

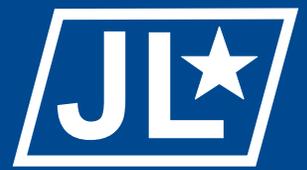
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Creative Approaches to Improving Segments of the Defense Transportation System

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With the recently adopted expeditionary and transformational mindset within the Department of Defense (DoD), the need for significant improvements in the military logistics system is recognized widely. Lieutenant General Michael E. Zettler, former Air Force Deputy Chief of Staff for Installations and Logistics, recently suggested that the Air Force logistics community needs to “shed the bureaucratic and organizational vestiges of the past and fundamentally transform ourselves to become more expeditionary, mobile, forward thinking, and more efficient than ever before.”¹ General John W. Handy, the commander of US Transportation Command (USTRANSCOM) agreed when he stated the military lacks an efficient supply chain and distribution system to support the warfighter.² Moreover, Air Mobility Command (AMC) has been losing cargo delivery business to commercial providers over the last 2 decades, perhaps because of simpler requirements placed on the shipper and better reliability and visibility provided by commercial vendors.³

In recent years, USTRANSCOM and the Defense Logistics Agency have taken several measures to begin improving the system. For example, the Strategic Distribution Management Initiative, which attempted to redesign and streamline the DoD global distribution system, significantly improved delivery time to test locations.⁴ During its first test in Europe—in July 2000 providing delivery to Tuzla, Bosnia, and Taszar, Hungary—the customer wait time for air-delivery cargo improved from 15 days to 10.7 days.⁵ In another attempt to improve DoD logistics processes, USTRANSCOM recently has been designated as the distribution process owner and, thus, is responsible for managing the entire supply chain for DoD.⁶ This move is expected to enhance delivery reliability, visibility, and efficiency.⁷

The Air Force also is exploring ways to improve its logistics processes and recently commissioned a transportation reengineering team to determine how to “improve the performance, quality, efficiency, and cost

effectiveness” of Air Force air transportation systems and processes.⁸ Toward this effort, the team researched and visited numerous military and civilian agencies.⁹ The reengineering team identified 20 policies and processes that warrant further consideration for improvement. This article focuses on three broad areas from the report—cargo entry, delivery reliability, and pricing. While manpower and training issues are not addressed, they were discussed in the report.

At a recent supply chain management consortium in St Louis, Handy, discussing the military distribution system, stated he was looking for anybody willing to put his/her brain into the problem. This article is aimed at generating discussion and debate among logistics professionals and encouraging readers to “put their brain to this problem.”

Cargo Entry

The Defense Transportation System (DTS), defined as “that portion of the nation’s transportation infrastructure that supports DoD common-user transportation needs across the range of military operations,” is managed by USTRANSCOM.¹⁰ One element of the Defense Transportation System—the focus of this article—consists of the Air Force providing regularly scheduled air transportation for passengers and cargo to government-approved customers. These regularly scheduled flights, also known as *channel missions*, are established to maintain a distribution network between the continental United States (CONUS) and overseas locations and to train military aircrews.



Before channel cargo enters the DTS airlift system, shippers must receive approval for their cargo by submitting cargo information to the airlift clearance authority.¹¹ The DoD has three airlift clearance authorities (the Air Force, Army, and Navy) whose purpose is to control the entry of cargo into the airlift system because of limited transportation resources. The information is submitted by completing the advance transportation control and movement document (ATCMD). Shippers can submit the required ATCMD information via the Cargo Movement Operating System at base traffic management offices, faxing or phoning the information to the airlift clearance authority, or using the airlift clearance authority online submission form. Once the documentation is received and approved by the airlift clearance authority, the information is entered electronically into the Global Air Transportation System (GATES).

The shipper's responsibilities extend beyond completion of appropriate documentation. The shipper must package and label the cargo properly in accordance with the Defense Transportation Regulation (DoD 4500.9-R), which ensures cargo airworthiness. Finally, the shipper must arrange transportation of the cargo (usually via surface transportation) to the appropriate aerial port, air terminal, or traffic management office. Thus, before any shipment enters the Defense Transportation System, the shipper is required to ensure the cargo is properly marked, packaged, and documented.

