

Preferences REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188		
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA, 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 27-10-2010		2. REPORT TYPE FINAL		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE Excess Baggage: Is it Time to Cut Back on What We Take to the Fight?			5a. CONTRACT NUMBER		
			5b. GRANT NUMBER		
			5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S) Lt Col Shawn E. Teagan, USAF Paper Advisor (if Any): Lt Col Justin Speegle, USAF			5d. PROJECT NUMBER		
			5e. TASK NUMBER		
			5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Joint Military Operations Department Naval War College 686 Cushing Road Newport, RI 02841-1207			8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSOR/MONITOR'S ACRONYM(S)		
			11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION / AVAILABILITY STATEMENT Distribution Statement A: Approved for public release; Distribution is unlimited.					
13. SUPPLEMENTARY NOTES A paper submitted to the Naval War College faculty in partial satisfaction of the requirements of the Joint Military Operations Department. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC or the Department of the Navy.					
14. ABSTRACT History has proven that logistics is the key to successful military operations. Each service plays a crucial role in providing logistics for their forces; however, to ensure efficient and effective logistics for the Joint Task Force (JTF), someone needs to oversee the end-to-end logistics pipeline. As Distribution Process Owner (DPO), USTRANSCOM has set up a theater command and control (C2) construct that includes the Director of Mobility Forces (DIRMOBFOR) and the Deployment Distribution Operations Center (DDOC). This paper examines the C2 construct to determine if redundancies exist and whether one or the other function should be eliminated. The thesis is supported through a task analysis of the doctrinal tasks assigned to the DIRMOBFOR and the DDOC. The analysis focuses on the C2 relationship of the DIRMOBFOR and the DDOC with the goal of examining how each contributes to the accomplishment of USTRANSCOM's mission. The analysis identifies the tasks required to bridge the gaps between the three levels of logistics; strategic, operational, and tactical. The comparison of tasks shows the DDOC has clearer C2 links and therefore provides a better foundation for executing operational logistics than the DIRMOBFOR. The paper recommends that the DDOC Chief assume the in-theater duties previously assigned to the DIRMOBFOR and eliminate the latter position because its functions are redundant and adversely affect JTF C2.					
15. SUBJECT TERMS USTRANSCOM; DIRMOBFOR; DDOC; DPO; Mobility; JTF Command and Control (C2)					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON Chairman, JMO Dept
a. REPORT UNCLASSIFIED	b. ABSTRACT UNCLASSIFIED	c. THIS PAGE UNCLASSIFIED		29	19b. TELEPHONE NUMBER (include area code) 401-841-3556

**NAVAL WAR COLLEGE
Newport, R.I.**

Excess Baggage: Is it Time to Cut Back on What We Take to the Fight?

by

Shawn E. Teagan

Lieutenant Colonel, United States Air Force

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

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

Signature: Shawn E. Teagan

27 October 2010

Contents

INTRODUCTION	1
BACKGROUND	2
ANALYSIS.....	6
COUNTER ARGUMENTS.....	13
ANALYTICAL CONCLUSIONS.....	15
RECOMMENDATIONS.....	15
CLOSING	16
APPENDIX A: USTRANSCOM Specified Tasks from Directives and Doctrine	17
APPENDIX B: DIRMOBFOR Specified Tasks from Directives and Doctrine.....	19
APPENDIX C: DDOC Specified Tasks from Directives and Doctrine	20
BIBLIOGRAPHY	22

Abstract

History has proven that logistics is the key to successful military operations. Each service plays a crucial role in providing logistics for their forces; however, to ensure efficient and effective logistics for the Joint Task Force (JTF), someone needs to oversee the end-to-end logistics pipeline. As Distribution Process Owner (DPO), USTRANSCOM has set up a theater command and control (C2) construct that includes the Director of Mobility Forces (DIRMOBFOR) and the Deployment Distribution Operations Center (DDOC). This paper examines the C2 construct to determine if redundancies exist and whether one or the other function should be eliminated. The thesis is supported through a task analysis of the doctrinal tasks assigned to the DIRMOBFOR and the DDOC. The analysis focuses on the C2 relationship of the DIRMOBFOR and the DDOC with the goal of examining how each contributes to the accomplishment of USTRANSCOM's mission. The analysis identifies the tasks required to bridge the gaps between the three levels of logistics; strategic, operational, and tactical. The comparison of tasks shows the DDOC has clearer C2 links and therefore provides a better foundation for executing operational logistics than the DIRMOBFOR. The paper recommends that the DDOC Chief assume the in-theater duties previously assigned to the DIRMOBFOR and eliminate the latter position because its functions are redundant and adversely affect JTF C2.

INTRODUCTION

History has proven repeatedly that logistics is the key to successful military operations. Failure to account for operational logistics in the command and control structure will result in unmet operational objectives; consider—Napoleon’s push to Russia, Russia fighting the Crimean War, or the German Schlieffen plan in WWI. Seizing control of the operational factors of time, space and force to get to the fight, sustain the forces during the fight and get them home following the conflict are vital considerations for the operational commander. Each service plays a crucial role in providing logistics for their forces; however, to ensure efficient and effective logistics for the Joint Task Force (JTF), someone needs to oversee the end-to-end logistics pipeline. In 2003, the Secretary of Defense designated USTRANSCOM the Distribution Process Owner (DPO) and with that the responsibility to provide interoperability, synchronization of the DOD end-to-end distribution network through coordination and oversight.¹ In a 2008 letter to DPO stakeholders, the USTRANSCOM Commander stated the DPO will “build an integrated, networked, end-to-end distribution capability that delivers for the warfighter the “right place,” at the “right time” and at the best value for the nation.”² In order to achieve this vision, TRANSCOM has set up a theater command and control (C2) construct that includes the Director of Mobility Forces (DIRMOBFOR) and the Deployment Distribution Operations Center (DDOC). This paper examines the C2 construct and concludes that the DIRMOBFOR is a redundant position and should be eliminated. This thesis is supported through a task analysis of the doctrinal tasks assigned to the DIRMOBFOR and the DDOC but first attempts to clarify the problem by looking at the background of each organization.

¹ U. S. Office of the Chairman of the Joint Chiefs of Staff, *Joint Logistics, Joint Publication (JP) 4-0* (Washington, D.C.: CJCS, 2008), xiii.

² Duncan J. McNabb, “DPO Letter of Intent,” December 17, 2008, 1, <http://www.transcom.mil/dpo/>.

BACKGROUND

The business of joint logistics has never been more important to the US military than now. The transition from a fixed location force to an expeditionary force places a tremendous demand on the ability to deploy and sustain the military to accomplish the nation's objectives. Making joint logistics complicated in this new environment because it spans all three levels of war; strategic, operational and tactical. To bridge the gaps between the different levels of war, clear command and control are essential.

