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CUSTOMER DISCIPLINE

PARAMOUNT FOR ENSURING EFFICIENT AIRLIFT OPERATIONS

by

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This paper explains, in detail, why discipline within the strategic airlift system is paramount for ensuring efficiency. The specific focus of the paper is customer discipline and its impact on efficiency. In supporting the thesis, the history of the airlift system is examined and the trial and error evolution to today?s tactics, techniques, and procedures are explored. The next requirement in building the case for efficiency is a firm understanding of the Joint Operations Planning and Execution System (JOPES) and the responsibilities of the customer, from providing movement data to offloading passengers and cargo at the aerial port of debarkation (APOD) culminating the deployment. Case studies examining the successes and failures of the strategic airlift system in JUST CAUSE and DESERT SHIELD/STORM provide the vehicle to fully examine and exploit the role of customer discipline. The corrective actions and system improvements taken since 1991 are fully explored, further supporting the maturity of the airlift and planning systems. Customer discipline is paramount to efficiency in airlift operations and after action reports are filled with supporting facts. This paper examines where we have been and our current efforts in maximizing efficiency in airlift operations.

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Preface

The decision to research the role of customer discipline and its impact on efficient airlift operations was born out of my being held hostage, at times, by the system. As I struggled to put together a coherent explanation in support of my thesis, I found that many of my doubts and frustrations with the airlift system were due to my own failures and lack of knowledge regarding the system. Having spent the last twenty years jumping from or stepping off the ramp of United States Air Force aircraft, literally all over the world, I have given myself the education I should have received as a junior officer in the United States Army.

Several key professionals provided assistance and the often needed "academic nudge" to keep me moving and on the correct azimuth. Colonel John Brower provided the guidance, subject matter expertise, and professional focus necessary to keep this Ranger moving to the objective. Charlotte and Janet, two great ladies, who serve the Air War College daily, fought the battle of the electrons and met the standard in formatting my work. To all I am truly appreciative.

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Abstract

This paper explains, in detail, why discipline within the strategic airlift system is paramount for ensuring efficiency. The specific focus of the paper is customer discipline and its impact on efficiency. In supporting the thesis, the history of the airlift system is examined and the trial and error evolution to today's tactics, techniques, and procedures are explored. The next requirement in building the case for efficiency is a firm understanding of the Joint Operations Planning and Execution System (JOPES) and the responsibilities of the customer, from providing movement data to offloading passengers and cargo at the aerial port of debarkation (APOD) culminating the deployment. Case studies examining the successes and failures of the strategic airlift system in JUST CAUSE and DESERT SHIELD/STORM provide the vehicle to fully examine and exploit the role of customer discipline. The corrective actions and system improvements taken since 1991 are fully explored, further supporting the maturity of the airlift and planning systems. Customer discipline is paramount to efficiency in airlift operations and after action reports are filled with supporting facts. This paper examines where we have been and our current efforts in maximizing efficiency in airlift operations.

Chapter 1

Introduction

> *Then in coordination with the various services, the planners would make up long lists of the forces that had to be deployed and then notify the U.S. Transportation Command, which was responsible for carrying out the airlift and sealift. Transportation Command in turn would rush its giant cargo planes, which were in short supply, to the appropriate bases to pick up the forces. That's when human nature would take over. Some high ranking officer on the ground would decide that, just to be on the safe side, his unit really needed to bring more people and equipment than originally planned. So airplanes would take off carrying loads they weren't scheduled to carry.*[1]
>
> -General H. Norman Schwarzkopf
> CINCCENT, August 1990

Several weeks prior to General Schwarzkopf's personal struggle with the deployment of forces to Southwest Asia to deter the Iraqi invasion of Kuwait, President Bush defined the post-Cold War National Security Strategy. This strategy outlined the requirement for rapidly deployable, ready forces from the United States, capable of responding to a variety of contingencies worldwide. Conditional requirements to ensure success of this strategy included our ability to execute deployment plans in a timely manner, gain access to local ports and airfields, and possess adequate airlift and sealift to accomplish the mission. President Bush outlined this strategy as the Iraqi forces invaded Kuwait.[2] As the National Security Strategy of the post-Cold War was put to the supreme test, the conditions for success (namely, feasible plans, timely execution, and adequate airlift) were initially absent. The early problems of the DESERT SHIELD deployment

sorted themselves out or were worked around. By the sixth week of the deployment the total ton-miles flown surpassed that of the 65-week long Berlin Airlift.[3] The sheer size, complexity, duration, and daunting success of the DESERT SHIELD deployment served as a testament to the people that made it work. In the midst of such a success, however, our ability to execute the President's National Security Strategy in terms of timely, executable plans supported by adequate airlift, appeared suspect.

President Clinton's 1997 National Security Strategy states that the deterrence of aggression and coercion on a daily basis is another crucial aspect of the military's shaping role. Our ability to shape and deter continues to be underwritten by our ability to rapidly deploy our CONUS-based forces worldwide.[4] Strategic airlift is the key to rapid, flexible global mobility. The demand for this capability has accelerated since 1989 as we have fully embraced the concept of power projection. The operating tempo (OPTEMPO) of strategic airlift forces has been at a backbreaking pace since Operation Just Cause in December 1989, and little relief is in sight for these crucial national assets.[5] The National Military Strategy that complements the National Security Strategy further reinforces the importance of rapid, flexible global mobility through the defining of four strategic concepts that govern the use of our forces. The strategic concepts of strategic agility, overseas presence, power projection, and decisive force are only attainable when combined with rapid, flexible global mobility.[6]

Since the end of the Cold War the US military establishment has been busier than ever. The "shape and deter" role that has been given them, by all current indications, will remain constant into the foreseeable future. If our experienced strategic airlift system maintains efficiency as the cornerstone of its rapid, flexible global mobility, why are the

initial days of a deployment so tenuous? In the early days of DESERT SHIELD, General Schwarzkopf believed human nature to be the culprit. Even today after almost a decade of back-to-back deployments, getting the air movement piece of the puzzle right confounds most organizations. The missing catalyst, the common thread through the entire process, must be discipline. *Doing what's right even when no one is looking* . . . is discipline's definition at the muddy-boot level. Discipline that starts at the muddy-boot level and permeates the entire system, coupled with faith in the same, will weather the frailties of human nature, the unknown, and a system that is by all appearances non-user friendly.