Shippers often rely on commercial vendors, who usually are not familiar with military airlift requirements, to ship their cargo to an aerial port. Consequently, the cargo shipped routinely is improperly packaged. However, regardless of the condition or problems the item might have, the carrier has completed its contractual responsibilities and is not responsible for the original shipper's documentation problems.

After cargo arrives at the appropriate facility for airlift, air terminal personnel inventory the cargo for accountability and check it against the information in GATES. If cargo arrives at the port without an ATCMD in GATES (termed a *no hit* by aerial port personnel), aerial port personnel will enter all the required information. Inputting this information averages 15 minutes per shipment (TCMD) to ensure all information is accurate and complete.¹² At Dover AFB, Delaware, *no hits* represent almost 20 percent of the 21,000 monthly shipments.¹³ Thus, at this one AMC aerial port, improperly documented cargo consumes more than 1,000 uncompensated man-hours per month.¹⁴ This problem is recognized at the highest levels—Handy stated at a recent defense logistics conference that 4,500 shipments from DoD vendors arrived at the Dover AFB aerial port during April and June 2003 without proper documentation or notification.¹⁵

Suggested Improvements to Cargo Entry

The Reengineering Team suggested several improvements to the entry of cargo into the Defense Transportation System.

- Establish a *full service* cargo capability.
- Eliminate the airlift clearance authority.
- Streamline documentation requirements.
- Simplify online access.

A broad, overarching suggestion is that AMC consider establishing a *full service* cargo capability for those customers

who are willing to pay to have their cargo prepared for shipment. This service would allow the shipper to deliver cargo directly to a cargo movement facility. Freight personnel would then be responsible for all aspects of originating cargo movement, to include packing, marking, labeling, and documentation preparation. At the cargo movement facility, the customer would see the list of available services and only pay for those services provided. However, customers would have the option of delivering cargo to the port fully prepared for shipment and avoid additional preparation costs. This recommendation not only would provide the DoD with a more customer-oriented service but also would reduce the amount of frustrated cargo, minimize the number of times personnel handle cargo that currently is being frustrated, reduce customer wait time for a portion of cargo, and compensate the DoD for the work.

A second suggestion is to eliminate the airlift clearance authority during peacetime to allow customers easier access to the airlift portion of the Defense Transportation System. By establishing a new pricing and service scheme, the need for an airlift clearance authority is removed. The customer would decide to ship it via AMC or commercial vendor based on price and service.

A third suggestion for improving the logistics system is to streamline documentation requirements. One potential area for cargo process streamlining is to reduce the amount of information required for the ATCMD; the ATCMD requires approximately 25 entries and an 80-digit punchcard format to advance a piece of cargo. Many of the data fields are irrelevant for aerial ports to ship cargo and could be replaced with an additional comment block that prints on the label and manifest. A recent memorandum from the Under Secretary of Defense for Acquisition, Technology, and Logistics calls for the elimination of the 40-year old, 80-column Military Standard System (MILS) format. This memorandum states, "As long as MILS forms the basis of our information exchanges, it will not be possible to track an item throughout its life cycle across the entire supply chain using unique identifiers."¹⁶ Furthermore, the memo mandates that systems that have not migrated off the 80-column format by 1 January 2005 will have their funding withheld.

Another option to streamline the process would be to eliminate the requirement for the 17-digit transportation control number (TCN) and use a simple tracking number for each shipment similar to express carrier operations. Transportation control numbers are generated by shippers and are very easy to manipulate in order to get cargo through the system. Character positions 15, 16, and 17 of the transportation control number allow personnel to circumvent the system, which results in numerous problems such as duplicate transportation control numbers or GATES entries. Another problem with the transportation control number is the limited number of split shipments allowed. The system allows only 22 items to be shipped under one transportation control number. However, shippers often try to ship more than 22 items under one transportation control number. The 22 split limit makes these types of large shipments an intransit visibility nightmare and makes it virtually impossible to locate missing pieces. Simple tracking numbers, generated electronically, would reduce TCN errors and improve supply chain visibility.

