

AU/ACSC/3830/AY09

AIR COMMAND AND STAFF COLLEGE

AIR UNIVERSITY

USCENTCOM'S INTRATHEATER AIRLIFT:
WHAT WOULD FEDEX DO?

by

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A Research Report Submitted to the Faculty

In Partial Fulfillment of the Graduation Requirements

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April 2009

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the 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 the 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 Washington Headquarters Services, Directorate for Information Operations and Reports, 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 a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE APR 2009		2. REPORT TYPE N/A		3. DATES COVERED -	
4. TITLE AND SUBTITLE USCENTCOM's Intratheater Airlift: What Would FedEx Do?				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Air Command And Staff College Air University Maxwell Air Force Base, Alabama				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 Approved for public release, distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT Incorporating successful business practices from the FedEx Corporations commercial air cargo system can increase productivity and effectiveness for U.S. Central Commands intratheater airlift system. The goal of this academic comparison is to recommend strategies for improvement and courses of action to make the intratheater airlift system more effective at supporting the warfighter in future conflicts. Although research on improving the intratheater airlift system is not new, this topic remains relevant as a continual problem area for the Joint Force Commander. Many researchers have improved specific aspects of the intratheater airlift system. Unfortunately, several problems persist. The intratheater airlift system remains plagued with inefficient business practices, misunderstandings of how the system works, or what happens during the execution phase. Additional intratheater airlift problem areas include: the Air Force 120 day deployment cycle decreases overall productivity, incorrectly configured cargo pallets decreases aircraft utilization rates, falsely prioritized cargo manipulates the system in hopes to guarantee a faster delivery, and the overall intratheater airlift system is poorly managed by an inept logistical computer network. Furthermore, disconnected ideas between Army and Air Force cultures appear to amplify most of the major problems. A specific example addressed in this research paper is how the two Services struggle over allocation and for control of the C-27J Joint Cargo Aircraft. To some extent, the other services have lost trust in the Air Forces ability to perform its supportive function involving intratheater airlift.					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT SAR	18. NUMBER OF PAGES 23	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

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Abstract

Incorporating successful business practices from the FedEx Corporation's commercial air cargo system can increase productivity and effectiveness for U.S. Central Command's intratheater airlift system. The goal of this academic comparison is to recommend strategies for improvement and courses of action to make the intratheater airlift system more effective at supporting the warfighter in future conflicts. Although research on improving the intratheater airlift system is not new, this topic remains relevant as a continual problem area for the Joint Force Commander. Many researchers have improved specific aspects of the intratheater airlift system. Unfortunately, several problems persist. The intratheater airlift system remains plagued with inefficient business practices, misunderstandings of how the system works, or what happens during the execution phase. Additional intratheater airlift problem areas include: the Air Force 120 day deployment cycle decreases overall productivity, incorrectly configured cargo pallets decreases aircraft utilization rates, falsely prioritized cargo manipulates the system in hopes to guarantee a faster delivery, and the overall intratheater airlift system is poorly managed by an inept logistical computer network. Furthermore, disconnected ideas between Army and Air Force cultures appear to amplify most of the major problems. A specific example addressed in this research paper is how the two Services struggle over allocation and for control of the C-27J Joint Cargo Aircraft. To some extent, the other services have lost trust in the Air Force's ability to perform its supportive function involving intratheater airlift.

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Laying the Foundation

Airlift's mobility brings the speed, range, and flexibility inherent in airpower to the JFC, increasing the ability to maneuver forces faster than an opponent.

Air Force Doctrine Document 2-6.1¹

This research paper will primarily focus on the inefficiencies of the current intratheater airlift system supporting U.S. Central Command (USCENTCOM) and provide a comparison to the highly efficient commercial air cargo system of the FedEx Corporation. A secondary purpose of this paper centers on understanding the Army and the Air Force debate over the Joint Cargo Aircraft (JCA), C-27J, and suggesting alternative solutions. The ultimate objective of this research is to find solutions and recommend strategies for improvement. Lastly, this paper identifies potential courses of action that will make the intratheater airlift system more effective in supporting the warfighter for future conflicts.