This paper will explain why discipline within the strategic airlift system, especially customer discipline, is paramount in ensuring efficiency. A thorough understanding of the airlift system from a historical perspective is essential to understanding the role discipline played in the formative years of the system. In addition to the historical background, the supporting elements of this research will focus on customer responsibilities for entry into the Joint Operations Planning and Execution System (JOPES). This customer focus will culminate with the transfer of cargo and passengers at the aerial port of debarkation (APOD) to theater control. Operations Just Cause and Desert Shield/Storm will be examined from the standpoint that planning, available time, and nature of the contingency impacts discipline. The following questions will assist in supporting the research statement:

1. In customer units, to what level should planning responsibilities for time-phased force deployment data (TPFDD) be extended?

2. What are the customer responsibilities in the TPFDD validation process and at what level does the supervisory responsibility rest?

3. Were planning problems evident in the airlift operation supporting Operation Just Cause?

4. Were the early air movement problems avoidable in the absence of a validated plan?

5. Have we taken corrective action at the customer level to incorporate the lessons learned from the DESERT STORM airlift?

Notes

[1] Schwarzkopf, H. Norman. *It Doesn't Take a Hero.* (New York: Bantam Books, 1992), 360.

[2] Bassert, Phillip A., Jr. *Strategic Airlift Inefficiencies from Desert Storm to Vigilant Warrior. (Fort Leavenworth, KS: CGSC, 1995),1.*

[3] Ibid., 3.

[4] White House. *A National Security Strategy for a New Century.* (Washington, DC: Superintendent of Documents, 1997), 8.

[5] Bassert, *Strategic Airlift Inefficiencies from Desert Storm to Vigilant Warrior, 2.*

[6] Office of the Chairman of the Joint Chiefs of Staff. *National Military Strategy.* (Washington, DC: Superintendent of Documents, 1997), 122.

Chapter 2

Development of Air Mobility

The airplane as a means to transport cargo and passengers became a military necessity during World War II with the Pacific Theater providing a vast, austere proving ground. The priority in the war effort was to Europe and the early days of 1942 in the Pacific found the Pacific allied air transport organization in dire straits. The Directorate of Air Transport (DAT) found itself with a menagerie of aircraft from the Allied Air Forces (AAF) and with an austere headquarters to manage air transport. Through trial and error the DAT established an airlift system within the theater that supported the ground and tactical air forces to a degree never required in the European theater. In most operations, the troop carriers served as logistics support aircraft and provided the supply and resupply lifeline to the supported forces. The nature of the combat operations, corresponding geography, lack of infrastructure, and sheer scope of the theater placed huge demands on the DAT.[1] Air transport operations in the Pacific had strategic implications and the resulting lessons learned remain relevant to airlifters and provides a framework for current organizational practices.

> *In the rush of establishing the early organization and meeting immediate combat needs, the safest and most efficient loading of aircraft was sometimes ignored. The airplanes were simply loaded and flown, both by the seat of the pants. The few loading charts available were ignored*

and most planes took off overloaded. By April 1942 some semblance of control was taking over.[2]

Director, Air Evaluation Board, Southwest Pacific Area, 1946

Necessity and haste initially pushed the DAT system along with little regard for the efficient employment of this extremely limited resource. The pre-conditions for efficiency demanded by today's airlifters are a carefully and tightly managed system of disciplined managers, providers, and customers. Lacking a common framework, the DAT instituted measures to ensure the efficient loading and unloading of aircraft as well as a command and control system for scheduling and dispatch.[3] Experience, coupled with the posturing of forces and materiel, provided the DAT with the environment and conditions necessary to develop efficiency and discipline measures. These proven loading and command and control measures were essential in building a flexible, responsive air transport system in the Pacific.

The command and control system was built around specially trained station control teams. These teams served a variety of purposes in putting order into an over-burdened and inefficient air transport system. DAT standardized procedures for manifesting passengers and freight plus the loading and unloading of cargo. Control team members served as subject matter experts on all aspects of air transport, its cargo and fuel capacities, and the load characteristics of all available transport. Additionally, the control officer with each team would evaluate the requests for transport, assign priorities, plan the load, and route the planes for maximum efficiency. They also provided the communication link to the airfield tower enabling all concerned parties to alert as necessary. This significantly enhanced efficiency in regards to the transfer and preparation for onward movement of passengers, cargo, and transport.[4] With few

exceptions, the station control team capability is exercised today by the Tanker Airlift Control Element (TALCE). Today, as during World War II, the station control teams or TALCE is generally organized based on the volume and type of air traffic and cargo they will be expected to manage at their respective location.