A final suggestion to facilitate cargo entry is to make online access to DTS shipment criteria and procedures easier to

navigate. Since the inception of the Internet, the process for advancing TCMDs has been improved. However, trying to find the particular Internet site to submit the required information can be frustrating for new shippers. It could take as many as 12 different screens for the shipper to finally find the right one. Also, if shippers are unaccustomed to AMC cargo terminology or what each specific field in the ATCMD requires, they could overlook or confuse key pieces of data.

Delivery Reliability and Pricing

Shippers have grown accustomed to the reliability and time-definite delivery (TDD) standards provided by express carriers such as Federal Express (FedEx) and United Parcel Service (UPS). In contrast, the Defense Transportation System employs a complicated and somewhat confusing priority system that does not guarantee cargo delivery at a specific time and a pricing system that does not adequately differentiate between available services.

The DTS cargo priority system is governed by the Uniform Materiel Movement and Issue Priority System (UMMIPS). The UMMIPS serves to allocate materiel and logistics resources in accordance with Joint Chiefs of Staff (JCS) and Military Service guidance, while establishing time-definite delivery standards.¹⁷

The priority system starts determining the force and activity designator (FAD) and the urgency of need designator (UND) indicating the mission essentiality of the cargo.¹⁸ From the FAD and UND, a supply priority designator can be determined. For example, using Figure 1, a FAD of II with a UND of B equates to a supply priority designator 5.

After determining the required delivery date (RDD) and its appropriate code, the supply priority designator is then converted into a transportation priority (TP).²⁰ Figure 2 depicts the conversion of the supply priority designator into a transportation priority. A supply priority designator of 5, from the example above, translates into a transportation priority of 2.

Thus, to determine cargo movement priority, the shipper must first determine the FAD/UND combination, followed by the supply priority designator; decide the appropriate code to best describe exactly when it needs to arrive; and finally, determine the transportation priority. This complex prioritization process is in stark contrast to the simple and straightforward options provided by commercial carriers.

To further complicate delivery, the aircraft used to deliver cargo has its own separate priority system independent from the cargo priority system. The priorities used to determine the use of Air Force cargo aircraft are designated by JCS priorities. These priority codes direct the use of aircraft to support a variety of missions. These channel airlift missions, which are designated to carry DoD cargo, are prioritized as 1B1, 1B3, or 3A3. There are at least four priorities that are higher than moving channel cargo. Recent changes have allowed some customers to request changing their channel from a frequency channel (1B3) to a contingency channel (1B1).²² Of approximately 122 worldwide-validated cargo channels, approximately 44 of them are JCS priority 1B1.²³ With this priority system, there can be unforeseen requirements with higher priorities, which may result in airlift being pulled from channel missions to support other, more important missions. Loss of airlift support because of higher priority missions could delay delivery—regardless of the

transportation priority of the cargo. There is no direct correlation between JCS mission priorities and cargo transportation priorities.

After all this, the complicated supply and transportation priority system does not provide a specific delivery date as commercial carriers provide. The UMMIPS attempts to provide an upper bound for delivery time by designating time standards for order-to-receipt time, but there is no guarantee these times will be met. Recently, USTRANSCOM, in conjunction with the Air Force Logistics Management Agency (AFLMA), concluded a study showing that previous UMMIPS time standards were frequently not being met.²⁴ To give customers a more accurate delivery estimate, USTRANSCOM proposed changing UMMIPS to indicate a more realistic delivery standard.²⁵ These standards, now labeled as time-definite delivery standards, reflect an 85-percent probability that the “wholesale supply system is capable of delivering required material to its customers” within the timeframe stated (Figure 3).²⁶ For example, the UMMIPS provides a time-definite delivery of 12 days to Area B for TP1 cargo. This means there is an 85-percent probability that the cargo will be delivered within 12 days.

