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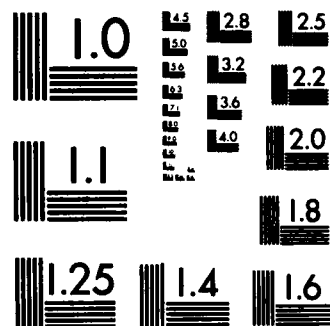
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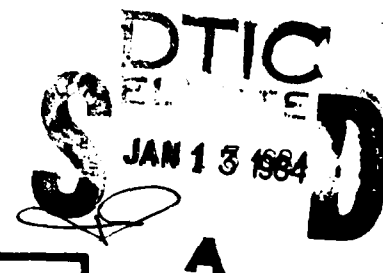
NAVAL POSTGRADUATE SCHOOL

Monterey, California

AD-A136839



THESIS



LOSS AND DAMAGE
IN THE
QUICKTRANS SYSTEM

by

Donald Kelly Hamann

September 1983

Thesis Advisor:

Dan C. Boger

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Loss and Damage
in the
QUICKTRANS System

by

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Lieutenant, United States Navy
B.S., University of Colorado, 1977

Submitted in partial fulfillment of the
requirements for the degree of

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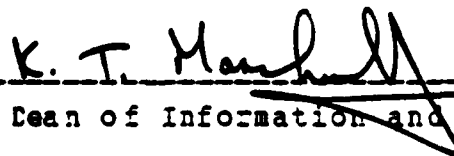
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ABSTRACT

The purpose of this thesis is to review the QUICKTRANS system with respect to loss and damage. The question has arisen concerning the amount of loss and damage which occurs on the system, and what should be done about it if it is excessive. This review will consist of an examination of the manuals and directives concerning the general operations, and more specifically, the procedures designed to control the freight in the system. The procedures as they are designed will be compared to actual observations of the system in an attempt to identify problems. The loss and damage which occurs will be evaluated to determine if the amount is excessive, based on similar commercial service, and alternatives will be discussed for reducing that which does occur.

TABLE OF CONTENTS

I.	INTRODUCTION	9
	A. PURPOSE OF THE STUDY	9
	B. THE FUNCTION OF QUICKTRANS	9
	C. RESPONSIBILITIES	10
	D. AIRLIFT AND TERMINAL SERVICES	11
	E. TRUCKING SERVICES	12
	F. METHOD OF STUDY	14
II.	SYSTEM DESIGN	16
	A. SHIPMENT ELIGIBILITY	16
	B. WHO CAN USE QUICKTRANS	17
	C. HOW TO USE QUICKTRANS	17
	D. SCHEDULES	19
	E. COVERAGES, SHORTAGES AND DAMAGED (OSD)	
	SHIPMENTS	21
	1. Liability	21
	2. Tracking System	22
	F. TERMINAL CONTRACTOR	23
	1. Procedures	23
	2. Releasing Shipments	25
	3. Air Force Bases	25
	4. Combined LOGAIR and QUICKTRANS	25
III.	AUTOMATION SYSTEM	27
	A. QUICKTRANS INFOSYSTEM	27
	B. CHARACTERISTICS	27
	C. INFORMATION CATEGORIES	29
	D. MCN-COMPUTERIZED TERMINALS	30
IV.	OPERATIONS REVIEW	31
	A. OVERALL PERFORMANCE	31
	B. DETAILED ACTUAL OPERATIONS	32

1. Overview	32
2. Receiving	33
3. Processing	34
C. CCMPARISON OF DESIGNED TO ACTUAL OPERATIONS	35
V. ANALYSIS	36
A. OBJECTIVES	36
B. ALTERNATIVES	36
C. EFFECTIVENESS	37
1. Model	38
2. DISREFs	38
D. CCST ANALYSIS	39
E. QUANTIFIABLE FACTORS	40
F. NON-QUANTIFIABLE FACTORS	44
G. DISCUSSION OF ALTERNATIVES	45
VI. CONCLUSION	49
A. RECOMMENDATIONS	49
APPENDIX A: QUICKTRANS TERMINALS	51
APPENDIX B: QUICKTRANS MAP AND SCHEDULES	53
APPENDIX C: DEDICATED TRUCK SCHEDULE A	55
APPENDIX D: CONTRUCK MAP	57
APPENDIX E: NORTHEAST DEDICATED TRUCK SERVICE	58
LIST OF REFERENCES	59
INITIAL DISTRIBUTION LIST	60