As the operational tempo increased in the Pacific theater, the austere manning of the DAT and encompassing support role eliminated it as the agency to manage theater air transport priorities. General Headquarters, Southwest Pacific Area (GHQ SWPA) established a theater priorities board for all shipments (not just air) under the direction of a cargo regulating officer (CRO). As the CRO became the focal point for all movement, by all means of conveyance, within the theater, the system procedures and cargo movement priority symbols became unified across the theater. To standardize the system authorized by GHQ SWPA and directed by the CRO, the CRO published a comprehensive set of regulations in November 1943. These regulations provided for a strong, centralized control of all troop and cargo movement within the theater regardless of conveyance means.[5]

Concurrently, the theater commander empowered the CRO and DAT with responsibilities out of synch with the current doctrine of the day. The CRO was directed to determine priorities of inter-theater movement that either originated or terminated in the Pacific Theater. The DAT was given an operating ceiling on the percentage of air transport that could be diverted to tactical use at any one time.[6] The CRO, in execution of his duties, was in effect managing air transport on a global basis. The DAT was faced with a doctrinal dilemma; current doctrine stated that all aircraft assigned to the GHQ were tactical while the CRO was executing strategic management for the same assets.[7]

This issue remains valid today as problems still arise with command and control of inter- and intra-theater air transport. In both instances the theater commander was affecting procedures that maximized the efficiency of tactical and channel lift in the theater air transport system. The system in place in SWPA by late 1943 has amazing resemblance to our system today. The scope of duties and responsibilities assigned to the CRO while operating at theater level are similar to those exercised by USTRANSCOM today. The recommendation in the Department of Defense Reorganization Act of 1986 (Goldwater-Nichols) supported a unified transportation command initiative . . . *a single unified command to integrate global air, land, and sea transportation.*[8] The CRO left the tasking, management, and daily operations to the DAT just as USTRANSCOM relies on the Air Mobility Command's Tanker Airlift Control Center (TACC) and the TALCE for much the same today.

The humble beginnings of the air transport system that served the Pacific in World War II continues to influence the most capable defense transportation system (DTS) today. The evolution of the strategic air mobility system has been continual from the days of the Air Corps Ferrying Command to the Air Mobility Command today. Organization names, roles and missions, and aircraft capability have and will continue to evolve. History is replete with the amazing airlift feats . . .The HUMP, BERLIN AIRLIFT, BLUE LIGHT, NICKEL GRASS, URGENT FURY, DESERT SHIELD/STORM, and countless humanitarian missions. As we face the uncertainties the future holds with "the new world order" and ushering in the new millennium in the midst of a technology explosion, the lessons of the past continue to ring true. The management

procedures and organizational techniques proven under combat conditions in the wide-ranging environs of the World War II Pacific theater live in our current airlift system.

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Notes

[1] Miller, Charles E. *Airlift Doctrine.* (Maxwell Air Force Base, AL: Air University Press, 1988), 122.
[2] Ibid., 123.
[3] Ibid.
[4] Ibid.
[5] Ibid., 124.
[6] Ibid.
[7] Military Airlift Command Office of History. *Anything, Anywhere, Anytime: An Illustrated History of the Military Airlift Command.* (Scott Air Force Base, IL: Headquarters, Military Airlift Command, 1996), 18.
[8] Ibid., 189.

Chapter 3

The Planning System

World War II not only ushered in the birth of a global airlift system, it also established that long held command arrangements were no longer suitable in multi-theater, multi-dimensional warfare. Early in World War II, General George C. Marshall, Army Chief of Staff, sensed the complexities found in each theater. He further realized that the current command arrangement of mutual cooperation between the Services would be difficult. Necessity proved to be the driving force for the unified command arrangement. The National Security Act of 1947 mandated the Joint Chiefs of Staff to *"establish unified commands in strategic areas when such commands are in the interest of national security."* The Act also directed the Joint Chiefs "*to provide for the effective strategic direction of the Armed Forces and for their operation under unified control and for their integration into an efficient team of land, naval, and air forces."*[1] As with any dynamic organization, change is inevitable over time. The 1986 Department of Defense Reorganization Act (Goldwater-Nichols) mandated major changes, many in areas to enhance organizational efficiency.

"The Department of Defense has developed various processes and systems to handle the complex problems of setting strategic direction, determining national military policy, requesting resources to execute that policy, and translating the funded military

capability into plans for military options." In elaborating on planning, it further states *"the purpose of joint operation planning is to use the military element of national power effectively . . .a commander's system to determine the best method of accomplishing assigned tasks*[2]*."* A consistent thread, throughout the National Defense Act and the Goldwater-Nichols Act that empowers and mandates the responsibilities of the Joint Chiefs of Staff, is the continued reference to the effective and efficient use of the Armed Forces. This chapter will focus on the Joint Operations Planning and Execution System (JOPES) and specifically the junctures in the planning process that requires customer influence to ensure compliance with accepted movement procedures.

JOPES is the result of a marriage between the 1970 version of the Joint Operations Planning System (JOPS) and the 1985 version of the Joint Deployment System (JDS). JOPS served as the standardized automated system to support the development and documentation of plans during the deliberate planning process. The shortfall with JOPS was its inability to rapidly retrieve data from the system and monitor execution. The JDS was developed to crosswalk from JOPS to the crisis environment and retrieve data files and TPFDD from existing plans for modification to support crisis action planning (CAP) and operations order (OPORD) development. The JDS also provided a capability to monitor OPORD execution, calculate force sustainment requirements, and simulate strategic movement, enabling feasibility testing. The JDS, while an improvement over JOPS, still required the cumbersome movement between two systems. In late 1989, JOPES became a reality further increasing the flexibility, user confidence, and responsiveness of the system. JOPES provided the long needed interface between long-term planning and execution planning.[3]

JOPES, through an interface with the Global Command and Control System (GCCS), provides the linkage to all participants in the Joint Planning and Execution Community (JPEC). The JPEC, the commands and agencies involved in the training, preparation, movement, employment, support, and sustainment of forces in a theater of operations, is dependent on JOPES to communicate using GCCS as the medium. Using feedback from the JPEC, recent modernization efforts have centered on GCCS and JOPES and have significantly increased the accessibility and user satisfaction in the system. Major upgrades (C4I for the Warrior) have been programmed for both elements to fully exploit this vast capability; however, budget constraints will likely delay or eliminate many of the initiatives.[4] With additional improvements to the systems, including aids to planning, marked increases in planning effectiveness and efficiency will be realized. The systems will continue to evolve to increase efficiency but one fact will remain constant; any system is only as good as the data base and disciplined input by all members of the JPEC must be unconditional.