Priority systems usually are used to regulate = available assets while simultaneously meeting the differing needs of customers. Within the Defense Transportation System, the airlift portion from CONUS to overseas generally is recognized as the most constrained segment. Thus, it should be reasonable to conclude

SUPPLY PRIORITY DESIGNATOR DETERMINATION			
FORCE ACTIVITY DESIGNATOR	URGENCY OF NEED DESIGNATOR		
	A	B	C
I	1	4	11
II	2	5	12
III	3	6	13
IV	7	9	14
V	8	10	15

Figure 1. Supply Priority Designator Determination¹⁹

TRANSPORTATION PRIORITY AND MOVEMENT CONVERSION TABLE			
Supply Priority Designator	Required Delivery Date	Transportation Priority	Mode of Shipment Eligibility
01-03	All	1	Air
04-08	44 555 777	2	Air
09-15	2	3	Surface
	None	4	Surface

Figure 2. Transportation Conversion and Movement Conversion Table²¹

that the TDD standards for TP1 and TP2 should reflect a significant difference for the strategic portion of the Defense Transportation System. However, this does not seem to be the case. The major difference in TDD times for TP1 and TP2 (Figure 4) to Area B is found in the CONUS transportation time—probably the least constrained part of the entire transportation process. Only 10 percent of the time difference between TP1 and TP2 time standards is allocated to the airlift segment, while 70 percent of the difference is given for CONUS transportation time. The differences in TP1 and TP2 essentially have no bearing on restricting the flow through the constrained airlift portion of the Defense Transportation System.

In addition to the priority system, the pricing structure in the airlift portion of the Defense Transportation System is not efficient. Currently, although TP1 cargo is higher priority and is handled before TP2 cargo, there is no difference in cost to shippers for airlift. The pricing is based on the origination, destination, and weight—not priority. The only price break is based on the weight of the cargo shipped (that is, 0-439 pounds, 440-1,099 pounds, 1,100-2,199 pounds, 2,200-3,599 pounds, and more than 3,600 pounds).²⁹ With this type of pricing structure and lack of delivery reliability, it is logical that shippers will use the highest priority possible to get their cargo to its destination.

Suggested Improvements to Delivery Reliability and Pricing

The following are suggestions to improve delivery reliability and pricing within the Defense Transportation System:

- Provide guaranteed delivery service by reducing delivery time variability.
- Decrease port hold times.
- Place greater emphasis on time-definite delivery and less emphasis on JCS airlift priority and aircraft utilization rates.
- Implement price and service level relationships.

The first suggestion is for the Defense Transportation System to provide a guaranteed delivery service for its customers. Through organic and contracted means, the Defense Transportation System could provide the capability to deliver cargo at a specific time, thus providing true time-definite delivery for its customers. More predictability and less variability in the system are needed, especially when customers are willing to pay higher prices for more reliable service.³⁰ Guaranteed delivery may reduce duplicate submissions that customers often submit because of a lack of reliability and visibility.³¹

The second suggestion, in conjunction with reducing variability in the UMMIPS time-definite delivery, is for USTRANSCOM and AMC to examine methods to reduce port

PIPELINE SEGMENT	Area					
	CONUS	A	B	C	D	EXP
A. Requisition Submission Time	.5	.5	.5	.5	.5	.5
B. ICP Processing Time	.5	.5	.5	.5	.5	.5
C. Storage Site (or Base) Processing, Packaging, and Transportation Hold Time	1	1	1	1	1	1
D. Storage Site to CCP Transportation Time	N/A	1	1	1	1	N/A
E. CCP Processing Time	N/A	.5	.5	.5	.5	N/A
F. CONUS Intransit Time	1.5	1	1	1	1	N/A
G. POE Processing and Hold Time	N/A	3	3	3	3	N/A
H. Intransit Theater Time	N/A	1	1	1	2.5	3
I. POD Processing Time	N/A	2	2	2	2	N/A
J. Intransit, within Theater Time	N/A	1	1	1	1	1
K. Receipt Take-Up Time	.5	.5	.5	.5	.5	.5
Total Order-to-Receipt Time	4	12	12	12	14	6.5