LIST OF TABLES

I.	ALL DEPARTMENT OF DEFENSE SHIPMENTS	41
II.	SELECTED COMPUTATIONS	42

LIST OF FIGURES

2.1	Penalty Value Scale	19
2.2	Sample Computation of Schedule Reliability . . .	20
3.1	Fallet Designator Number	28

I. INTRODUCTION

A. PURPOSE OF THE STUDY

The QUICKTRANS system is a contractor-operated transportation network designed to transport high priority United States Navy freight. It is currently unknown whether or not the QUICKTRANS system incurs an excessive amount of loss and damage. The problem arises because the contractor, who handles strictly government cargo on the system, does not carry private insurance for loss or damage incurred in the system and the government acts as a self-insurer. If the government were to begin processing claims against the contractor for loss and damage, the contractor would have a legitimate reason for increasing rates. The QUICKTRANS system does not have the same historical data on loss and damage as other methods of transportation because a contract carrier is utilized and claims are not filed in the same manner. In order to better analyze the problem some background information on QUICKTRANS is necessary.

B. THE FUNCTION OF QUICKTRANS

The objective of the QUICKTRANS system is to provide a controlled, flexible, and responsive method of expediting high dollar repairables and other urgently-required cargo between points of major Navy interest within the continental United States (CONUS) [Ref. 1].

The QUICKTRANS transportation system has been designed to satisfy the specific requirements of the Navy for expeditious movement of high priority material between Naval Air Stations, U.S. Navy ships, Military Airlift Command

(MAC) aerial ports, aircraft engine overhaul and repair facilities, major Navy shipyards, major supply activities, nuclear propulsion development and fabrication facilities, and weapons system fabrication and testing facilities [Ref. 1]. These requirements are met by contracting with commercial companies to perform the airlift, terminal and trucking services. Although the airlift and terminal services are commercial contractors to the Navy, the QUICKTRANS system is an integral element of the Defense Transportation System (DTS). The current airlift contract is held by Transamerica Airlines, the terminal service contract is held by CFE Air Cargo Inc., and the trucking portion is performed by several individual common carriers under contracts issued by the Military Traffic Management Command (MTMC).

C. RESPONSIBILITIES

The Naval Supply Systems Command (NAVSUP) has overall responsibility for the QUICKTRANS system and establishes system policies. The airlift contract is issued by the Military Airlift Command (MAC) but is administered under the direction of NAVSUP. NAVSUP has delegated responsibility for QUICKTRANS management and operations control to Naval Material Transportation Office (NAVMTO), Norfolk, Virginia. NAVMTO is also responsible for managing the trucking systems associated with QUICKTRANS; however, the trucking services are not contracted in the same manner as the airlift and terminal services. The trucking services are procured through the Military Traffic Management Command (MTMC), as described in section E below. NAVMTO has responsibility for administering the airlift and terminal contracts including, but not limited to, the following areas:

1. Develop a monthly cost base and annual mileage grid throughout the contract year;
2. Initiate, authorize, and issue schedules, schedule changes, expansion flights, cancellations, and delays;
3. Issue waivers for movement of explosives and other dangerous articles;
4. Negotiate cancellations with the airlift contractor and determine whether mileage reduction is appropriate;
5. Procure alternate or substitute transportation service;
6. Perform all phases of administration except those reserved to the procurement offices;
7. Monitor and enforce other administrative functions of the contract; and
8. Perform at least annual inspections of the terminals to assure contractor compliance [Ref. 3].

In general, NAVETO is responsible for insuring that the QUICKTRANS system continues to run smoothly and is responsive to the customer's needs.

D. AIRLIFT AND TERMINAL SERVICES

Only the terminal services and the airlift services are contracted as complete systems. The trucking services are procured individually and several carriers are used. As mentioned above, the airlift contract is currently held by Transamerica Airlines which has held the contract for many years. The contract will continue through 30 September 1983 unless sooner terminated by the government. The government may extend the contract in monthly increments for a maximum of three months to 31 December 1983. The contractor is required to utilize L-100-30 aircraft (L-188c Electra

aircraft may be substituted with the government's permission) in performing the 2,056,061 statute miles of air transportation and approximately 3,600 directed landings per year [Ref. 3]. Directed landings are special landings made at the government's request. Other landings can be made at the contractor's convenience for refueling or crew changes. The terminals are listed in Appendix A and the map of the routes and the schedule is included in Appendix B.

The terminal services contractor (CFE) has the responsibility for loading and unloading the aircraft, trucks, and containers [Ref. 3]. The contractor also performs tasks such as transporting the air crew, delivering flight bags, tracking, tracing and others which will be discussed later in the terminal contractor section. Material is delivered to the terminals by a wide assortment of common carriers and government vehicles from nearby military installations.