Explaining the full capability of JOPES is well beyond the scope of this paper. The preceding background information on the basics of the system is presented to allow for a logical understanding of the customer's role in the system. During the plan development phase, whether CAP or deliberate, customers will routinely work with their Service headquarters. This phase is initiated upon approval of the unified commander's concept of operations (CONOPS). The following steps comprise the plan development phase:

Step 1. Force Planning-Consists of force requirements determination, force list development and refinement, and force shortfall identification and resolution. Customers

below Service major command level must ensure current organization and equipment is accurately depicted in the type unit characteristics file (TUCHA).[5] The TUCHA provides "ground truth" to the JPEC with regard to descriptions and characteristics of the equipment and cargo required for that unit to conduct its combat mission.

Step 2. Support Planning-Identify the quantity of supplies, equipment, and replacement personnel required to sustain forces identified in Step 1 and phase their movement into the theater to support the CONOPS. Customers ensure that additional, accompanying supplies are accurately posted to the TUCHA.[6]

Step 3. Chemical/Nuclear Planning-Consists primarily of receipt, pre-positioning, issue and accountability of nuclear, biological, and chemical (NBC) defensive equipment and procedures and responsibilities for furnishing NBC defensive support to Allies. Customers ensure that bulk NBC defensive supplies are included on TUCHA as additional accompanying supplies.[7]

Step 4. Transportation Planning-Produces a feasible strategic transportation plan in support of the CINC's OPLAN. It is an iterative process. Customers, once sourced, must ensure that the TUCHA truly reflects ground truth in regards to their units.[8]

Step 5. Shortfall Identification-Occurs throughout the plan development phase and the focus is on identifying and resolving shortfalls. A transportation deployment simulation is conducted on the working TPFDD. Customers must resolve identified shortfalls, if possible. Adjustments must be restricted to those shortfalls that will not impact the CINC's CONOPS.[9]

Step 6–8. Transportation Feasibility Analysis, TPFDD refinement, and Documentation are steps that are generally exclusive to the supported commander and component

commanders. Shortfall resolution is normally directive to the customer. These steps ensure that the transportation plan is feasible and adjusts the plan, as necessary, based on identified and resolved shortfalls.

The resulting plan (OPORD or OPLAN) that is documented at Step 8 will have a computer listing generated from the TPFDD. This computer-generated list is known as the time phased force and deployment list (TPFDL). The TPFDL provides a schedule of the movement means and times of every unit sourced from unit origin to unit destination.[10] The simulations that were applied to the TPFDD during planning factored in availability of transportation assets, port capability, weather, maintenance, level of activity at departure and arrival ports, and sustainment requirements. All participants predicate the success of this complex and encompassing TPFDL on disciplined compliance. Lieutenant General Gus Pagonis, US Army, the logistics leader of the United States Central Command during Desert Shield/Storm, provided this interesting perspective:

> *"In and of itself, the TPFDL is an interesting document. But I see it as symbolic of bigger concerns. Any huge operation needs the equivalent of the TPFDL-and also the means to circumvent it. Situations change constantly, and we must have the capability to adjust accordingly . . . And finally, the organization needs in some cases to be able to stop circumventions of its TPFDL."* [11]

The planning system to support global mobility is more flexible and timely today than ever before in its history. Hard-learned lessons have brought about changes in procedures as well as technological improvements in data processing and communications. At each step in the system, the efficient closure of units, equipment, and sustainment is the goal. Our transportation systems must be able to deliver our military forces as directed by the National Command Authority (NCA). The JPEC today is more

adept in the application of JOPES but problems continue to exist. After-action reports are replete with the same findings; customers are not trained in the application of JOPES. This singular shortcoming impacts the customer-provider communications loop and system confidence, efficiency, and discipline are built on this loop.

Notes

[1] National Defense University. *The Staff Officer's Guide.* (Washington, DC: Superindent of Documents, 1993), 2–21.

[22]Ibid., 5–2.

[3] Ibid., 5, 25–27.

[4] Ibid., 5, 29–33.

[5] Ibid., 6–47.

[6] Ibid., 6–55.

[7] Ibid., 6–61.

[8] Ibid., 6–62.

[9] Ibid., 6–66.

[10] Ibid., 6–73.

[11] Pagonis, William G., *Moving Mountains: Lessons in Leadership and Logistics from the Gulf War.* (Boston, MA: Harvard Business School Press, 1992), 125.

Chapter 4

Analysis of Planning, Time, and Nature of the Contingency Operations Just Cause and Desert Shield/Storm

Operation Just Cause

The invasion of Panama during the early morning hours of 20 December 1989, marked the culmination of planning and preparation initiated in February 1988. From all aspects the operation was an overwhelming success. From a strategic airlift standpoint, the operation was made to order. Military Airlift Command (MAC), with contract assistance, flew 775 missions. These missions moved 39,994 passengers and 20,675 tons of cargo to Panama. MAC's role was greater than any other USAF organization and established the record for the largest night airborne operation in the history of airpower.[1]

The operation was well planned. Deliberate planning had been initiated in February 1988, and a solid OPLAN that had undergone numerous revisions was in place.[2] The enemy, General Manuel Noriega's Panamanian Defense Force as well as his Dignity Battalions, were known and tracked by intelligence assets. U.S. forces were still stationed in Panama with U.S. Army units on both sides of the isthmus and USAF and U.S. Naval forces were stationed near Panama City. Troop listed units, not in the assault force, had been incrementally forward deployed with in-place forces resulting in theater troop stengths at or exceeding reinforced levels.