Figure 3. Time-Definite Delivery Standards for Category 1 Requisitions²⁷

PIPELINE SEGMENT	Area					
	CONUS	A	B	C	D	EXP
A. Requisition Submission Time	.5	.5	.5	.5	.5	.5
B. ICP Processing Time	.5	.5	.5	.5	.5	.5
C. Storage Site (or Base) Processing, Packaging, and Transportation Hold Time	1	1	1	1	1	1
D. Storage Site to CCP Transportation Time	N/A	1	1	1	1	N/A
E. CCP Processing Time	N/A	.5	.5	.5	.5	N/A
F. CONUS Intransit Time	1.5	1	1	1	1	N/A
G. POE Processing and Hold Time	N/A	3	3	3	3	N/A
H. Intransit Theater Time	N/A	1	1	1	2.5	3
I. POD Processing Time	N/A	2	2	2	2	N/A
J. Intransit, within Theater Time	N/A	1	1	1	1	1
K. Receipt Take-Up Time	.5	.5	.5	.5	.5	.5
Total Order-to-Receipt Time	4	12	12	12	14	6.5

Figure 4. TP 1 and TP2 Comparison²⁸

hold times. As Figure 4 shows, 3 days are allowed for port-of-entry processing and hold time, and 2 days are allowed for port-of-debarkation processing time. For high-priority cargo in the commercial sector, these times are reflected in hours, not days. One approach to reduce port hold time is to match airlift more closely to cargo movement requirements. This would reduce the amount of time cargo sits at a port waiting for movement.

A third suggestion is for USTRANSCOM and AMC to place greater emphasis on time-definite delivery and less on JCS airlift priority and aircraft utilization. Although the JCS airlift priority system may be necessary to manage the limited number of available airframes, mechanisms to compensate for priority changes and ensure time-definite delivery could be implemented. Additionally, aircraft utilization (that is, space or weight used versus space or weight available) is an important measure of efficiency and is easily computed and understood. However, there are costs associated with an unpredictable transportation system, such as increased ordering costs because of duplicate orders, increased inventory, and increased inventory holding costs that are not as easily quantifiable but are important. Perhaps the most important and intangible consequence of an unreliable Defense Transportation System is the lack of customer confidence in the system. By placing greater emphasis on time-definite delivery and providing more reliable delivery, many of these tangible and intangible costs may be reduced.

The fourth suggestion is to implement price and service-level relationships. The DoD could change the pricing structure and charge customers based on the level of service provided (in addition to origin, destination and weight). Customers who require premium, guaranteed service would be expected to pay premium prices. However, customers who are willing to accept longer delivery periods would be charged less but still receive their cargo within a designated timeframe. Offering pricing options would solve the priority inflation problem that continues within the system. Without customer confidence in the ability of the Defense Transportation System to provide time-definite delivery, combined with no cost incentive to use a priority other than TPI, customers will continue to abuse the system to try and ensure their items are delivered as quickly as possible. In fact, a recent General Accounting Office (GAO) report stated, "Ineffective prioritization system for cargo precluded the effective use of transportation assets during Operation Iraqi Freedom."³²

Conclusion

This article suggests several improvements to three areas of AMC airlift operations: cargo entry procedures, delivery reliability, and pricing. Technological improvements, along with offering a *full service option*, provide the means to make cargo entry into the Defense Transportation System relatively simple and virtually error free while alleviating the need for human interaction in the airlift clearance process. Additionally, with the appropriate measures and price controls during peacetime, technology and costs to shippers could regulate the movement of cargo through the Defense Transportation System. Finally, if decisionmakers are serious about providing genuine time-definite delivery, they need to refocus their priorities from airframe priorities, aircrew training, and aircraft utilization to establishing appropriate processes that ensure cargo is delivered when required.