To begin with, military airlift in support of combat operations is inherently different from air transport of commercial cargo for profit. Comparing the importance of next day commercial freight to vital supplies for troops engaged in combat is difficult to overcome. However, these two models share fundamental similarities when compared. This relationship provides positive insight and perspective, which may benefit the intratheater airlift structure and its operations. Furthermore, incorporating the successful business practices of the FedEx model into the intratheater airlift system will increase productivity and effectiveness for USCENTCOM and the warfighter.

Initially, the first step is truly identifying and understanding the problem, which leads to identifying a solution.² The method for this research project was defining specific problem areas in one system, while examining successful areas in a similar system. This approach presents the inefficiencies of the intratheater airlift system in contrast to the efficient business practices of the

FedEx Corporation. Establishing a stark contrast in this manner presents a mechanism to develop effective solutions for the intratheater airlift system's problems. A problem-comparison-solution format of this nature offers a fresh look into the mobility community. The basic premise is finding workable solutions to repair USCENTCOM's intratheater airlift system.

Overall, the intratheater airlift system is complex, but not that different from FedEx. Both organizations employ the hub-and-spoke system introduced by Delta Air Lines.³ Both systems funnel the majority of cargo into a few main hubs for distribution. Cargo is processed and then dispersed to outlying cities, or forward operating bases (FOBs), in the military's case. They diverge, however, in measurements of success, measurements of customer satisfaction, and retribution for operational inefficiencies. The FedEx Corporation cannot sustain inefficient practices; otherwise, it would go out of business for poor economic performance. In contrast, the intratheater airlift system sustains itself out of military necessity, regardless of performance level. Interestingly though, both organizations seek alternative solutions to increase their effectiveness; however, FedEx' survivability in a capitalist market depends upon it. The focus of this effort examines courses of action that produce results rather than on each system's unique restrictions, challenges, and barriers.

Subsequently, the Memphis-based shipping giant, FedEx Corporation, provided the optimal target because it has achieved consistent success since its creation in 1971 by Frederick W. Smith. FedEx demonstrated solid evidence to its credit with a steady climb on Fortune 500's largest company lists over the past years. For example, in 1995 the FedEx Corporation ranked number 136 with over \$204 million dollars in profit.⁴ In just over a decade FedEx increased profit revenues by ten times, improved to number 68 on the list, and generated over \$2 billion of profit in 2008.⁵

Consequently, this type of growth is astonishing in corporate America, but more so because Frederick Smith's empire developed from a simple term paper as an undergraduate student at Yale University.⁶ Smith, a former charter pilot and Marine, realized "as society automated [it] would need a completely different logistics system."⁷ His concept capitalized on the requirement for businesses to deliver critical components to their customers quickly. The first two nights of operation delivered a mere seven packages, yet through Smith's persistence, the company began to grow. Smith's journey has overcome several challenges that forced him to adapt and shape his company to satisfy the customers. Adapting to the customers' need is the benchmark for FedEx success.

For the most part, intratheater airlift research is not new, yet it remains a significant problem for Geographic Combatant Commanders (GCC) and current campaigns. Joint Publication (JP) 1-02 defines intratheater airlift as "the 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."⁸ The reality is today's intratheater airlift system is plagued with inefficient business practices, misunderstandings of how the system works, or what happens during the execution phase. Disconnected ideas between Army and Air Force cultures amplify this problem.

Comparison Analysis

Particularly, problem areas associated with the intratheater airlift system are major inefficiencies resurface on every rotational deployment. In July 2008, Major General Burt Field, the 332nd Air Expeditionary Wing Commander, Balad Air Base, Iraq, commented on the

intratheater airlift system: “Education within the theater on how the process works is lacking. People give up and use other methods. We [the Air Force] need to get better.”⁹ To highlight a few intratheater airlift inadequacies: the Air Force 120 day deployment cycle decreases overall productivity, incorrectly configured cargo pallets decreases aircraft utilization rates, falsely prioritized cargo manipulates the system in hopes to guarantee a faster delivery, and the overall intratheater airlift system is poorly managed by an inept logistical computer network. To some extent, the Army and the Marine Corps have lost trust in the Air Force’s ability to perform this supportive function. The following paragraphs introduce differences between USCENTCOM’s Intratheater Airlift System and FedEx, reference Figure 1.