Adequate time to plan and prepare for execution was available. The units at their respective homestations conducted deliberate planning. Heavy forces and additional logistics support were positioned in theater prior to D-Day. Due to the complex nature of the operation, the CINC directed a validation of all task force missions through rehearsals. Unilateral rehearsals were conducted at homestation locations with in-theater forces, in many cases, rehearsing on their actual objectives. The responsible task force rehearsed every target during the Sand Flea exercises prior to execution.[3]

The nature of this operation mandated aggressive operations security, however the media coverage and speculation left little doubt that operations were imminent. The soldiers, sailors, airmen, and marines set to participate in JUST CAUSE were not faced with a set of "unknowns;" their only question regarded when they would be employed. Success hinged on rapid deployment, overwhelming combat power, and the ability to support the combat forces from the start. The existing in-theater infrastructure had been evaluated and adapted to support the operation and the needs of the forces. Everything was in place and ready and the successful execution attests to the planning and preparation for combat operations.

The short duration and sparse enemy contact did not provide a true test of the logistics and transportation systems. The strategic airlift system was pressed at times but throughput into Howard AFB was continual and Tocumen International was open under TALCE control late on the morning of 20 December. The single significant failure in customer discipline during JUST CAUSE came during redeployment of forces to homestation. XVIII Airborne Corps, in its role as Joint Task Force-South (JTF-S), did not deploy their JOPES capability thus slowing the redeployment planning and execution

process.[4] As an indicator, this reluctance to use JOPES would be equally as painful eight months later while trying to deploy to the Gulf.

Operation Desert Shield/Storm

Desert Shield/Storm provided the nation the format to showcase the best equipped, best trained, and best led military force ever assembled. USTRANSCOM was given the mammoth task to deploy this force to the Persian Gulf to stop Saddam Hussein. General Schwarzkopf, CINCCENT, termed the deployment task "daunting" and the execution "spectacular." To put the performance in perspective, USTRANSCOM deployed by air and sea to the Persian Gulf area, the rough equivalent of Atlanta, Georgia-all its people, their clothing, food, cars, and other belongings-halfway around the world in seven months.[5] The airlift portions of the deployment alone set records of epic proportions. At the height of the initial surge, more than 124 strategic airlifters were landing in the desert each day-one airplane every 11 minutes.[6] Although the deployment of forces was successful in terms of throughput, efficiency was taken prisoner several times. The Rand Corporation made the following assessment of the operational efficiency:

> *One is left with an intangible but real side effect of the successful Gulf airlift . . . In any future contingency, we should be better prepared to plan and execute an airlift operation of this scale . . .They will carry these experiences with them and undoubtedly will institute reforms and institutionalize successes learned from the Gulf airlift. But that is dependent upon ensuring that these skills are not lost.*[7]

The inefficiencies in the system, largely customer generated, will be reviewed from planning through onward movement from the aerial port of debarkation (APOD).

The events of 2 August 1990, left Kuwait under Iraqi control and the United States initiating a major mobilization effort. This effort was not based on a mature OPLAN; in fact OPLAN 1002-90 had just completed a test in simulated war games in July. The wargaming simulation allowed for 30 days warning time and 20 days deployment time before the Iraqi attack plus an additional 10 days before the Iraqis would attack the Saudi oil fields. The simulation found serious shortages in strategic lift (sea and air). The current situation, void of strategic warning, required a "cold start" which began with the initial deployments on 7 August, without a formal, written Joint Chiefs of Staff (JCS) warning or alert order. Timing, compared to the OPLAN, already had the deployment two to three weeks behind schedule. The unrefined TPFDD began troubling all concerned immediately. For the sake of brevity, we'll simply say it was not functional.[8]

As the deployment began without a functional TPFDD, deploying units were faced with a barren area of responsibility (AOR) and little idea with regard to the duration of the crisis. Lacking this information, the unit's deployment requirements grew in weight and volume.[9] These units, in many cases, attempted to update their TPFDD database to reflect their increases. Updating a suspect database by poorly trained operators only served to compound the problem with the TPFDD. Unit decisions not to "go light" had the following impact: "estimated airlift requirements for the first seven deploy-units increased by sixty per cent between 11 and 13 August." The ripple effect this increase had on closure of the first seven units prompted USTRANSCOM to request an updated movement priority for the first-deploy units. USCENTCOM responded with a nine-unit listing, however only the 82d Airborne and the First Tactical Fighter Wing were

prioritized, leaving the remainder to USTRANSCOM. To further compound these initial problems, the JCS deployment order presented USCENTCOM a major problem by failing to allocate lift to them. USCINCTRANS was forced to allocate resources on a daily basis until 13 August. Daily requirements for airlift far exceeded USTRANSCOM's capability and did so for the first sixty days of the deployment.[10]

The first days of the deployment also gave JOPES its first true workout. The system would gridlock at times and frustrations were compounded by the existence of several software problems, which proved the system to be less than "user friendly." Senior officers and operators throughout the JPEC circumvented the system in the initial days by calling and directly tasking units. The system problems forced freezing of the TPFDD for time periods and customers and providers found themselves reverting to "stubby pencil" planning. The following vignette by General Johnson, USCINCTRANS, gives magnitude to the impact of a poorly developed TPFDD and a developing JOPES:

> *The initial units to move, the 1st Tactical Fighter Wing and the 82d Airborne, were not JOPES literate, had never used it real-world, didn't want to use it-and didn't . . . No matter how hard we tried to complete their move, the 82d would add more items. I could not criticize them because they were going into an uncertain situation and wanted more support than was in their package. I facetiously said we would know we had completed the Ready Brigade move when the 'Fayetteville Chamber of Commerce showed up to load!' Because of this lack of faith in JOPES, a decision was made to simply flow airlift into Langley, Bragg, and a few other places at the rate of one airlifter per hour.*[11]

Air Force units just down the road from Bragg at Shaw Air Force Base were having the following problems:

> *Beginning August 8, 1990, while F-16s were howling aloft and F-16 support people were scrambling to load up huge C-5 Galaxy cargo planes, the airlifts were arriving faster than the "customers"-the F-16 outfit-could load them.*[12]

The premier rapidly deployable units of the Army and Air Force were immersed in problems that forced draconian measures until order was slowly recovered. USCENTCOM was validating requirements 48 to 72 hours in advance by 22 August and JOPES came back on line 24 August. The TPFDD was accurate enough to be used as a basis for planning by 28 August and airlift mission numbers could be matched to unit line numbers (ULN) in the TPFDD on 10 September.[13]

As the TPFDD became functional and JOPES gained in reliability and user confidence, other problems began to manifest themselves in the strategic airlift system, a system struggling for efficiency. General Johnson, CINCTRANS, made the following observation, "*Initially customer discipline was very shaky. Everybody wanted to move forward very, very quickly.*"[14] However, this new set of problems indicates that customer discipline would continue to be a problem for the duration of the operation. The following customer generated problems proved to have strategic implications: port backlogs, abuse of airlift priority codes, and 463L pallet availability.

A backlog of cargo, primarily at Dhahran, Saudi Arabia, started to form early in the deployment. This cargo was marked "DESERT SHIELD" with no other information due to operational security restrictions. This backlog from the early days of the deployment continued to grow as unmarked and poorly marked cargo continued to arrive. The backlog exceeded 1,000 pallets for the majority of DESERT SHIELD/STORM, easily dwarfing backlogs at CONUS aerial ports.[15] This problem, that can be "fixed" in most cases with a placard and standard information/markings, not only confounded the aerial ports but the seaports as well. Lieutenant General Gus Pagonis, the senior logistician in theater, made the following observation:

> *In-theater processing of containers also presented a major headache, for a number of reasons. One big factor was multiple consignees for a single container. This resulted from the eagerness of our stateside, European, and Korean shippers to fill every container to the brim, which would ensure that every ship was filled to capacity. Given our limited shipping capacity, this made good sense-at least until those ships disgorged their cargo in Saudi Arabia. Then it turned into a classic case of suboptimization. We had numerous mixed loads, and even a large number of unidentified containers. The documentation on the ship's manifest didn't always jibe with what was in the containers. We had to open some 28,000 of the 41,000 arriving containers right there on the docks to find out what was in them. We hauled a lot of containers 2,000 miles out into the desert only to find out that 10 percent of their contents were intended for the front line troops, whereas 90 percent belonged to units back near the port.*[16]

The cargo backlogs served as a catalyst to usher in more problems for the JPEC. Born from the backlog were abuse of the movement priority codes, increased levels of materiel handling equipment (MHE) maintenance downtime, and a world-wide shortage of 463L pallets.

With cargo backlogs building at CONUS aerial ports, USTRANSCOM was forced to exercise its only option. As the ports neared the "maxed out" level, the "flow" had to be interrupted to move the cargo to theater and clear the jammed ports. In-theater ports had nowhere to send the cargo so holding areas added to the congestion of the aerial ports. Two factors contributed to the loss of visibility on the majority of the backlogged cargo. JOPES software did not have the capability to track partially deployed unit type codes (UTCs). The partially deployed UTCs were quite numerous based on the number of units that deployed heavier than reflected in their TPFDD or held obsolete TPFDD. Upon the deployment of the personnel in a given UTC, the ability to manually monitor and push this additional cargo diminished as JOPES was not capable of automatic tracking and visibility was lost. This planning and system problem resulted in cargo

sitting at the ports with no movement priority and no way to track it in the system. The other contributing factor related to sustainment cargo. USCINCCENT's decision to deploy "shooters" ahead of logistics support and sustainment cargo left the sustainment cargo, previously programmed for movement, sitting in aerial ports until USCINCCENT was comfortable in allocating aircraft to flow the cargo into theater. To further exasperate this problem, once the sustainment failed to arrive as programmed and there was no visibility on it while backlogged, the requestor reordered the sustainment cargo. This reordering was usually done using a higher priority movement code further aggravating the system. In September, 52 percent of the sustainment cargo awaiting shipment had been coded top priority for movement. Cargo backlogs at both ends of the line would continue to hamper operations at aerial ports throughout DESERT STORM/SHIELD.[17]

As mentioned above, another reason for the increase in the volume of air cargo was attributed to the higher priority designators used by virtually all units in their requisition process. A Government Accounting Office (GAO) report found that because units were preparing to conduct their wartime missions, the use of the high priority code was widespread. Department of Defense (DOD) directives designated air transportation as the mode for high priority cargo. The directives also placed the responsibility for determination of the urgency of need with the unit and with this came the capability to establish a higher than required priority, allowing system abuse. The unit commander had checks on use of priority with the installation materiel manager and transportation manager but abuses occurred. The discipline required to assign the appropriate priority code, faced with the uncertainties of DESERT STORM and compounded by an airlift system struggling to gain efficiency, placed yet another burden on the strategic airlift

system. Continued abuse of the priority system coupled with a serious shortcoming in in-transit visibility and a huge volume of air cargo necessitated immediate corrective action.[18]