Admittedly, some of the ideas are rather progressive and would necessitate fundamental changes to the accepted practices, culture, and doctrine at USTRANSCOM and AMC. Implementing these suggestions may require a significant investment of time and money. However, the authors believe DTS customers are looking for far-reaching improvements to current service levels and hope this article contributes to the ongoing transformation within the Defense Transportation System.

Notes

1. Lt Gen Michael E. Zettler, "A View From the Top," eLog21, Bringing AF Logistics into the 21st Century, 24 Nov 03
2. SFC Doug Sample, "General Addresses Supply Chain Problems," *Air Force Print News Today*, 11 Dec 03.
3. Brian G. Chow, *The Peacetime Tempo of Air Mobility Operations: Meeting Demand and Maintaining Readiness*, Rand Project Air Force, 2003, XIX.
4. Strategic Distribution Management Initiative Underway [Online] Available: <https://us.army.mil/frame.html?rtfPossible=true&lang=en>, 28 Jan 04.
5. *Ibid.*
6. DoD news release, "US Transportation Command Appointed As Defense Distribution Process Owner," Release Number: 090325-1, 25 Sep 03.
7. Ken Cottrill, "Waging War on Inefficiency," *Journal of Commerce*, 8 Dec 03, 1.
8. "Proposed Implementation Plan for Air Transportation Reengineering," Dec 01.
9. USTRANSCOM, AMC, Tanker Airlift Control Center, Air Force Institute of Technology, Emery Worldwide, FedEx, UPS, and Windswept Enterprises.
10. DoDR 4500.9-R, Defense Transportation Regulation, Part II, Cargo Movement, II-xxxix.
11. Channel airlift—common-user airlift service provided on a scheduled basis between two points. There are two types of channel airlift. A requirements channel serves two or more points on a scheduled basis, depending on the volume of traffic; a frequency channel is time-based and serves two or more points at regular intervals, *DoD Dictionary of Military Terms*.
12. Author's telephone interview with Capt Robert Neal, Dover AFB Aerial Port Commander, Air Terminal Operations Flight, 28 Jan 04
13. Author's telephone interview with Capt Robert Neal, Dover AFB Aerial Port Commander, Air Terminal Operations Flight, 22 Jan 04.
14. Author's telephone interview with Capt Robert Neal, Dover AFB Aerial Port Commander, Air Terminal Operations Flight, 29 Jan 04.
15. Sample.
16. The Under Secretary of Defense, letter to Secretaries of the Military Departments, "Migration to the Defense Logistics Management Standards and Elimination of the Military Standard System," 22 Dec 03.
17. F/AD. A Roman numeral (I to V) that the Secretary of Defense, the Chairman of the Joint Chiefs of Staff, or a DoD component assigns to a unit, organization, installation, project, or program to indicate its relative mission essentiality.
18. UNDs are used respectively to describe the importance of any given item to any specific mission. UND A—requirement is immediate. Without the material needed, the activity is unable to perform one or more of its primary missions. UND B—requirement is immediate, or it is known that such a requirement will occur in the immediate future. The ability of the activity to perform one or more of its primary missions is impaired until the material is received. UND C—requirement is routine.
19. Joint Pub 4-01, Appendix A.
20. A three-position field that is used to identify the level of service (in terms of time) that a customer requires of the logistics system. The RDD specifies the allotted times that each element of the logistics system has to satisfy the service-level required by the customer. The logistics management systems use the RDD to determine the service-level times that must be met or exceeded and allocate their resources accordingly. An RDD of 999 indicates an expedited handling requirement for nonmission-capable supply overseas customers or CONUS customers deploying within 30 days. This RDD applies to requisitions with priority designators 01 through 03 and is reserved for US forces. An

(continued on page 47)

44. US Strategic Bombing Survey, Interview No 56, 4.
45. Baumbach, 56.
46. Milward, 48-49.
47. Overy, 187.
48. Overy, 177.
49. Baumbach, 34.
50. Lee, 256.
51. Faber, 141.
52. Baumbach, 171.
53. Price, 183.
54. *The Rise and Fall of the German Air Force, 1933-1945*, New York: St Martin's Press, 1983, 407.