Command and control is one of the most crucial of all operational functions. The framework integrates all theater-wide functions and allows the operational commander to synchronize the sources of national power he has available in the theater.³ From the logistics perspective, a good C2 structure allows for effective use of available logistics resources. Unity of joint logistics is difficult and without unity, controlling logistics is challenging. Synchronizing the actions of USTRANSCOM, DLA and the services is critical to the successful execution of intertheater distribution and hinges on unity of effort. When considering the logistics organizations in the theater it is important to remember that COCOM includes authority for the Joint Force Command (JFC), to exercise directive authority for logistics.⁴ This authority allows use of all logistics capabilities of the forces assigned and/or attached to accomplish the mission. Often a point of contention is the fact that logistics is a service responsibility; however, the JFC needs control over the tasks and processes to achieve his objectives.⁵

³ Milan Vego, *Joint Operational Warfare* (Newport, RI: U.S. Naval War College, 2007), VIII-20.

⁴ U. S. Office of the Chairman of the Joint Chiefs of Staff, *Joint Operations, Joint Publication (JP) 3-0* (Washington, D.C.: CJCS, 2010), III-4.

⁵ U. S. Office of the Chairman of the Joint Chiefs of Staff, *Joint Logistics, Joint Publication (JP) 4-0*, xx.

The United States Transportation Command is responsible for the execution of end-to-end distribution in its role as DPO for the Department of Defense.⁶ This charter charges USTRANSCOM with overall effectiveness, efficiency and alignment of DoD-wide distribution.⁷ To accomplish this, USTRANSCOM uses the Joint Mobility Control Group (JMCG) as the C2 structure to exercise centralized control and decentralized execution of the DTS. This structure uses elements of the USTRANSCOM headquarters, its component commands and other transportation organizations.⁸

At the headquarters level, USTRANSCOM uses its DDOC to direct global transportation. “The DDOC fuses capabilities of multimodal deployment and distribution operations, intelligence, force protection, capacity acquisition, resource management, and other staff functions to collaboratively provide distribution options to the combatant commander.”⁹ The TRANSCOM JDDOC achieves command and control of the preponderance of mobility forces through a global logistics infrastructure. The DIRMOBFOR and Geographic Combatant Commander (GCC) DDOCs enable theater logistics through this C2 network.

Mobility forces consist of common-user and organic assets. The commonality of the often-limited resources complicates their command and control. The management of common-user platforms is different from those of most other military forces. This is particularly true for assets capable of supporting more than one GCC simultaneously. One example of this is air mobility forces. When such forces deploy, they often remain under the

⁶ U. S. Office of the Chairman of the Joint Chiefs of Staff, *Distribution Operations, Joint Publication (JP) 4-09* (Washington, D.C.: CJCS, 2010), I-1.

⁷ Ibid., I-5.

⁸ U. S. Office of the Chairman of the Joint Chiefs of Staff, *Joint Doctrine for the Defense Transportation System, Joint Publication (JP) 4-01* (Washington, D.C.: CJCS, 2003), IV-1.

⁹ U. S. Office of the Chairman of the Joint Chiefs of Staff, *Distribution Operations, Joint Publication (JP) 4-09*, IV-3.

OPCON of their respective functional combatant commander, USTRANSCOM. When this happens, those assets integrate into the JFC C2 structure through a special representative, in this case the Director of Mobility Forces.¹⁰

During regional operations, the DIRMObFOR is responsible for coordinating the integration of air mobility operations. The DIRMObFOR works for the Joint Forces Air Component Commander (JFACC) however, he may have several allegiances that could adversely affect the C2 of air mobility assets.¹¹ This becomes more evident in operations where the JFACC and Commander of Air Force Forces (COMAFFOR) are not one in the same. C2 is further complicated when establishing multiple JTFs with multiple Joint Operating Areas in a single GCC Area of Responsibility (AOR).¹² Perhaps the missing link in this scenario is an organization with an established footprint in the GCC's AOR.

The Deployment Distribution Operations Center is the GCC logistics powerhouse, created to improve logistics effectiveness and efficiency. Prior to 2003, the weak link in end-to-end logistics was that which TRANSCOM had little control -- the seams between the strategic and operational, and tactical level logistics.¹³ To facilitate improved logistic support for the GCC, TRANSCOM created a framework to bring logistics experts together at the operational level. The DDOC accomplishes its mission by combining IT and a staff comprised of representatives from USTRANSCOM, individual services and DOD agencies. These capabilities allow the DDOC to synchronize the strategic flow of forces and sustainment to the operational level by providing expertise and data to other elements of the

¹⁰ U. S. Air Force, *Operations and Organizations, Air Force Doctrine Document (AFDD) 2* (Washington, D.C.: Department of the Air Force, 2007), 46.

¹¹ Rolanda Burnett, "Control of Mobility Air Forces: Should the Director of Mobility Forces Command?" (Maxwell Air Force Base, AL: Air University, 2002), 48, <http://handle.dtic.mil/100.2/ADA420547>.

¹² Ibid., 77.

¹³ Gregory S. Otey, "Mending a Seam: Joint Theater Logistics," *Air Force Journal of Logistics* 30, no. 2 (Summer 2006): 11.

JTF C2 network. Furthermore, the DDOC coordinates common-user and commercial capabilities to meet JFC requirements.¹⁴

Good logistics can mean the difference between victory and defeat so the JFC needs a logistics C2 network that is both effective and efficient. When conflict or action requires the stand-up of a Joint Task Force, clear command and control is imperative. One common deficiency of the JTF is a staff lacking familiarity of the area in which they will operate. This is true because historically, the military waits until a contingency to develop a theater logistics system. The DDOC overcomes this deficiency through its enduring presence in the theater, thus when forming the JTF, the DDOC brings with it a team familiar with the area.

The DDOC construct provides a standing logistics organization, with established relationships at the operational level that is familiar with the theater. Whether using the standing DDOC or a DDOC-Forward in time of crisis, the JFC will start with an established team that has clear C2 relationships to ensure success early. This is not the case with the DIRMOBFOR, since this leader is selected at the beginning of crisis action planning and must be rolled into the theater C2 structure after the fact. While the goal is seamless logistics for the war fighter, how to achieve that remains the question. Next, this paper will evaluate the roles of the DDOC and the DIRMOBFOR to determine the necessity of both. Insufficient contribution, duplication of effort and complicated C2 may not warrant continued support in a time with increased emphasis on effectiveness and efficiency.

¹⁴ U. S. Office of the Chairman of the Joint Chiefs of Staff, *Distribution Operations, Joint Publication (JP) 4-09*, V-16.

