic Context

A good portion of each of the first three chapters of this thesis was dedicated to describing the historical, geo-political, and economic context of that AOR. These factors will have a great bearing on how the logistics system will take shape. How much involvement the United States has had in the region will influence the types of relationships that will be in place at the start of a contingency. The JFC will have to be cognizant of whether or not he or she will be able to leverage those relationships for

¹⁰⁸Carl von Clausewitz, *On War*, translated by Michael Howard and Peter Paret, (Princeton, NJ: Princeton University Press, 1989), 88.

basing rights. With the United States reliant on global power projection, securing basing rights to anchor a supply chain in theater is critical to conducting military operations abroad. What type of alliances has the United States entered into in the region? What type of logistics capabilities do the allied nations have and how integrated to the U.S. logistics system do the allied nations want to be? For example, South Korea has a robust logistics capability but prefers to maintain a separate logistics system to sustain its forces. Are there actors in the region hostile to the United States other than the belligerents involved in the contingency operation? Will they hamper basing rights or deny the overflight rights necessary to sustain sufficient throughput? How stable are the governments of the nations that have offered support? Will that support wane during the operation? The United States has had to deal with issues like these during OEF and OIF. Changing attitudes in Uzbekistan caused the United States to lose basing rights there and revolts in the Kyrgyz Republic have threatened the operations of the transportation center in that nation's capital. Finally, the JFC needs to understand the economic make up of the region in order to leverage contracts for ground support, fuel, commercial airlift, and material handling operations.

Infrastructure and Intermodal Operations

The type of infrastructure available in the theater will affect the pace of intra-theater throughput. Even if the Aerial POD is a major airport, the conditions downrange at the FOBs will dictate how quickly material can be moved forward. A lack of roads will drive a greater need for air traffic and a lack of Sea PODs close to the theater of operation will significantly limit sustainment activity as the bulk of heavy equipment arrives by sealift. If there are no overland routes available to remote areas and there is insufficient infrastructure to support Airland operations, Air Drop options may be the only ones available which restricts what can be resupplied due to weight limits. On the other hand, the JFC needs to understand that not everything needs to go by air. Air transport is the most expensive of the transportation modes and excessive requests for air transport bogs down the air transport system. When other options are available, those options should be leveraged against movement requirements.

Reliance on Global Supply Chains

Lieutenant General David Deptula recently described the American way of war as one dependent on “highly efficient supply chains and force generation processes.”¹⁰⁹ Deptula was warning against the complacency that has developed among American military leaders because our global supply chains have worked almost completely unimpeded over the last two decades. Indeed, the efficiency of U.S. global supply chain has certainly allowed logistics experts to concentrate their efforts on operational level problems within an AOR. If the United States were to go against an adversary that could threaten that global supply chain it could severely limit intra-theater operations. For example, the air mobility system is reliant upon a globally networked C2 system and, because of the need to interface with civilian commercial entities across the globe, that network is largely unclassified. A cyber attack against it could cause chaos in the aerial supply chain.

The Difference between Mobility and Combat Air Power

If one takes for granted that air power is distinct from land and sea power because it has strategic, operational, and tactical effects across an entire theater simultaneously, air mobility is distinct from other forms of air power in that it has strategic, operational, and tactical effects across an entire theater simultaneously *by being able to put boots on the ground across the full spectrum of operations from peacetime to war*. Whereas combat power can engage with troops at the tactical level of war and ALOs on the ground facilitate close air support missions, tactical airlift by design has a primary role of touching down at FOBs. C-130 and C-27 airlift aircrews have to transition from air operations to ground operations then back to air operations as they execute their missions. Mobility Airmen must have a presence at aerial ports throughout the theater, not only at rear echelon locations.

For mobility air power, it makes very little difference whether combat operations are ongoing or not. Save for changes in tactics, air mobility operations are continuous regardless of whether there are hostilities. Even during Humanitarian Assistance and

¹⁰⁹Lieutenant General David Deptula, Deputy Air Force Chief of Staff, Intelligence, Surveillance, and Reconnaissance, “Thoughts on 21st Century National Security Challenges,” Briefing given on 13 April 2010, slide 8.

Disaster Relief operations, the pace of throughput can be substantially high and factors like austere locations and bare base operations are still players. A JFC needs to be aware that though the rest of the CAOC may be able to go home in the evening when there is no active major contingency operation, the AMD will still be operating. Intra-theater air mobility assets may be readily engaged in operations throughout the AOR beyond a contingency in a particular theater of war and that may require shifts in the weight of effort and prioritization of mobility forces accordingly.