October 1990 found USTRANSCOM continuing to labor with backlogs at each of the three CONUS APOEs supporting the channels established to move sustainment cargo to the Gulf. With the initial backlogs beginning to clear, backlogs of channel cargo were forming. The growing situation at the CONUS aerial ports was unique. The majority of the huge volume of air cargo bound for the Gulf, as sustainment cargo was coded high priority.[19] A 1991 USAF white paper on transportation revealed that it was not unusual for aerial port backlogs to be 80 percent priority cargo. In reality this meant that when everything is priority, nothing is priority. This situation began to affect the readiness rates of deployed combat systems as the movement of critical non-mission capable supply (NMCS) repair parts floundered. This situation, due in large part to customer discipline failures, was preventing the system from supporting its customers. The defining event with regard to the channel backlog came in early October 1990, when the U.S. Army Aviation Support Command informed USTRANSCOM that the shipping times for highest priority NMCS repair parts was not meeting established timelines and was not acceptable. This moved USCINCTRANS to propose establishing a premium transportation system to alleviate this readiness-impacting situation.[20]

The premium transportation system, a "new" service and not a work-around of the channel backlog problem, was labeled *"Desert Express."* This USTRANSCOM concept called for an east coast aerial port of embarkation (APOE) to serve as a collection point for high priority logistics parts which the Services would deliver by commercial means.

Charleston AFB was selected as the APOE for Desert Express. Desert Express was built around a daily C-141 sortie that would transit to the Gulf transporting "showstopper" critical parts as determined by the Services. In-theater force structure and level of operational activity determined cargo space allocation to the Services. Daily space allocations determined by USCINCCENT were strictly controlled by USCINCTRANS and allocation compliance failures would result in the subject cargo being diverted to common user transportation mode.[21]

Desert Express service was inaugurated on 30 October 1990. Cargo reception, preparation, and loading procedures were streamlined. Crew and aircraft preparation and backup were given top priority. The same priority procedures were instituted at Torrejon, Spain, to ensure ramp, maintenance, and refueling priority were given Desert Express aircraft while on the ramp for crew change and fuel. Transit time from Charleston, South Carolina, to Dhahran, Saudi Arabia, was as little as 16 hours and 15 minutes. Desert Express met the customer expectation and remained a viable enterprise through the cease-fire.[22]

The near record levels of equipment readiness enjoyed by deployed forces can largely be attributed to Desert Express. The cost associated with the removal of crews and aircraft from the pipeline and the occasional bump of other loads due to aircraft maintenance was warranted. Desert Express, however, was not trouble free. Although not intended, Desert Express experienced backlog problems early, too. These problems coupled with increased operational activity in January 1991, necessitated the addition of a second daily express flight.[23] Customer discipline was kept in check with the regulatory nature of the venture's management, however this system was not void of abuse. On

11 January, Charleston received eight pallets of high priority cargo coded for Express movement . . . a pallet of duplicating paper, a pallet of sandbags, and six pallets of truck tires. Supporting DESERT SHIELD/STORM with efficient strategic airlift remained as elusive as customer discipline.[24]

Residual fallout to the customer discipline problem was materiel handling equipment (MHE) reliability. MHE offloaded those non-motorized pieces of cargo from the ramp of the aircraft to a designated location off of the active aircraft parking ramp. MHE reliability was a continual problem and hampered efficiency throughout Desert Shield/Storm. The desert environment, continual operations, and 1960s technology rendered the MHE "hangar queens." By late September in the Desert Shield flow, five of the ten 25K loaders at Dhahran were non-mission capable. A Rand Study concluded *"MHE problems did slow down the airlift flow by restricting the maximum number of aircraft that could be handled at a base at a given time."*[25] The backlog of cargo required larger storage areas, greater distances from the ramp, which further impacted MHE reliability by necessitating longer moves under load. MHE reliability was a problem in any operation and the lack of customer discipline in other areas only served to intensify it during the Gulf War.

The "hostage" of the backlog situation was the 463L pallet. The 463L pallet complete with nets, chains, straps, and dunnage allows for the rapid on/offload and handling of standard cargo on USAF airlift aircraft. It also serves unofficially as a commodity with an unlimited number of expedient uses. A large percentage of the pallets were in backlog holding areas and many continued in use after they were transferred to other modes at the APOE. They were also in use at the seaports, by ammunition handlers,

and by line haul transporters. The uses of the 463L outside of the transportation system abounded and their uses in field fortification and as tent flooring proved to be the greatest abuse. With pallets going out and few returning, throughput was threatened and reached the general officer level for resolution. Again, a disciplined customer approach across the JPEC would have precluded the removal of 6,000 pallets from war reserve storage to correct an easily avoidable problem.[26]

Notes

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[13] Cohen, Elliot *Gulf War Airpower Survey,* 84–85.

[14] Bassert, Phillip A., Jr. *Strategic Airlift Inefficiencies from Desert Shield to Vigilant Warrior*, 36.

[15] Cohen, Elliot *Gulf War Airpower Survey*, 6.

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[16] Pagonis, William G. *Moving Mountains: Lessons in Leadership and Logistics from the Gulf War.* (Boston, MA: Harvard Business School Press,1992), 206–206.

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[18] Bashan, Terry D. and Evgenides, Jason G. *Desert Express: Framework for Institutionalization of Express Airlift Procedures.* (Wright Patterson Air Force Base, OH: AFIT, 1992), 25–26, 59.