ANALYSIS

This analysis will focus on the C2 relationship for two of USTRANSCOM's key enablers at the JTF level—the DIRMOBFOR and the DDOC. The goal is to examine how each contributes to the accomplishment of USTRANSCOM's mission while considering how they fit into the C2 framework. The analysis will identify the key tasks for USTRANSCOM, the DIRMOBFOR and the DDOC using DOD directives and doctrine. Then while looking at how each enabler fits into the JTF C2 structure, consider how each contributes to the execution of operational logistics.

It is necessary to characterize the set of assumptions used in this analysis. This study looks at a snapshot of DPO functions from the perspective of providing support to a JTF to accomplish its objectives. Therefore, this paper will look at the baseline functions available to the JFC and not at a specific operation. To this end implied tasks were not considered because only the tasks inherent to USTRANSCOM and the two enablers are critical to this evaluation. Additionally, essential tasks were only labeled for USTRANSCOM and identified with underlined text on the task list. Neither the DIRMOBFOR nor DDOC support all USTRANSCOM tasks. The assumption is that the USTRANSCOM staff or other enablers accomplish those tasks, which is beyond the scope of this study.

The analysis began by reviewing current DOD Directives and Instructions, Joint and Service Doctrine considering the tasks required each organization to accomplish its mission. The foundations of military guidance yielded four main sources for the tasks assigned USTRANSCOM: DODD5158.04, DODI 5158.06, JP 4-0 and JP 4-09. An analysis of these keystone documents generated a combined list of the specified tasks assigned to USTRANSCOM, Appendix A. Using the Universal Joint Task List (UJTL), these tasks were

translated into standardized tasks for comparison and evaluation. The review of guidance for USTRANSCOM duties identified six strategic tasks in order to provide mobility support to the JFC.¹⁵ To complete those strategic level tasks, and bridge the gap to the tactical level, seven standardized operational level tasks were selected from the UJTL.¹⁶

OP 1.1 Conduct Operational Movement

OP 1.1.1 Formulate Request for Strategic Deployment to a Joint Operations Area

OP 1.1.2 Conduct Intratheater Deployment and Redeployment of Forces within the Joint Operations Area

OP 1.1.2.1 Conduct Airlift in the Joint Operations Area

OP 4.5 Manage Logistics Support in the Joint Operations Area

OP 4.5.1 Provide for Movement Services in the Joint Operations Area

OP 5.4.5 Coordinate/Integrate Component, Theater, and Other Support

These standardized operational tasks are the ones requiring assistance from the enablers, the DIRMOBFOR and DDOC, to ensure success at the operational level for the JFC.

Analysis of the DIRMOBFOR and DDOC using the same method found functions in JP 3-17, JP 4-0, JP 4-09, AFDD 2, and AFDD 2-6. See Appendix B and C respectively for a complete listing of the specified tasks for the DIRMOBFOR and DDOC.

The review directed at the DIRMOBFOR found five specified tasks, listed below.¹⁷

¹⁵ The following six Strategic National tasks, selected from the UJTL, are required for USTRANSCOM to execute global mobility: SN 1.2 Conduct Deployment and Redeployment, SN 1.2.1 Integrate Deployment Systems, SN 1.2.2 Provide Forces and Mobility Asset, SN 1.2.5 Move Forces from Port of Embarkation (POE) to Port of Debarkation (POD), SN 1.2.6 Conduct Redeployment or Retrograde of Personnel and Equipment from Theater, SN 5.7.7 Manage DOD Distribution Process.

¹⁶ U. S. Office of the Chairman of the Joint Chiefs of Staff, *Universal Joint Task List (UJTL) Database with Conditions* (Washington, D.C.: CJCS, 2009), 705-708, 857-858, 913.

¹⁷ U. S. Office of the Chairman of the Joint Chiefs of Staff, *Air Mobility Operations, Joint Publication (JP) 3-17* (Washington, D.C.: CJCS, 2009); U. S. Air Force, *Operations and Organizations, Air Force Doctrine Document (AFDD) 2*; U. S. Air Force, *Air Mobility Operations, Air Force Doctrine Document (AFDD) 2-6* (Washington, D.C.: Department of the Air Force, 2006).

Notice that tasks have the DIRMOBFOR coordinating with another entity or organization.

1. Coordinate integration of intertheater air mobility capability provided by USTRANSCOM.
2. In concert with the AOC director, facilitate the tasking and effective and efficient employment of air mobility forces assigned or attached to the JFC.
3. Coordinate with the AOC director and AMD chief to ensure all air mobility operation supporting the JFC are integrated into the air assessment, planning and execution process and deconflict with other air operations.
4. Coordinate with the TACC and USTRANSCOM to ensure the joint force air mobility support requirements are met.
5. Coordinate the integration of the multinational air mobility plan.

These five doctrinal tasks translate into one UJTL standardized operational task, OP 5.4.5

Coordinate/Integrate Component, Theater, and Other Support.¹⁸ It is important to point out that doctrine assigns duties to the DIRMOBFOR with respect to air transportation only.

There are no provisions in doctrine for the DIRMOBFOR to do any coordination for other modes of transportation.

The review focusing on the DDOC found 6 primary and 13 sub specified tasks, primary tasks listed below.¹⁹ Unlike the DIRMOBFOR list, the DDOC list contains active tasks, for example: direct, manage, establish, plan and synchronize.

1. Direct GCC deployment, redeployment, and distribution.
2. Provide Asset Visibility (AV) and In Transit Visibility (ITV) of force flow, sustainment and retrograde.
3. Manage, connect and establish theater distribution architecture in coordination with the Services and Joint Staff.

¹⁸ U. S. Office of the Chairman of the Joint Chiefs of Staff, *Universal Joint Task List (UJTL) Database with Conditions*, 913.

¹⁹ U. S. Transportation Command, *Joint Deployment Distribution Operations Center (JDDOC) Template Edition 3* (Scott Air Force Base, IL: USTRANSCOM, 2008); U. S. Office of the Chairman of the Joint Chiefs of Staff, *Joint Logistics, Joint Publication (JP) 4-0; Distribution Operations, Joint Publication (JP) 4-09*.

4. Plan, coordinate and synchronize strategic and operational deployment and distribution with theater forces and National Logistics Partners.
5. Develop strategic and operational deployment and distribution performance measures.
6. Perform container, 463L airlift equipment (air pallets and nets), Radio Frequency Identification Device (RFID) tag and other intermodal equipment oversight responsibilities.

These six doctrinal tasks translate into five UJTL standardized operational tasks.