E. TRUCKING SERVICES

Trucking services for QUICKTRANS are provided under standing route orders. Standing route orders are issued by MTMC routing offices to cover normal repetitive movements (two or more shipments per month) of specific items between points in CCNUS by any mode of transportation [Ref. 2]. They eliminate the need for repetitive issuance of route orders. They are periodically reviewed and, if conditions change, they are rescinded or superceded. The standing route orders designate the mode of transportation, the individual carrier or carriers to be used, and any other necessary instructions for movement of the freight.

Five separate trucking services have been developed which are used in conjunction with the QUICKTRANS system. It is not desirable for the QUICKTRANS aircraft to stop at every major Naval activity because of their proximity to

each other or an inadequate volume of freight. Therefore, the system of trucking services has been adopted and adjusted to pick up and deliver material from activities which do not have a QUICKTRANS terminal on base.

The Dedicated Truck system utilizes common carriers under individual standing route orders, and operates between QUICKTRANS terminals and nearby installations. The purpose of the dedicated truck system is to carry freight along high volume routes as a feeder system to and from QUICKTRANS terminals. This system does not go to many of the smaller activities which do not have a constant volume of shipments moving. It services larger activities which need regular service to and from QUICKTRANS terminals. The dedicated trucks operate on a regular schedule which is included in Appendix C.

The Expansion Truck system was designed to handle overflows in the QUICKTRANS system. This is a dedicated truck system as well but does not have a routine schedule. Instead, it is initiated when needed to handle overflows. When too much freight is tendered to the QUICKTRANS terminals for the regularly scheduled flights, trucks are utilized to carry the extra freight rather than contracting for additional aircraft. The Expansion Truck system was designed to provide expedited delivery across country at a rate cheaper than air freight. Under this program the carriers provide the trailer which the government packs and seals. The carrier then hauls it across country. When the trucks arrive at the QUICKTRANS terminals, they are unloaded and transhipped as necessary.

Another trucking system which utilizes QUICKTRANS facilities for receiving, consolidation and distribution of shipments is Connected Truck (CONTRUCK). CONTRUCK is a system which was designed to take advantage of truckload rates by consolidating many smaller shipments of low

priority material into one shipment and moving it from coast to coast. It provides for local pickup and delivery to shippers and utilizes other services such as the Northeast Dedicated Truck Service (NDTS). CONTRUCK operates on a regular basis, between Norfolk, Jacksonville, North Island, and Travis. The CONTRUCK route map is included in Appendix D.

The NETS provides motor transportation service for Less than Truckload (LTL) and Parcel Post shipments moving between Norfolk area shore support activities and surface ships and shore activities in the Northeast area of the Eastern seaboard. NETS includes three North-South routes, originating in Norfolk. The routes are serviced two or three times weekly as shown in the route map in Appendix E [Ref. 5].

Individual commercial trucks (common carriers) are used in addition to these other four trucking systems as a feeder to QUICKTRANS. In some cases the other systems mentioned do not serve an activity, or the timing of the service does not match the required QUICKTRANS flight schedule. Then the local transportation officer will tender a shipment to a common carrier.

F. METHOD OF STUDY

Chapter II is a detailed description of how the system is designed to operate. The instructions, manuals, contracts and other published material pertaining to QUICKTRANS are used to determine how the system should operate if everyone performs as the references state. The chapter will describe the interfaces with the shippers, the government agencies, and the contractors. Chapter III is a description of the automation system used by QUICKTRANS to keep track of the freight. It will include a detailed

description of how the material is processed through the terminals and what information the information system provides. Chapter IV is a review of how the system actually operates as indicated by the published statistics as well as a physical review of the system by the author. The description will include a comparison of the system design, as described in Chapters II and III, and what is actually occurring. Chapter V is an analysis of the loss and damage which occurs in the system. It will include a model which is designed to compare the loss and damage in QUICKTRANS to that in a comparable system. The analysis will attempt to evaluate the quantifiable and the non-quantifiable aspects of the alternatives. Chapter VI presents conclusions on what should be done about the loss and damage occurring in the system.

II. SYSTEM DESIGN

A. SHIPMENT ELIGIBILITY

The QUICKTRANS system is designed for high priority items which meet the Uniform Military Movement and Issue Priority System (UMMIPS) requirements for air shipment. Shipments which do not meet the criteria mentioned in NAVSUPINST 4630.22B [Ref. 6] (weight exceeding 300 pounds, cube exceeding 24 cubic feet, and requisition dates over 90 days old) will be challenged by NAVMTO. When shipments are challenged the shipper must fully justify the need for airlift. In addition to the extremely high priority shipments generated from situations such as Casualty Reports (CASREP'S), Not Mission Capable Supply (NMCS) and Partial Mission Capable Supply (PMCS), there are other characteristics which will allow a shipment to go in the QUICKTRANS system without being challenged [Ref. 6]. These are:

1. Shipments of 50 lbs or less,
2. Shipments which will be connecting with a MAC flight for export,
3. Fleet Ballistic Missile Material,
4. Foreign Military Sales (FMS) shipments, and
5. Shipments that will move by QUICKTRANS truck only.