55. Baumbach, 30.
56. Milward, 172.
57. US Strategic Bombing Survey, Interview No 56, 4.
58. Lee, 266.

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(Improving Bare-Base Agile Combat Support from page 15)

17. Boley, 55.
18. Todd Groothuis, "Afloat Prepositioning of Nonmunitions WRM Phase II," Air Force Logistics Management Agency Report LX200125700, Apr 03, i.
19. Groothuis, 22.
20. Groothuis, 24.
21. *Ibid.*
22. Groothuis, 25.
23. *Ibid.*
24. Groothuis, 26.
25. *Ibid.*
26. Groothuis, 27.
27. The final leg of truck to destination is descriptive of the fact that once an item arrives at an aerial port it still has to be moved to an operating location.
28. Groothuis, 15.
29. Boley, 27.
30. HQ Air Force/Installation and Logistics Briefing, "Bare-Base Systems Status Update—Harvest Falcon and Harvest Eagle," Slide 20 [Online] Available: <http://140.185.52.73/ilx/ilxx/wrm/index.html>, May 03, slide 20.

31. GAO, "Military Prepositioning: Army and Air Force Programs Need to Be Reassessed," GAO/NSIAD-99-6 Nov 98, 41.
32. *Ibid.*
33. *Ibid.*
34. HQ AF/IL Bare-Base Systems Update, slide 34.
35. HQ AF/IL Bare-Base Systems Update, slide 33.
36. The WRM facility at Al Udeid, Qatar, was used for lodging during the initial stages of Enduring Freedom while the Harvest Falcon kits were being readied for use.
37. During the buildup for Iraqi Freedom, planners were unwilling to discuss the use of local hotels in Doha, Qatar, to allow for a faster force closure at Al Udeid AB. Instead, a 4-month delay was allowed for the contracting of tents, latrines, and other infrastructure additions to Al Udeid.
38. Boley, 42.
39. HQ AF/IL Bare-Base Systems Update, slide 14.
40. Boley, 54.

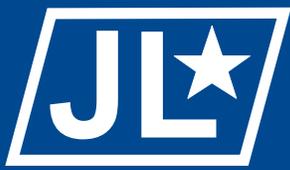
Lieutenant Colonel Diana is chief, Conventional Munitions Policy, Headquarters Air Force Installations and Logistics. At the time of writing of this article, he was a student at the Air War College. **JL***

(Creative Approaches to Improving Segments of the Defense Transportation System continued from page 33)

- RDD of 444 indicates handling service for customers collocated with the storage activity or for locally negotiated arrangements. An RDD of 555 indicates exception to mass requisition cancellation, expedited handling required. An RDD equal to 777 indicates expedited handling required for reasons other.
21. DoDR 4140.1-R.
 22. Author's telephone interview with TACC/XOGE, 17 Feb 04.
 23. Author's e-mail interview with HQ USTRANSCOM, J3-RR, 18 Feb 04.
 24. Capt Leigh Method, letter report, Time-Definite Delivery Estimates for DoD Air Shipments, AFLMA Project Number LT200011000, Oct 00, 2.
 25. Author's telephone interview with HQ USTRANSCOM/TJ4, 28 Jan 04.
 26. Area A. To locations in the vicinity of Alaska (Elmendorf AFB), Hawaii (Hickam AFB), North Atlantic (Thule AB, Greenland, and NAVSTA Keflavik, Iceland), and the Caribbean (NAS Guantanamo Bay, Cuba, and NAVSTA Roosevelt Roads, and Puerto Rico). Area B. To locations in the vicinity of United Kingdom (RAF Mildenhall, England) and Northern Europe (Ramstein AB, Germany and Lajes AB, Portugal, Azores). Area C. To locations in the vicinity of Japan (Yokota AB and Kadena AB, Okinawa), Korea (Osan AB), Guam (Andersen AFB), Western Mediterranean (Spain (NAVSTA Rota), and Italy (Aviano AB, NAS Sigonella, Olbia, and Naples). Area D. Hard lift areas—all other destinations not listed as determined by USTRANSCOM; for example, low-use Alaska (Eielson AFB, Adak, Eareckson AS, and Galena), low-use Japan (Itazuke, MCAS Iwakuni, Misawa AB), low-use Korea (Kunsan AB and Kimhae), Indian Ocean (Diego Garcia), New Zealand (Christchurch), Singapore (Paya Lebar), Greece (Souda Bay), Turkey (Incirlik AB), Southwest Asia (Saudi Arabia (Dharan and Riyadh), Kuwait, Bahrain, Oman (Fujairah), and Israel (Tel Aviv).