Recommendations for Further Study

Throughout the course of this thesis, the author encountered issues that seemed appropriate for further study. The first among these is the nature of the American reliance on global supply chains and the potential vulnerabilities that may be faced in light of rising near-peer competitors. Ultimately intra-theater movement may be largely impacted by what happens outside the theater. Another issue worth exploring deals with the total force nature of mobility operations. Though it is becoming more prevalent among combat air force units, air mobility operations have relied heavily on National Guard and Air Reserve Component assets for the past 20 years. If the United States were engaged in a conflict that caused heavy losses, would there be sufficient assets in reserve? If not, how would the United States effort have to shift? A third issue dealt with the health of the Civil Reserve Air Fleet. It was activated during DESERT SHIELD/STORM but since then AMC has not had to utilize it. Would the United States be able to leverage that capability in the future? In terms of cyber warfare, the air mobility system's reliance on distributed operations from 618th TACC to AMDs around the globe could be severely affected. How would a denial of service attack affect a JFC's ability to sustain efforts in the AOR?

Air mobility and theater distribution operations do not evoke images of the steely-eyed warrior getting ready to climb into a jet for a combat mission nor do they have Hollywood producers clamoring for the next multi-million dollar movie. But without logistics and air mobility, that combat jet would not have the fuel or the armament to engage the enemy in theater and that producer would not have a ride into the AOR on his or her United Service Organizations tour. A JFC does not necessarily need to be an expert in logistics or air mobility operations, but he or she should definitely understand

that movement control needs to be part of strategic development, not just an assumption in the planning process.

Appendix

Selected Acronyms

AADC	AREA AIR DEFENSE COMMANDER
ACC	AIR COMPONENT COMMAND
ACCE	AIR COMPONENT COORDINATION ELEMENT
ADCON	ADMINISTRATIVE CONTROL
AECT	AERO-MEDICAL EVACUATION CONTROL TEAM
AEF	AIR AND SPACE EXPEDITIONARY FORCE, formerly AEROSPACE EXPEDITIONARY FORCE
AEG	AIR EXPEDITIONARY GROUP
AFAFRICA	AIR FORCES AFRICA
AFCENT	U.S. AIR FORCES CENTRAL
AFDD	AIR FORCE DOCTRINE DOCUMENT
AFFOR	AIR FORCE FORCES
AFI	AIR FORCE INSTRUCTION
AGOA	AFRICAN GROWTH AND OPPORTUNITY ACT
ALCOM	ALASKAN COMMAND
ALCT	AIRLIFT CONTROL TEAM
ALN	ADAPTIVE LOGISTICS NETWORK
ALO	AIR LIAISON OFFICER
AMLO	AIR MOBILITY LIAISON OFFICER
AMC	AIR MOBILITY COMMAND
AMCC	AIR MOBILITY CONTROL CENTER
AMCT	AIR MOBILITY CONTROL TEAM
AMD	AIR MOBILITY DIVISION
AME/TT	AIR MOBILITY EXERCISE/TRAINING TEAM
AMOCC	AIR MOBILITY OPERATIONS CONTROL CENTER
AMOS	AIR MOBILITY OPERATIONS SQUADRON
AMR	AIR MOVEMENT REQUEST

AMST	AIR MOBILITY SUPPORT TEAM
AOC	AIR OPERATIONS CENTER, also AIR & SPACE OPERATIONS CENTER
AOR	AREA OF RESPONSIBILITY
APCT	AERIAL PORT CONTROL TEAM
ARCT	AIR REFUELING CONTROL TEAM
ASOC	AIR SUPPORT OPERATIONS CENTER
ATO	AIR TASKING ORDER
ATOC	AIR TERMINAL OPERATIONS CENTER
AWCF	AIR FORCE WORKING CAPITAL FUND
C2	COMMAND AND CONTROL
CAB	COMBAT AVIATION BRIGADE
CAF	COMBAT AIR FORCE
CAMPS	CONSOLIDATED AIR MOBILITY PLANNING SYSTEM
CDS	CONTAINER DELIVERY SYSTEM
CENTCOM	U.S. CENTRAL COMMAND
CFACC	COMBINED FORCES AIR COMPONENT COMMANDER
CFC	COMBINED FORCES COMMAND
CFLCC	COMBINED FORCES LAND COMPONENT COMMANDER
CHOP	CHANGE OPERATIONAL CONTROL
CJTF-HOA	COMBINED JOINT TASK FORCE-HORN OF AFRICA
CLC	COMBINED LOGISTICS COMMAND
C-NAF	COMPONENT NUMBERED AIR FORCE
COCOM	COMBATANT COMMAND
COMAFFOR	COMMANDER AIR FORCE FORCES
COMARFOR	COMMANDER ARMY FORCES
CONEMP	CONCEPT OF EMPLOYMENT
CONOP	CONCEPT OF OPERATIONS
CSIS	CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES
CSL	COOPERATIVE SECURITY LOCATIONS