Comparison	Intratheater Airlift	FedEx
Measurement of Success	Convoy mitigation, pallet count, cost avoidance, sortie rates, aircraft efficiency rates	Meet customers’ requirement, customer satisfaction Customer feedback
Training and Education	1 week AMD training, 120 day deployments	Initial, Annual, Continuation Training
Technology & Centralized Control	GDSS, JOPES, GATES, LOGMOD, MS Excel	DADS, Powership, SuperTracker, MultiShip, ClearSM Electronic Customs Clearance System, QuickShip, InterNetShip

Figure 1. Comparison.

From firsthand experience as the Deputy Chief, Airlift Control Team, assigned to the Combined Air Operations Center (CAOC) in 2006, the basic design of the system is adequate, but contained considerable flaws. The biggest dilemmas were locating and tracking cargo, empty aircraft sorties, personnel turnover rates, a comprehensive computer system, and the incompatibility of existing program software. The past six officers assigned to this duty within

the Air Mobility Division (AMD) have all echoed the same experiences during their deployments. These factors continue to contribute to the ineffectiveness of the intratheater airlift system, despite the efforts of many hardworking individuals.

The FedEx model has the luxury of a relatively stable and experienced workforce compared to what the intratheater airlift system experiences every 120 days. From that standpoint, FedEx would cease to exist if they fired workers and then hired new ones every deployment cycle. GCCs face this reality in a long protracted war. The inefficiencies in executing the mission rise the first three weeks of deployment cycles. For the next two and a half months, performance improves dramatically. However, toward the end of deployments, inefficiencies rise again to repeat the same cycle with the next set of replacements. All specialties experience a lag in performance while adjusting to the pace of operations and learning new systems. Increasing deployments from 120 to 180 days, or longer is one course of action. A better solution is methodically adjusting, or spacing personnel at different intervals for a more complete coverage of experience. AMD already uses this plan, but only for a few select positions. Staggering personnel replacements in smart intervals offers the best solution to maximize personnel productivity.

Another significant area of comparison is the manner in which organizations define and measure *success*. A universally agreed upon characteristic of a successful business is earning a sizeable profit in a capitalist society. Even though many businesses earn profit revenues, they also develop methods to measure customer satisfaction and evaluate company performance. This collection of customer feedback, positive and negative, provides key information to improve marketability and services. Normally, higher customer satisfaction generates repeat business from satisfied customers. The main point, however, rests on *how* companies respond to customer

feedback and implement action for improvement. Businesses that adapt and respond to meet their customers' changing needs frequently achieve higher profit revenues equating to a higher level of success. Likewise, inefficient business processes work in a negative manner on profit earnings and to the overall success of the company.

Conversely, the intratheater airlift system measures success by convoy mitigation and the amount of cargo transported on pallets referred to as the *daily pallet count*. These daily and monthly reports are examples of how the Air Force typically measures success and require further explanation. In an effort to reduce the number of U.S. soldiers exposed to dangerous roadside bombs on truck convoys, the Air Force attempts to air transport the majority of intratheater cargo. The AMD tracks this pallet count and translates it directly into a quantity of *lives saved* through convoy mitigation. The Air Force proudly presents these statistics of lives saved to demonstrate its contribution to the war effort. The irony is that Army and Marine units are frequently frustrated when higher priority cargo takes precedence over their shipments. These delays actually create additional truck convoys that the Air Force is trying to prevent in the first place. Sadly, most of these occasions are not reported and are not included in the Air Force statistics.

Another Air Force measure of successful operations is transporting high numbers of cargo pallets, or personnel within USCENTCOM on a daily basis. The average pallet count transported is 350 per day. Primarily, a fleet of U.S. and coalition C-130 Hercules, C-17 Globemasters, Soviet designed IL-76, and occasionally the C-5 Galaxy performs these missions in the theater of combat operations. This standard creates a daily goal for success. Airlifting more than 350 pallets equals a rather successful day and ineffective days are obviously transporting fewer pallets.