[19] Ibid., 23.

[20] Ibid,. 37–38.

[21] Ibid., 40–41.

[22] Ibid., 44–45.

[23] Ibid., 46–48.

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Chapter 5

Conclusion

The DTS and in particular, the supporting air mobility system are without equal in today's world. The air mobility system was born during the inter-war years of the 1930s and matured quickly providing worldwide airlift during World War II. World War II provided the toughest of environments that stretched man and machine to the limits hammering an airlift vision into a capability. The transformation of this medium from vision to capability ranks as one of man's greater accomplishments in this century. Along the way, tough lessons were learned with resulting tactics, techniques, and procedures codified in regulations and standing operating procedures ensuring a framework for the efficient application of the capability today. The airlift platforms have changed significantly from those early days, taking the capability from worldwide airlift to rapid, global mobility. The confidence enjoyed by the United States in the current air mobility system is predicated on its efficiency, and at the core of that efficiency is discipline.

JOPES provides the common system for customer, provider, and manager to determine the best method of accomplishing assigned tasks. JOPES has matured from inception and lessons learned have been incorporated, making the system much more flexible and "user friendly." As with any system that manages a multitude of simultaneous, complex tasks, it was viewed as ominous. This reputation was well

warranted early in the life cycle of the system and continues to hang on at the expense of the system. With the multiple software upgrades and the introduction of GCCS, JOPES is now relatively user friendly. Even now with a user-friendly system to plan, coordinate, execute, and monitor an operation, problems continue to abound during each joint operation.

With world class air mobility and planning systems, why do we continue to experience the same problems? The simple answer is a lack of understanding of the system resulting in little or no confidence at the customer level. The means to negate this problem is readily available through training. Familiarity breeds understanding and confidence; two factors which are absolutely imperative at the battalion and squadron customer level but no less important at the CINC and Service Component level. It is through their leadership and insistence on the disciplined use of JOPES that discipline at lower levels will occur. These perishable factors are gained and maintained only through training. This is the critical juncture in defining customer discipline. Training and responsibility in JOPES must reach down to battalion and squadron levels because discipline must come from the bottom as well as the top. The updating of JOPES-related data bases can and should be pushed down to the true customer level where the expertise in what "must move" resides, leaving management and oversight to the Service Component. This provides the answer to the first and second supporting questions raised in Chapter 1 regarding the level at which TPFDD supervision, planning and validation responsibilities reside.

Considerable effort was expended in examining the planning problems experienced in JUST CAUSE and DESERT SHIELD/STORM. JUST CAUSE was the

product of a deliberate planning process that validated most parts of the OPLAN prior to execution. Deployment for DESERT SHIELD/STORM was initiated with an OPLAN in initial development. The lack of problems with JUST CAUSE as compared to the multiple problems experienced in DESERT SHIELD/STORM attests to the importance of a completed OPLAN. In addition to the lack of a completed OPLAN, two other factors proved to apply friction in DESERT SHIELD/STORM, but were largely absent in JUST CAUSE. The lack of preparation time and the abundant number of "unknowns" surrounding DESERT SHIELD placed the U.S. Armed Forces in a position last experienced during the outbreak of the Korean War. The need to put U.S. Forces in place as quickly as possible to deter the Iraqis brought the old adage *"If you want it bad, you'll get it bad"* to fruition. A reasonable understanding of JOPES and responsibility in the database validation, down to battalion and squadron level, would have negated many of the deployment problems. Again, customer understanding and confidence in JOPES is a necessary condition for the exercise of discipline.

Many of the lessons learned in DESERT SHIELD/STORM have resulted in improvements in systems, software, and procedures regarding JOPES. Generic force packaging and other adaptive planning procedures to streamline and quicken force planning continue to shorten response times. With the multitude of enhancements, true change will not be realized until responsibility and training is powered down to battalion/squadron level. This is the true point of the spear in JOPES. Customer discipline will only be realized when leaders at all levels can enforce standards based on understanding. The time proven premise that discipline spurs efficiency and efficiency builds confidence, more often than not, holds our magnificent air mobility system

hostage. Customer discipline is paramount in ensuring the efficiency of our air mobility system.

"Practice those things in peacetime that you intend to do in war."
General George S. Patton

Glossary

AAF	Allied Air Forces
APOD	aerial port of debarkation
APOE	aerial port of embarkation
CAP	crisis action procedures
CINC	commander in chief
CONUS	Continental United States
CRO	cargo regulating officer
DAT	Directorate of Air Transportation
DOD	Department of Defense
DTS	Defense Transportation System
GAO	General Accounting Office
GCCS	Global Command and Control System
GHQ	general headquarters
JDS	Joint Deployment System
JOPES	Joint Operation Planning and Execution System
JOPS	Joint Operations Planning System
JPEC	Joint Planning and Execution Community
MAC	Military Airlift Command
MHE	materials handling equipment
NCA	National Command Authority
NBC	nuclear, biological, and chemical
NMCS	non-mission capable supply
OPLAN	operation plan
OPORD	operation order
OPTEMPO	operating tempo
SWPA	Southwest Pacific Area
TACC	tanker airlift control center
TALCE	tanker airlift control element
TPFDD	time-phased force and deployment data

TPFDL	time phased force and deployment list
TUCHA	type unit data file
ULN	unit line number
USAF	United States Air Force
USCENTCOM	United States Central Command
USCINCCENT	Commander In Chief, United States Central Command
USCINCTRANS	Commander In Chief, United States Transportation Command
USTRANSCOM	United States Transportation Command
UTC	unit type code

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