- The time standards for port of debarkation for Area D are lower than the other areas. EXP. Commercial door-to-door air service is only for OCONUS shipments that are transportation priority 1 or 2. It is an alternative service to be used when established AMC channel service is not adequate. The intransit-to-theater standard for commercial door-to-door air service (that is, segment H) encompasses the total time for contract transportation rather than individual nodes.
27. Table AP8.T1 from Appendix 8 of DODR 4140.1-R.
 28. Appendix 8 of DODR 4140.1-R
 29. US Government DoD Airlift Rates, Passenger and Cargo Channel Rates Effective 1 Oct 03 through 30 Sep 04 [Online] Available: <http://public.amc.af.mil/fm/dodrates.doc>(<http://public.amc.af.mil/fm/fy04dod.pdf>).
 30. Roger O. Crocket, "Let the Buyer Compare," *Business Week*, 3 Sep 01, Issue 3747.
 31. GAO Report 04-305R, Defense Logistics: Preliminary Observations on the Effectiveness of Logistics Activities during Operation Iraqi Freedom, 18 Dec 03, 2.
 32. GAO Report 04-305R, Preliminary GAO Observations on Effectiveness of Logistics Activities During Operation Iraqi Freedom, 18 Dec 03, Enc 1, 22.

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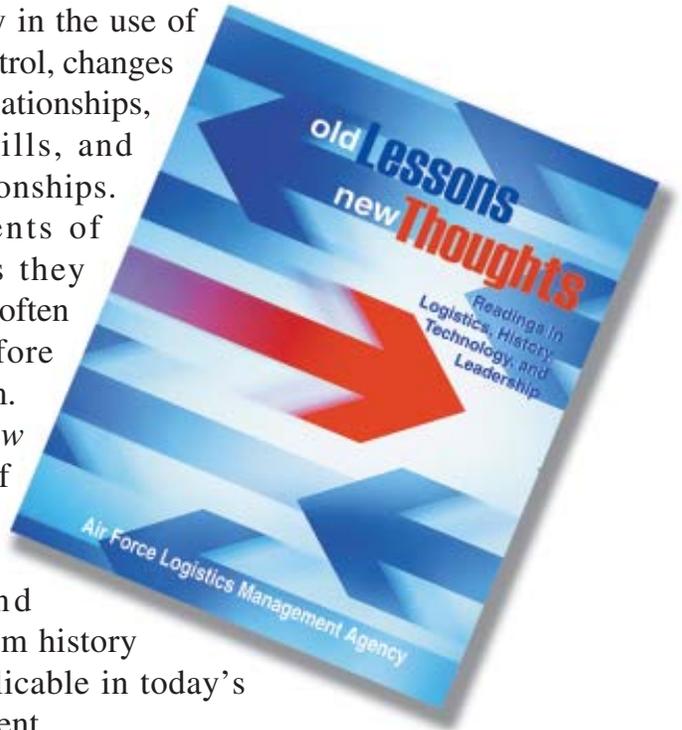


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