Additional measures the Air Force correlates to successful operations are cost avoidance, airlift sortie rates, and channel/standard theater air route (STAR) efficiency rates. To some degree, cost avoidance is ambiguous; however, U.S. Transportation Command (USTRANSCOM) and the U.S. Marine Corps were recognized as the 2004 Supply Chain Operational Excellence Award winners.¹⁰ This award signified USTRANSCOM's successful contribution to the warfighter with a "reported cost avoidance/savings of \$26 million."¹¹ Significantly, the newly integrated CENTCOM Deployment Distribution Operations Center (CDDOC) effectively played a major factor in USTRANSCOM winning the award.¹² Additionally, staffs brief commanders on aircraft sorties every day. As of March 31, 2009, airlift sorties rank the highest (11,940) for the year in support of the Global War on Terrorism (GWOT). This is over 3,000 more than Close Air Support/Armed Reconnaissance sorties, but it does not mean that airlift was any more successful flying more sorties.¹³ Yet, this demonstrates a misidentification to measure successful operations. Lastly, airlift routes (channels/STARs) that compose the intratheater airlift system are analyzed monthly, quarterly, and yearly according to utilization rates, aircraft seats filled, and cargo pallets loaded. These statistics are adequate, but are often misleading because low efficiency rates do not account for aircraft performance limitations and physical space limitations of certain outsized cargo. In other words, an aircraft sortie may report thirty percent efficient, but in actuality, it transported the maximum weight allowable due to climate conditions. In this instance, analysts should have reported the aircraft one hundred percent efficient and effective, but it was not the case.

Although there are others, these five measures of success illustrate the Air Force tries to define success directly through performance calculations without regard to the customer's need. This declaration is in no manner stating the efforts of personnel working within the intratheater

airlift system are not performing a valuable service supporting the warfighter. Indeed, increasing the numbers of convoys mitigated, pallets transported, needless cost avoided, sorties flown, and aircraft capacity maximized are absolutely important towards a successful operation. Rather, the point remains every action must focus on adapting to meet the customers' requirements.

Traditional statistical analysis has a valid merit, but the best course of action is an Air Force paradigm shift focused on what its customers need. In order to better evaluate successful operations, developing statistical measures of customers' needs would be more appropriate combined with a collection of customer feedback process.

In comparison, Frederick Smith built FedEx on fulfilling the customers' requirement and adapting to meet the requirement when it changed. As FedEx began to offer their overnight services to more cities, they realized information technology must be utilized "to an extent that had never been done before."¹⁴ In fact, FedEx diligently collects customer feedback to keep in touch with the changing environment. Handheld bar-code readers and online package status tracking are just two of several technological advancements that FedEx implemented action to improve customers' service.¹⁵ The best course of action is adapting technology in concert with customer feedback to meet changing requirements.

While the Air Force has made progress in allowing intratheater airlift customers the ability to track shipments, it lags behind in this effort frustrating users. One of the biggest aggravations of AMD personnel is the inability to accurately target and track cargo. Multiple sorties are often wasted searching for cargo that previously transported, or mysteriously disappeared in the aerial port. The capability to track cargo is referred to as in-transit visibility (ITV). The Radio Frequency Identification Data (RFID) tag is one capability used to manage and track pallets within the intratheater airlift system. In 2004, the first test of RFID tags allowed

internet tracking, but this system has not been fully implemented.¹⁶ In contrast, FedEx developed this technology twenty-five years earlier in 1984 and continued seeking advanced technology becoming “the first transportation website to offer online package status and tracking, which enabled customers to conduct business via the internet.”¹⁷ More importantly to note is that FedEx realized the importance of ITV for its customers and has invested additional revenue to continue and update their tracking capability. The intratheater airlift system is roughly twenty years behind commercial air cargo systems tracking capability. The obvious solution for USCENTCOM’s intratheater airlift system is to raise the priority for ITV technology. This technology has existed for several years, yet it has remained a low priority for the Air Force.