OP 1.1 Conduct Operational Movement

OP 1.1.2 Conduct Intratheater Deployment & Redeployment of Forces within the JOA

OP 4.5 Manage Logistics Support in the Joint Operations Area

OP 4.5.1 Provide for Movement Services in the Joint Operations Area

OP 5.4.5 Coordinate/Integrate Component, Theater, and Other Support

This analysis next used the USTRANSCOM standardize operational task list as the baseline to correlate the standardized operational tasks of the DIRMOBFOR and the DDOC to determine the weight of support and duplication of effort. The DIRMOBFOR supports only one USTRANSCOM task while the DDOC directly supports five. Furthermore, the DDOC has doctrinal responsibilities covering all modes of transportation for the theater. This fact is crucial when planning, managing, and synchronizing deployment and distribution operations for the JFC.

Efficient and effective mobility support for the JFC is dependent on how each enabler links to the JFC C2 structure. As depicted in Figure 1, the DIRMOBFOR works for the JFACC with coordinating authority between the JTF Air Operations Center (AOC) and the

Air Mobility Command AOC.²⁰ Additionally, the DIRMOBFOR has direct liaison authority with the DDOC for air mobility related issues.²¹

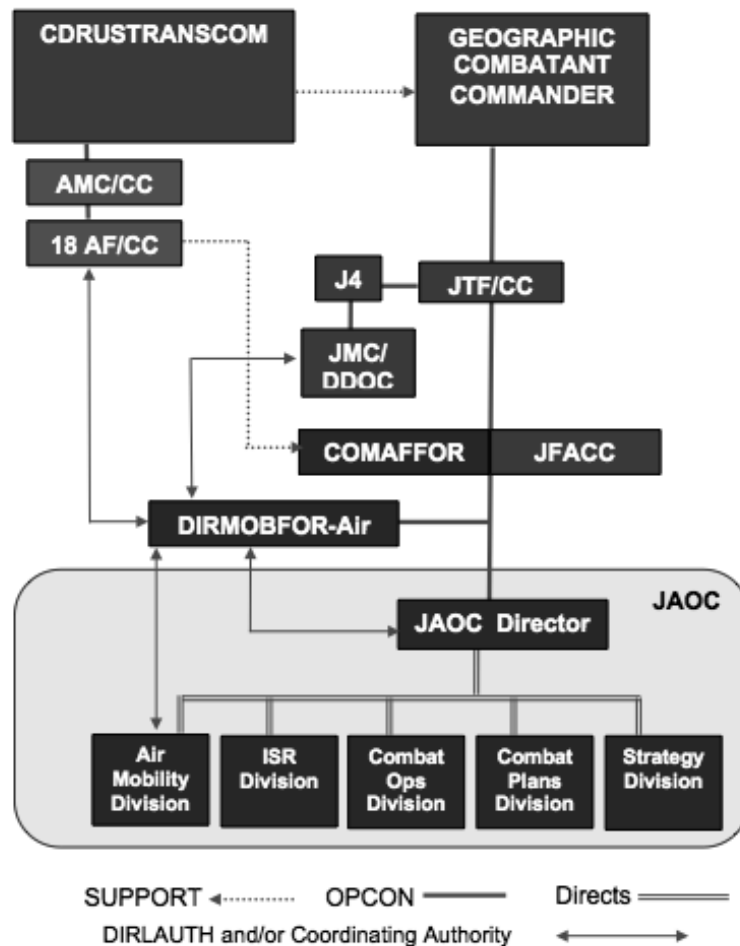


Figure 1- DIRMOBFOR C2 Structure²²

Reviewing the command relationships for the DDOC, Figure 2, yields a more robust connection to the transportation network providing better support to the JFC. The doctrinal DDOC structure links to all modes of transportation, coupled with ties to other supporting combatant commanders and agencies.

²⁰ U. S. Air Force, *Air Mobility Operations, Air Force Doctrine Document (AFDD) 2-6*, 21.

²¹ Ibid.

²² Ibid.

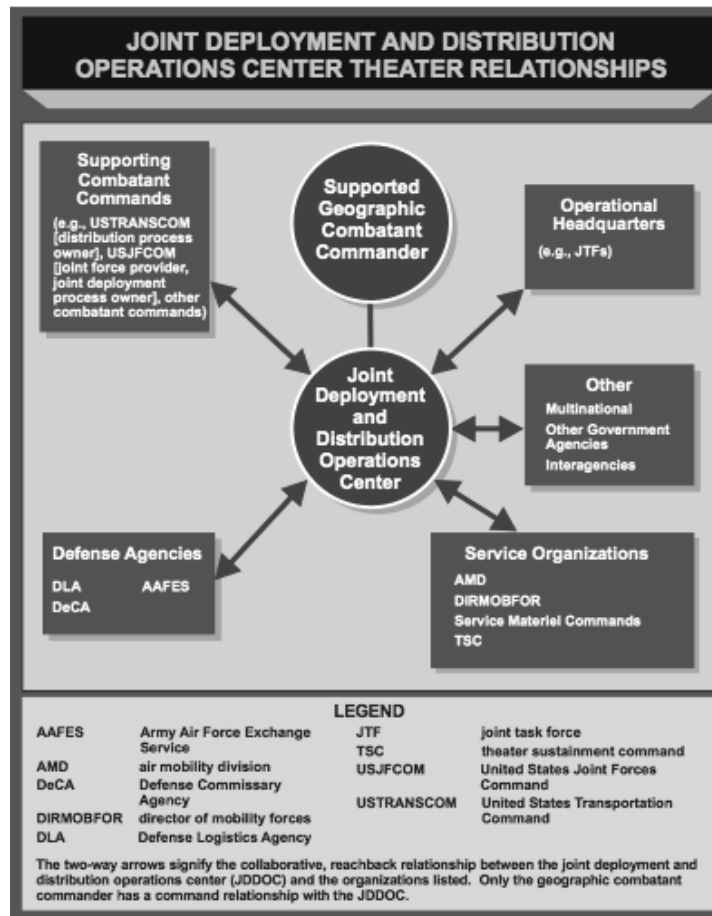


Figure 2 - DDOC Theater Relationships²³

Consideration of real-world application is also important to improve the usefulness of this analysis. To gather real-world inputs, current DDOC leadership provided input for consideration with respect to their organization's relationship to the DIRMOBFOR. Supporting the findings above, there is concern that confusion over management of common-user logistics could occur due to current doctrine. Presently the DIRMOBFOR can prioritize missions directly with USTRANSCOM. However, doing so could undermine the priorities established by the DDOC. In most cases, the USTRANSCOM JDDOC would consult the theater DDOC to clarify any misunderstanding, but managing the process in this manner is

²³ U. S. Office of the Chairman of the Joint Chiefs of Staff, *Distribution Operations, Joint Publication (JP) 4-09*, IV-6.

very inefficient. Understanding the chain-of-command is critical to military operations.