DDOC	DEPLOYMENT AND DISTRIBUTION OPERATIONS CENTER
DIRMOBFOR	DIRECTOR OF MOBILITY FORCES
DLA	DEFENSE LOGISTICS AGENCY
DoD	DEPARTMENT OF DEFENSE
DPO	DISTRIBUTION PROCESS OWNER
DS	DIRECT SUPPORT
DTS	DEFENSE TRANSPORTATION SYSTEM
DV	DISTINGUISHED VISITOR
DZ	DROP ZONE
EAS	EXPEDITIONARY AIRLIFT SQUADRON
EFX	EXPEDITIONARY FORCE EXPERIMENT
EMTF	EXPEDITIONARY MOBILITY TASK FORCE
ESC	EXPEDITIONARY SUSTAINMENT COMMAND
EUCOM	U.S. EUROPEAN COMMAND
FAST	FLY AWAY SECURITY TEAM
FOB	FORWARD OPERATING BASE
FP	FORCE PROTECTION
GAO	GOVERNMENT ACCOUNTING OFFICE, formerly GENERAL ACCOUNTING OFFICE
GCC	GEOGRAPHIC COMBATANT COMMANDER
GDSS 2	GLOBAL DECISION SUPPORT SYSTEM
GTN	GLOBAL TRANSPORTATION NETWORK
GWOT	GLOBAL WAR ON TERRORISM
ITARS	INTRA-THEATER AIRLIFT REQUEST SYSTEM
JCA	JOINT CARGO AIRCRAFT
JDDOC	JOINT DEPLOYMENT AND DISTRIBUTION OPERATIONS CENTER
JFACC	JOINT FORCES AIR COMPONENT COMMANDER
JFC	JOINT FORCE COMMANDER
JFCOM	U.S. JOINT FORCES COMMAND

JFSCC	JOINT FORCE SUPPORT COMMAND COMPONENT
JMC	JOINT MOVEMENT CENTER
JMR	JOINT MOVEMENT REQUEST
JOA	JOINT OPERATIONS AREA
JOPEX	JOINT OPERATIONS PLANNING AND EXECUTION SYSTEM
JP	JOINT PUBLICATION
JPADS	JOINT PRECISION AERIAL DELIVERY SYSTEM
JRAC-AK	JOINT REAR AREA COORDINATION-ALASKA
JSOTF-P	JOINT SPECIAL OPERATIONS TASK FORCE-PHILIPPINES
JTF	JOINT TASK FORCE
JTF-AK	JOINT TASK FORCE-ALASKA
JTF-SWA	JOINT TASK FORCE-SOUTHWEST ASIA
JxDS	JOINT EXPERIMENTAL DEPLOYMENT AND SUPPORT
KAOC	KOREA AIR AND SPACE OPERATIONS CENTER
KJFC	KOREA JOINT FORCES COMMAND
KORCOM	U.S. KOREA COMMAND
KTO	KOREAN THEATER OF OPERATIONS
LOI	LETTER OF INSTRUCTION
LZ	LANDING ZONE
MAF	MOBILITY AIR FORCE
MOA	MEMORANDUM OF AGREEMENT
MOG	MAXIMUM ON GROUND
MST	MOBILITY SUPPORT TEAM
NORAD	NORTH AMERICAN AIR DEFENSE
NORTHCOM	U.S. NORTHERN COMMAND
OCO	OVERSEAS CONTINGENCY OPERATION
OEF	OPERATION ENDURING FREEDOM
OIF	OPERATION IRAQI FREEDOM
OPCON	OPERATIONAL CONTROL
OSW	OPERATION SOUTHERN WATCH

PACAF	PACIFIC AIR FORCES
PACMARF	PACIFIC MILITARY ALTITUDE RESERVATION FUNCTION
PACOM	U.S. PACIFIC COMMAND
PEPFAR	PRESIDENT'S EMERGENCY PLAN FOR AIDS RELIEF
POD	PORT OF DEBARKATION
PSAB	PRINCE SULTAN AIR BASE
ROK	REPUBLIC OF KOREA
ROK JCS	REPUBLIC OF KOREA JOINT CHIEFS OF STAFF
SAAA	SENIOR ARMY AVIATION AUTHORITY
SOCAPAC	SPECIAL OPERATIONS CENTER PACIFIC COMMAND
SOUTHCOM	U.S. SOUTHERN COMMAND
TAA	TACTICAL ASSEMBLY AREA
TACC	TANKER AIRLIFT CONTROL CENTER
TACON	TACTICAL CONTROL
TACS	THEATER AIR CONTROL SYSTEM
TBMCS	THEATER BATTLE MANAGEMENT CORE SYSTEM
TDD	THEATER DIRECT DELIVERY
TDS	THEATER DISTRIBUTION SYSTEM
TF	TASK FORCE
TRIADS	TRI-WALL AERIAL DISTRIBUTION SYSTEM
TWCF	TRANSPORTATION WORKING CAPITAL FUND
UNC	UNITED NATIONS COMMAND
USAFE	U.S. AIR FORCES EUROPE
USAID	U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT
USFJ	U.S. FORCES JAPAN
USFK	U.S. FORCES KOREA
WOC	WING OPERATIONS CENTER

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