Although both models have large amounts of resources and technology to acquire centralized computer systems, FedEx has an advantage over the intratheater airlift system. FedEx conceded very early in its company’s history that in order to survive they had to have a single, comprehensive computer network to unify operations. The military, on the other hand, has incompatibility issues in the planning community from logisticians to aircrew planners. The military plans using the Global Decision Scheduling System I and II (GDSS), Joint Operational and Planning Execution System (JOPES), Global Air Transportation Execution System (GATES), and an advanced Microsoft Excel spreadsheet to accomplish the mission. Some of the major problems are software interfacing, user training and proficiency, and planning information at two classification levels, unclassified and Secret. The best course of action is for USTRANSCOM to streamline seamless interfacing of these critical computer networks. Multiple software contracts have been awarded at different levels of command with no overall oversight as to how, or if the computer programs are compatible with one other.

Struggle for the Joint Cargo Aircraft (C-27J)

The secondary purpose for this research paper analyzes the conflict between the Army and the Air Force over the JCA and suggesting alternative solutions. Although the upcoming Quadrennial Defense Review (QDR) will propose significant changes to the roles, missions, and capabilities of intratheater airlift, several areas are still in need of review. Specifically, the Army emphasizes their requirement to move forces to point of need, or the “last tactical mile.” The Air Force remains dedicated to maximizing the correct mix of available active duty and reserve air assets to accomplish the mission efficiently. While both Services are committed to satisfy specific requirements of Special Operations Forces (SOF), they struggle over the allocation of limited resources and for control of the newly acquisitioned C-27J Joint Cargo Aircraft (JCA). In an attempt to reconcile the JCA debate, the 2009 Quadrennial Roles and Missions Review Report stated, “The [Defense] Department determined Service responsibilities for intratheater airlift operations are appropriately aligned, and the option that provided the most value to the joint force was to assign the C-27J to both the Air Force and the Army.”¹⁸ The report further recognized, “There are areas for improvement.”¹⁹ The intent of this compromise is to improve joint effectiveness and it may, but it raises serious concerns over *how* the two Services coordinate unity of command to achieve a unified action. A truly unified action would not duplicate efforts.

An additional point of contention surrounding the intratheater airlift system and inter-service rivalry is the Army’s requirement to lift “time-sensitive/mission-critical” cargo. While acknowledging the Air Force is the Department of Defense (DoD) provider of Fixed Wing intratheater airlift, the Army has a legitimate function for acquiring the JCA.²⁰ The Army must provide “on-demand transport of time-sensitive/mission-critical cargo and key personnel to

forward deployed Army units operating in a Joint Operations Area.”²¹ Historically, the Army met operational necessities with C-7 Caribous in Vietnam and former Air Force C-23 Sherpas after the Cold War.²² The limited range and payload of the Sherpas combined with the age and strain on the 1962 built CH-47 transport helicopters justifiably proves the Army’s functional need for the C-27 JCA.²³

Nevertheless, this service rivalry was further strained by former Air Force Chief of Staff General John Jumper’s 2005 response to the JCA, “you [the Army] don’t need to go out and buy yourself an Air Force—we’ve got one.”²⁴ To the Air Force’s credit, they fully accept the traditionally role of providing “general support” airlift for common-users and “direct support” of land operations.²⁵ The direct support includes transport of the Army’s time-sensitive/mission-critical cargo, often categorized as outsized cargo like helicopter and tank transports. General support, defined by JP 1-02, consists of “airlift service provided on a common basis for all DoD agencies and, as authorized, for other agencies of the US.”²⁶ So, if the Air Force is filling both the Army’s requirement of general and direct support, then the obvious question is where’s the disconnect? The problem starts with allocation and priorities. By design, the intratheater airlift system maximizes available air assets according to the GCC’s priority of personnel and cargo transport. Due to higher priority allocation, the Air Force cannot fulfill all the Army’s requirements and unfortunately, critical Army missions cannot be supported. Assuming the Air Force could increase their level of support to Army commanders, would they? General Norton Schwartz, Air Force Chief of Staff and former Commander of U.S. Transportation Command, displayed some doubt when he said, “Is the Air Force willing to attach tactical airlifters to an Army brigade commander when required?”²⁷