According to the leadership in the field, if the DIRMOBFOR follows the chain-of-command as described in AFDD 2-6, see Figure 1 above, they will coordinate their airlift requirements through the Joint Movement Center (JMC) and DDOC.²⁴ By working through the JMC/DDOC, and not directly with USTRANSCOM, the DIRMOBFOR ensures synergy of theater logistics leaders to meet the needs of the JTF.

When considering the tasks the DIRMOBFOR and the DDOC perform and how each fits into the JTF C2 structure the question arises as to why not combine the duties and eliminate the DIRMOBFOR. The C2 structure of any organization should be simple, requiring a clear chain of command. There should not be any overlapping authority or responsibilities.²⁵ A disjointed command structure will slow decision-making and could lead to confusion in execution.²⁶ Dr. Milan Vego's concept of homogeneity supports this claim. Homogeneity maximizes efficiency by grouping together all functions required to accomplish a particular aspect of the mission.²⁷ This analysis indicates the DDOC construct benefits from the concept of homogeneity.

The standing DDOCs believe that, with training, the DDOC chief could cover the doctrine-defined duties of the DIRMOBFOR. This highlights another dimension of doctrinal disconnect of misidentifying DIRMOBFOR duties and subsequent misnaming of the position. The DIRMOBFOR's tasks, as previously identified, are to coordinate air mobility assets. However, the title implies someone who has the responsibility to direct all mobility assets. By transferring the DIRMOBFOR tasks to the DDOC chief, the JFC ends up with a

²⁴ U. S. Air Force, *Air Mobility Operations, Air Force Doctrine Document (AFDD) 2-6*, 21.

²⁵ Milan Vego, *Joint Operational Warfare*, VIII-13.

²⁶ *Ibid.*, VIII-17.

²⁷ *Ibid.*, VIII-18.

simplified logistics C2 network and a senior logistician in the theater with a span of influence over all modes of transportation.²⁸

COUNTER ARGUMENTS

The DIRMOBFOR integrates into the C2 structure, albeit with some redundancies, and has functioned for nearly two decades. Considering the successes of this construct could fuel the debate about whether or not the findings of this analysis are valid. Additionally, DIRMOBFOR proponents say having a single person serve as coordinator of limited common-user logistics assets adds value to the JTF.

Supporters of the DIRMOBFOR could claim doctrine is a starting point, and the analysis completed in this paper does not look into the execution of logistics at the operational level. Doctrine provides a common framework for military organizations to bridge the gap between theory and practice.²⁹ In this case, the doctrine prescribes tasks the DIRMOBFOR and the DDOC are to perform in their role as USTRANSCOM enablers but the framework established in the doctrine is not absolute. Without a thorough review of the development of the doctrine for each enabler, one could argue against using doctrine as a basis for review. Doctrine can be contradictory and often requires compromise between competing views when written.³⁰ Looking at the DIRMOBFOR C2 structure, as defined above in Figure 1, the link from JTF to USTRANSCOM is through the DIRMOBFOR and not the DDOC. The separate paths of coordination could lead to a perceived duplication of effort between the DIRMOBFOR and the DDOC. Furthermore, without a more in-depth

²⁸ Dennis L. D'Angelo, "DDOC Research Questions," October 4, 2010.

²⁹ Milan Vego, *Joint Operational Warfare*, XII-3.

³⁰ *Ibid.*, XII-5.

analysis, one could reason the DIRMOBFOR was directly responsible for the logistics success in recent operations.

Of the numerous tools available to enable USTRANSCOM, some may argue the best tool is a flag officer embedded in the JTF. While there is no rank specification in doctrine for the DIRMOBFOR, the position is normally filled by a USAF brigadier general. Rank selection is important since the DIRMOBFOR is normally assigned to the JFACC's special staff.³¹ The assumption is that choosing a general officer as DIRMOBFOR guarantees him a seat at the table with the other JTF generals. AFDD 2-6 says, "the DIRMOBFOR is the COMAFFOR's designated coordinating authority with all agencies affecting air mobility operations...[and] is also the advisor on how best to effectively and efficiently use air mobility assets."³²

As written, doctrine should be broad and flexible, leaving room for interpretation and adaptation. Real-world application of doctrinal framework gets the job done. Having a flag officer devoted to the coordination of mobility assets provides the necessary horsepower to aid the JFC in bridging the gap between strategic and tactical logistics. This point is further emphasized by the DIRMOBFOR course director at the Air Mobility Command's Mobility Operations School. He said the DIRMOBFOR course emphasizes to their senior officer students that they are the JFACC's resident mobility expert, not just for air but all modes of transportation. Furthermore, the JFACC will expect the DIRMOBFOR to have the answers to anything mobility-related.³³

³¹ U. S. Air Force, *Operations and Organizations, Air Force Doctrine Document (AFDD) 2*, 61.

³² U. S. Air Force, *Air Mobility Operations, Air Force Doctrine Document (AFDD) 2-6*, 19.

³³ Michael K. Howell, "DIRMOBFOR Information," September 27, 2010.

ANALYTICAL CONCLUSIONS

This analysis indicates the improved C2 of logistics for the JTF, through improved command relationships, could provide more efficient and effective logistics. Additional layers in the C2 structure and duplication of effort exist. The review of DIRMOBFOR and DDOC task lists suggests the DDOC contributes more to support the DPO's mission than the DIRMOBFOR. The DDOC could accomplish the tasks assigned to the DIRMOBFOR thus streamlining the JTF C2 links for logistics support. Opponents of this restructuring might argue the importance of having a senior officer embed in the JFACC special staff is critical to mobility success. With current communication technology, USTRANSCOM could establish a virtual presence in the JFACC staff to achieve the desired results.

The DDOC is tailorable and already has the relationships developed to streamline the end-to-end flow of materiel and people bridging the gap between strategic and tactical logistics networks for the JFC. The unknown is whether the DDOC can singularly meet the needs of the JTF. The analytical data in this paper, supported by comments from current DDOC leadership, indicate this is possible. If the goal is to provide optimized movement of people and materiel in, out and around the theater to meet JFC needs, then the DDOC should prevail through this debate.

RECOMMENDATIONS

The next step in improving operational logistics is testing the combination of DIRMOBFOR and DDOC duties. To test the evolution of theater logistics leadership, choose a current or future DIRMOBFOR tasking where the DDOC Chief could serve as the in-theater representative to accomplish the coordination functions previously done by the DIRMOBFOR. USTRANSCOM could continue having a general officer on the JFACC staff

by leveraging IT to establish a virtual presence. Sourcing this general officer from the headquarters would guarantee the necessary knowledge and mean he would not have to leave Scott Air Force Base. The in-theater coordination role for air mobility support, previously done by the DIRMOBFOR, would require a new training program for DDOC chiefs. Coordination with Air Mobility Command could modify the existing DIRMOBFOR training course to give senior DDOC leaders the knowledge necessary to meet USTRANSCOM's needs for in-theater representation.

These recommendations translate easily to operations where the JTF is collocated with the standing DDOC. For those operations where the JTF is not collocated, further study may be required to incorporate the new duties into the DDOC Forward structure. In these instances, current DDOC-Forward reach back capability may require bolstering to ensure the necessary resources are available for the DDOC Forward chief.

CLOSING

This paper examined the C2 construct USTRANSCOM provides to the JFC to ensure effective and efficient logistic support. The analysis identified the tasks required to bridge the gaps between the three levels of logistics; strategic, operational, and tactical. The comparison of DOD directives and doctrine showed the DDOC has clearer C2 links thus providing a better foundation for executing operational logistics than the DIRMOBFOR.

Whether the DDOC Chief can accomplish the DIRMOBFOR duties has yet to be determined. Proponents of the DIRMOBFOR believe having a person dedicated to coordinating air mobility on the JFACC staff is critical. However, this paper recommends eliminating the DIRMOBFOR because the position's functions are redundant and adversely affect JTF C2.

APPENDIX A
USTRANSCOM Specified Tasks from Directives and Doctrine

1. Have combatant command over all assigned transportation assets of the services except service-unique or theater assigned unless otherwise directed (DODD 5158.04)
2. Provide effective and efficient air, land and sea transportation for the DoD in time of peace and war (DODD 5158.04)
 - a. Provide intertheater airlift through AMC (JP 4-09 xii)
 - b. Provide worldwide intertheater ocean transportation of equipment, fuel, supplies and ammunition through MSC (JP 4-09 xii)
 - c. Provide single port manager through SDDC (JP 4-09 xii)
3. Develop and maintain a relationship with commercial transportation industry (CRAF & VISA) (DODD 5158.04)
4. Provide management support for service-unique or theater-assigned transportation assets to the department secretaries and combatant commanders (DODD 5158.04)
5. Serve as DoD single manager for transportation other than Service-unique or theater-assigned-assets (DODD 5158.04)
 - a. Provide common-user and commercial air, land and sea transportation, terminal management, and aerial refueling to support global deployment, employment, sustainment and redeployment of US forces (DODD 5158.04) (JP 4-0 ix) (JP 4-09 xi) (JP 4-09 I-5)
 - b. Procure commercial transportation services in accordance to law as necessary to carry out USTRANSCOM mission (DODD 5158.04)
 - c. Provide common-user and commercial air, land and sea transportation metrics to DoD components and combatant commanders (DODD 5158.04)
6. Serve as the DoD single manager for patient movement (DODD 5158.04) (DODI 5158.06) (JP 4-09 I-5)
7. Serve as the DoD DPO and in this capacity oversee the overall effective, efficiency and alignment of DoD-wide distribution activities, including force projection, sustainment and redeployment/retrograde operations (DODD 5158.04) (DODI 5158.06) (JP 4-09 I-5) (JP 4-0 II-7)
8. Serve as the DPfM Manager to include managing the information technology of the distribution portfolio in collaboration with the JDDE (DODD 5158.04) (DODI 5158.06) (JP 4-09 I-6)
9. Establish the concepts and operational frameworks relating to the planning and execution of DoD transportation operations (DODI 5158.06) (JP 4-09 I-6) (JP 4-0 V-9)
10. Develop and implement distribution process improvements (DODI 5158.06)

11. Establish, monitor, and improve distribution relationships with the Combatant Commands, the Joint Task Force Commanders, the DLA, General Services Administration, and the Military Services to ensure integration of distribution improvement efforts and performance standards (DODI 5158.06)
12. Identify and coordinate joint distribution processes, materiel management, and force movement improvement efforts and initiatives to ensure efforts are integrated and complementary. (DODI 5158.06)
13. Serve as the DoD single coordination and synchronization element on behalf of and in coordination with the JDDE COI (DODI 5158.06) (JP 4-0 II-7) (JP 4-0 II-8) (JP 4-09 x) (JP 4-09 I-6) (JP 4-09 V-2)
 - a. Employ necessary knowledge management/decision support tools to enable JDDE COI information sharing and staffing (DODI 5158.06)
 - b. Develop, coordinate, review, and take maintenance actions necessary to integrate the JDDE, including making policy recommendations to OSD, with respect to Directives, Instructions, and Decision Memorandums, and issue other distribution-related guidance (DODI 5158.06)
 - c. Establish processes to plan, allocate, route, schedule, and validate Joint Force Commander deployment and distribution priorities, track movements, adjudicate constraints, and redirect forces and supplies to coordinate and synchronize joint distribution activities to meet Joint Force Commanders' needs (DODI 5158.06) (JP 4-0 V-9) (JP 4-09 III-12)
 - d. Improving the overall effectiveness, efficiency, and interoperability of capabilities and systems in the distribution portfolio (DODI 5158.06)
14. Be responsible for coordination and overseeing the DoD distribution system to provide interoperability, synchronization and alignment of DoD wide end-to-end distribution (JP 4-0 I-7) (JP 4-09 V-2)
15. Provide joint expeditionary capability to rapidly establish and initially operate an POD to facilitate RSOI for GCC contingences and support end-to-end synchronized cargo and passenger movement, and common-user terminal management with JTF-PO (JP 4-0 V-10)
16. Share responsibility with supported combatant commander to coordinate intertheater and intratheater movement control systems (JP 4-09 xii)
17. Act as single worldwide manager for common-user POE/PODs (JP 4-09 xiii)

Note: Essential Tasks are underlined.

APPENDIX B
DIRMOBFOR Specified Tasks from Directives and Doctrine

1. Coordinate integration of intertheater air mobility capability provided by USTRANSCOM (JP 3-17) (AFDD 2) (AFDD 2-6)
2. In concert with the AOC director, facilitate the tasking and effective and efficient employment of air mobility forces assigned or attached to the JFC (JP 3-17) (AFDD 2) (AFDD 2-6)
3. Coordinate with the AOC director and AMD chief to ensure all air mobility operations supporting the JFC are integrated into the air assessment, planning and execution process and deconflict with other air operations (JP 3-17) (AFDD 2) (AFDD 2-6)
4. Coordinate with the TACC and USTRANSCOM to ensure the joint force air mobility support requirements are met (JP 3-17) (AFDD 2) (AFDD 2-6)
5. Coordinate the integration of the multinational air mobility plan (JP 3-17) (AFDD 2-6)