This is a battle for operational control of assets. Unity of command is more effective when all resources are collectively controlled, which supports the Air Force's argument. The JCA plan allocates 54 C-27Js to the Army for direct support and only 24 C-27Js to the Air Force.²⁸ However, the complicated portion of the current plan is when the Army's C-27s are not directly supporting its primary mission that the Air Force can assign intratheater airlift missions in concert with normal Air Force intratheater assets. The Air Force is worried they will not have the necessary visibility over the Army C-27s for effective allocation.²⁹ Specifically, the Air Force fears situations when local Army commanders will not relinquish control, or make the assets available for intratheater airlift system as a whole, even when they are not filling the Army's direct support role. This fear can be agitated when the Air Force is blamed for not adequately providing enough general support to other airlift users, especially the Army commanders lacking C-27 airlift capability. Drawing an important lesson from a FedEx perspective, they see/realize a valid customer requirement and adapt to meet that requirement. Specifically, the Air Force is not able to meet all the "direct support" needs of the Army. The best solution for the JCA allocation is complete Service separation, to include any aspirations of temporary Air Force operational control over Army C-27s. The bottom line is a properly equipped Army can effectively manage the majority of direct support requirements better than the Air Force can. The bright side for the Air Force is that it will actually free up additional Air Force assets for a more effective allocation plan. The planned distribution of C-27s will not distort the joint concept of operations.

Recommendations

1. Staggering personnel replacements in smart intervals offers the best solution to maximize personnel productivity during Air Force deployment cycles.

2. Traditional statistical analysis has a valid merit, but the best course of action is an Air Force paradigm shift focused on what its customers need. Developing statistical measures of customers' needs is more appropriate combined with a customer feedback collection process. This criteria better defines successful operations.
3. The best course of action is adapting technology in concert with customer feedback to meet changing requirements.
4. The best course of action for USCENTCOM's intratheater airlift system is to raise the Air Force priority level for obtaining ITV technology. This technology has existed for several years, yet it has remained a low priority for the Air Force.
5. The best course of action is for USTRANSCOM to streamline seamless interfacing of these critical computer networks. Multiple software contracts are continually awarded at different levels of command with no overall oversight as to how, or if computer programs are compatible.
6. The best solution for the JCA allocation is complete Service separation, to include any Air Force aspirations of temporary operational control over Army C-27s.

Conclusion

In conclusion, this research paper focused on the inefficiencies of the current USCENTCOM intratheater airlift system and provided a comparison to an efficiently operated FedEx Corporation. The overall objective was to find solutions and recommend strategies for improvement. Six recommendations were suggested to make the intratheater airlift system more effective at supporting the warfighter in future conflicts. The two models have differences, yet possess fundamental similarities. The problem-comparison-solution format connects them

forming a relationship that allows a valid academic assessment. This comparison provided positive insight and perspective, which may benefit the intratheater airlift structure and its operations. Incorporating FedEx Corporation's successful business practices will increase productivity and effectiveness of the intratheater airlift system for the warfighter in future conflicts.

Notes

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¹⁸ DOD, "Quadrennial Roles and Missions Review Report," 27.

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²⁰ "Memorandum of Agreement Between the Department of the Army and the Department of the Air Force, 16 June 2006" 2.

²¹ Ibid.

²² Hess, "CRS Report for Congress, Military Airlift: The Joint Cargo Aircraft Program," 1-2.

²³ Ibid 2.

²⁴ John T. Bennett, "USAF Chief: Small Fixed-Wing Aircraft Needed for Intra-Theater Lift," *Inside the Air Force*, September 2, 2005, p. 2.

²⁵ Ibid 4.

²⁶ "Joint Publication 1-02 Department of Defense Dictionary of Military and Associated Terms," 108.

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