APPENDIX C
DDOC Specified Tasks from Directives and Doctrine

1. Direct GCC deployment, redeployment, and distribution priorities (JDDOC Template 3)
 - a. Synchronize and optimize the flow of arriving forces and materiel between intertheater and intratheater transportation (JP 4-0 IV-4) (JP 4-09)
 - b. Exercise C2 of intertheater lift forces and logistics infrastructure (JP 4-0 C-2)
 - c. Coordinate all GCC common-user transportation activities and integrates commercial lift capabilities based on GCC requirements (JP 4-09)
2. Provide Asset Visibility (AV) and In Transit Visibility (ITV) of force flow, sustainment and retrograde (JDDOC Template 3)
 - a. Collect data and provide GCC with ITV on lift capacity throughout intertheater and intratheater systems (JP 4-09)
 - b. Track movement requirements from lift allocation to execution through closure (JP 4-0 C-2)
3. Manage, connect and establish theater distribution architecture in coordination with the Services and Joint Staff (JDDOC Template 3)
 - a. Coordinate common user and theater distribution operations; link strategic deployment and distribution processes to operational and tactical functions in support of the warfighter (JP 4-0 V-5) (JP 4-09)
 - b. Direct common user and intratheater distribution operations (JP 4-0 C-3)
 - c. Coordinate and synchronize supply, transportation and related distribution activities (JP 4-09)
 - d. Fuse capabilities of multimodal deployment and distribution operations, intelligence, force protection, capacity acquisition, resource management and other staff functions to collaboratively provide distribution options for the warfighter (JP 4-0 C-2)
4. Plan, coordinate and synchronize strategic and operational deployment and distribution with theater forces and National Logistics Partners (JDDOC Template 3)
 - a. Develop deployment and distribution plans, integrate multinational and/or interagency deployment and distribution, and coordinate and synchronize the movement of sustainment in support of CCDR's priorities (JP 4-0 V-5) (JP 4-09)
 - b. Provide reach back to national partners to address and solve deployment and distribution issues for the CCDR (JP 4-0 V-5) (JP 4-09)
 - c. Serve as the link btw multiple organization including coalition partners, combat support, agencies, NGO liaison elements, commercial transportation and other entities is the single coordination and synchronization element that manages distribution operations within the JDDE (JP 4-09 V-13)
5. Develop strategic and operational deployment and distribution performance measures (JDDOC Template 3)

6. Perform container, 463L airlift equipment (air pallets and nets), Radio Frequency Identification Device (RFID) tag and other intermodal equipment oversight responsibilities (JDDOC Template 3)
 - a. Theater container management is a GCC function that can be assigned to the JDDOC (JP 4-09 IV-31)

BIBLIOGRAPHY

- Akins, Mark W., and George L. Topic. "Transforming Joint Operational-Level Logistics." *Joint Forces Quarterly*, no. 47 (Quarter 4, 2007): 87-93.
- Anonymous. "DDOC ENJOYS EARLY SUCCESS." *Army Logistician* 36, no. 4 (August 2004): 52.
- Brughelli, John D. "Joint Theater Logistics Management: Is the Joint Force Support Component Commander Concept a Viable Option?." Newport, RI: Naval War College, 2006. <http://handle.dtic.mil/100.2/ADA463388>.
- Burnett, Rolanda. "Control of Mobility Air Forces: Should the Director of Mobility Forces Command?." Maxwell Air Force Base, AL: Air University, 2002. <http://handle.dtic.mil/100.2/ADA420547>.
- Bush, Timothy, E. "Improving Operational Logistics: A Joint Functional Logistics Command - The Next Step." Newport, RI: Naval War College, 2006.
- Bush, Timothy, E. "The Director of Mobility Forces' Role in the Command Control of Air Mobility Assets During Humanitarian Relief Operations." Wright-Patterson Air Force Base, OH: Air Force Institute of Technology, 2000. <http://handle.dtic.mil/100.2/ADA430821>.
- Cabana, Nanie. "Total Mobility Flow: A Post-Kosovo Role for the DIRMOBFOR." *Air Force Journal of Logistics* 26, no. 1 (Spring 2002): 32-36.
- Calvano, Philip M. "Joint Task Force J3/J4: Directorate of Mobility Forces." Wright-Patterson Air Force Base, OH: Air Force Institute of Technology, 1999. <http://handle.dtic.mil/100.2/ADA372310>.
- Carter, Ted E. "Theater Air Mobility: Historical Analysis, Doctrine and Leadership." Maxwell Air Force Base, AL: Air Command and Staff College, 2000. <http://handle.dtic.mil/100.2/ADA394042>.
- Christianson, C.V. "Joint Logistics in the Future." *Joint Forces Quarterly*, no. 41 (Quarter 2, 2006): 76-79.
- Dail, Robert T., and David E. Jones. "Deployment and Distribution Command and Control." *Army Logistician* 39, no. 1 (February 2007): 2-8.
- D'Angelo, Dennis L. Email. "DDOC Research Questions," October 4, 2010.
- Downing, Jonathan G. "Is There a DDOC in the House?? An Analysis of the Deployment Distribution Operation Center." Newport, RI: Naval War College, 2009.

- Engel, Gary R. "Joint and combined theater logistics--the future reality." *Army Logistician* 31, no. 3 (June 1999): 34-38.
- Gates, Robert. Letter. "Department of Defense (DoD) Efficiency Initiatives," August 16, 2010.
- Goodwin, Scott P. "The Evolving Role of the DIRMBOFOR: A Critical Analysis of Current Doctrinal Trends." Newport, RI: Naval War College, 1999.
<http://handle.dtic.mil/100.2/ADA370696>.
- House Armed Services Committee. *Statement of General Norton A. Schwartz, USAF Commander, United States Transportation Command*. Washington, D.C., 2006.
http://www.globalsecurity.org/...2006_hr/060302-schwartz.pdf.
- House Armed Services Committee, Subcommittee on Readiness. *Testimony of Major General Robert T. Dail Director of Operations United States Transportation Command*. Washington, D.C., 2004.
http://www.globalsecurity.org/military/library/congress/2004_hr/04-03-30dail.htm.
- Howell, Michael K. Email. "DIRMOBFOR Information," September 27, 2010.
- Joint Warfighting Center. *Doctrinal Implications of the Joint Deployment Distribution Operations Center (JDDOC), the Joint Warfighting Center Joint Doctrine Series Pamphlet 8*. Suffolk, VA: USJFCOM, 2008.
- Kendrick, Randy S. "Joint Logistics for the EUCOM AOR." *Army Logistician* 37, no. 6 (December 2005): 47-51.
- Kendrick, Randy S. "Joint Logistics for the EUCOM AOR Part II." *Army Logistician* 38, no. 1 (February 2006): 22-27.
- Kress, Joy. "CENTCOM Deployment Distribution Operations Center (CDDOC) Pilot to Improve Distribution Pipeline," November 1, 2004.
<https://acc.dau.mil/CommunityBrowser.aspx?id=32288>.
- Leffler, Lori. "Champions." *Defense Transportation Journal* 64, no. 6 (December 2008): 4-5.
- LeMasters, Jr., Clark W. "Logistics Command and Control within the Combatant Command." Carlisle Barracks, PA: U.S. Army War College, 2007.
<http://handle.dtic.mil/100.2/ADA469590>.
- Martinez, Steven L. "Baffled by DAFL: Directive authority history for logistics." *Air Force Journal of Logistics* 30, no. 3 (Fall 2006): 61-75.
- Mauro, Lance. "What's a DDOC?." *United States Navy Supply Corps Newsletter* 68, no. 2 (April 2005): 4-5.

- McNabb, Duncan J. General, USAF. Letter. "DPO Letter of Intent," December 17, 2008. <http://www.transcom.mil/dpo/>.
- Mead, Phillip A. "Senior Army Logistician Preparedness for Expeditionary Theater Opening and Theater Distribution Operations." Fort Leavenworth, KS: School of Advanced Military Studies, 2009. <http://handle.dtic.mil/100.2/ADA506138>.
- Melville, Mark A. "The Director of Mobility Forces and Command and Control of Airlift." Wright-Patterson Air Force Base, OH: Air Force Institute of Technology, 1996. <http://handle.dtic.mil/100.2/ADA320617>.
- Moncrief, Keith W. "Creating a Theater-Based Operational Link Between Strategic Mobility and Theater-Level Logistics for the Joint Task Force Commander." Newport, RI: Naval War College, 2003.
- Montero, Eddie. "Breaking Paradigms: CENTCOM DDOC's Revolution in Deployment and Distribution." *Army Logistician* 39, no. 1 (February 2007): 8-10.
- Mordente, Patrick, Paul, PhD Needham, and Theodore P. Ogren. "Logistics for the 21st Century: Deployment Distribution Operations Center, Quick Fix or Long-Term Solution?." *Air Force Journal of Logistics* 30/31, no. 4 (Winter /Spring 2007 2006): 80-90.
- "New Concept Synchronizes CENTCOM Deployment and Distribution." *Army Logistician* 38, no. 6 (December 2006): 1.
- Otey, Gregory S. "Mending a Seam: Joint Theater Logistics." *Air Force Journal of Logistics* 30, no. 2 (Summer 2006): 8-17.
- Robbins, Marc, Patricia Boren, and Kristin Leuschner. *The Strategic Distribution System in Support of Operation Enduring Freedom*. Santa Monica, CA: Rand Corporation, March 2004. <http://handle.dtic.mil/100.2/ADA426623>.
- Thurmond, Suzi. "Analyzing the Lessons of OIF Distribution." *Army Logistician* 36, no. 4 (August 2004): 3.
- U. S. Air Force. *Air Mobility Operations, Air Force Doctrine Document (AFDD) 2-6*. Washington, D.C.: Department of the Air Force, 2006.
- U. S. Air Force. *Operations and Organizations, Air Force Doctrine Document (AFDD) 2*. Washington, D.C.: Department of the Air Force, 2007.
- U. S. Department of Defense. *Distribution Process Owner (DPO), Department of Defense Instruction (DODI) 5158.06*. Washington, D.C.: DoD, 2007.

- U. S. Department of Defense. *United States Transportation Command (USTRANSCOM), Department of Defense Directive (DODD) 5158.04*. Washington, D.C.: DoD, 2007.
- U. S. Office of the Chairman of the Joint Chiefs of Staff. *Air Mobility Operations, Joint Publication (JP) 3-17*. Washington, D.C.: CJCS, 2009.
- U. S. Office of the Chairman of the Joint Chiefs of Staff. *Distribution Operations, Joint Publication (JP) 4-09*. Washington, D.C.: CJCS, 2010.
- U. S. Office of the Chairman of the Joint Chiefs of Staff. *Doctrine for the Armed Forces of the United States, Joint Publication (JP) 1*. Washington, D.C.: CJCS, 2009.
- U. S. Office of the Chairman of the Joint Chiefs of Staff. *Joint Doctrine for the Defense Transportation System, Joint Publication (JP) 4-01*. Washington, D.C.: CJCS, 2003.
- U. S. Office of the Chairman of the Joint Chiefs of Staff. *Joint Logistics, Joint Publication (JP) 4-0*. Washington, D.C.: CJCS, 2008.
- U. S. Office of the Chairman of the Joint Chiefs of Staff. *Joint Operational Planning, Joint Publication (JP) 5-0*. Washington, D.C.: CJCS, 2006.
- U. S. Office of the Chairman of the Joint Chiefs of Staff. *Joint Operations, Joint Publication (JP) 3-0*. Washington, D.C.: CJCS, 2010.
- U. S. Office of the Chairman of the Joint Chiefs of Staff. *Joint Tactics, Techniques, and Procedures for Sealift Support to Joint Operations, Joint Publication (JP) 4-01.2*. Washington, D.C.: CJCS, 1996.
- U. S. Office of the Chairman of the Joint Chiefs of Staff. *Universal Joint Task List (UJTL) Database with Conditions*. Washington, D.C.: CJCS, 2009.
- U. S. Office of the Chairman of the Joint Chiefs of Staff. *Universal Joint Task Manual, Chairman of the Joint Chiefs of Staff Manual (CJCSM) 3500.04E*. Washington, D.C.: CJCS, 2008.
- U. S. Transportation Command. *Joint Deployment Distribution Operations Center (JDDOC) Template Edition 3*. Scott Air Force Base, IL: USTRANSCOM, 2008.
- U. S. Transportation Command. *Joint Deployment Distribution Operations Center Selection and Training, USTRANSCOM INSTRUCTION 36-35*. Scott Air Force Base, IL: USTRANSCOM, 2009.
- U.S. General Accounting Office. *Defense Logistics: DOD Has Begun to Improve Supply Distribution Operations, but Further Actions Are Needed to Sustain These Efforts*. Washington, D.C.: U.S. General Accounting Office, August 11, 2005.
<http://www.gao.gov/products/GAO-05-775>.

U.S. General Accounting Office. *Defense Logistics: Preliminary Observations on the Effectiveness of Logistics Activities During Operation Iraqi Freedom*. Washington, D.C.: U.S. General Accounting Office, December 18, 2003.
<http://www.gao.gov/htext/d04305r.html>.

USTRANSCOM NEWS SERVICE. "PA NEWS RELEASE- Transforming the deployment and distribution seams between strategic and operational logistics." *USTRANSCOM NEWS SERVICE*, February 10, 2004.
<http://www.transcom.mil/pa/body.cfm?relnumber=040210-1>.

Vego, Milan. *Joint Operational Warfare*. Newport, RI: U.S. Naval War College, 2007.

West, Scott G. "Logistical Support of Operation Iraqi Freedom (OIF)." *Logistics Spectrum* 38, no. 2 (June 2004): 9-11.