If the shipper is concerned about a shipment being challenged by NAVMTO it can be prevalidated and the shipment will not be challenged. Certain shipments which require special handling, a specific flight, courier service, or special routing of the plane must always be prevalidated. Shipments which would not ordinarily be acceptable for commercial air shipment are eligible for QUICKTRANS flights. For example, there are many types of hazardous material

which are considered too dangerous to put on a commercial flight and yet are mission essential. This hazardous material must be cleared by NAVMTO on a case-by-case basis and must be waived under Department of Transportation (DOT) exemption 7573, which permits the transportation, by air, of explosives and other hazardous materials deemed essential to national defense via Department of Defense contract airlift services [Ref. 3].

B. WHO CAN USE QUICKTRANS

Although QUICKTRANS was set up to service the high density traffic areas near major Navy installations, other services and government agencies are eligible to use QUICKTRANS on a reimbursable basis. Many off-line activities (off-line meaning not in the immediate area of the terminals) find the QUICKTRANS service to be cost favorable when compared to other methods of shipment. QUICKTRANS will also carry some materials for air shipment which other air carriers will not, making it the only method available for some off-line customers. Cargo is sometimes carried on QUICKTRANS which does not actually require air transportation. This occurs when space is available and the cargo movement is considered cost effective. In this event NAVMTO will solicit cargo from eligible shippers.

C. HOW TO USE QUICKTRANS

One of the advantages of QUICKTRANS is the small amount of documentation needed to move a shipment through the system. The two documents acceptable for entering the QUICKTRANS system are the DD Form 1348-1, DOD Single Line Item Release/Receipt Document or the Transportation Control Movement Document (TCMD), DD Form 1384. Both card and printout formats are acceptable. Government Bills of Lading

(GBL'S) and Commercial Bills of Lading (CBL'S) are neither necessary nor acceptable. Billing is done by NAVMTO using the Transportation Account Code (TAC) on the movement document supplied by the shipper.

NAVSUP Instruction 4610.37 series [Ref. 1] is used by the shipper for information on how to fill out the documentation. The Military Standard Transportation and Movement Procedures (MILSTAMP) Instruction 4500.32R contains many of the codes and other information necessary to document the shipment. Special blocks are used when the shipment has unusual characteristics. On those shipments which require special handling, a DD Form 1387-2, Special Handling Data/Certification must be utilized to alert the QUICKTRANS personnel.

If a courier is required, the shipment must first be cleared with NAVMTO. The shipper is also responsible for assuring that the shipment is properly packed and labeled for safe transportation, including any hazardous certifications, special caution areas, and shipping information.

Shippers are encouraged to deliver material as far in advance as possible. The terminal agents are on hand during all working hours to receive shipments if necessary. The consignee is required to pick up the shipment at destination and will usually be notified within three hours of arrival. The shipment will be available for pickup within three hours after the flight, truck, or container arrives at the terminal, and high priority items will be ready within two hours. Special rules relate to hazardous cargos, such as explosives, which must be picked up immediately.

NAVMTC has the facilities to trace shipments on a twenty-four hour basis. The tracing activity needs only the full Transportation Control Number (TCN) information and the date shipped to receive current status.

D. SCHEDULES

The schedules for QUICKTRANS are subject to change when considered necessary by NAVMTO, as mentioned in the introduction. However, routine scheduled flights, included in Appendix E, can normally be relied upon by the shipper. Between three and seven flights are flown weekly between the major Navy activities in CONUS. The airlift contract states that the schedule reliability will be computed monthly for each type of aircraft. If the reliability is below 85 percent, the contractor will lose entitlement in future years.

The schedule reliability [Ref. 3] is determined monthly by counting the number of contractor-caused delays and cancellations, applying these figures to a specified penalty value scale, subtracting the total penalty points from the number of actual departures on scheduled flights and, finally, stating the result as a percentage of the actual departures. Figure 2.1 is the penalty value scale used in determining the value of each delay.

30 minutes to 3 hrs	3 hrs to 12 hrs	12 hrs to 24 hrs	over 24 hrs
2	4	8	16

Figure 2.1 Penalty Value Scale.

Delays which are the responsibility of the contractor are measured by an accelerating scale according to the length of time involved in the delay. Delays on turnaround flights resulting from lack of aircraft due to the late

arrival of the inbound flight will not be reflected in the monthly rating.

Cancellations which are the responsibility of the contractor are measured by a count of the stations from which the contractor failed to depart on scheduled flights. A penalty value of eight (8) is applied to each station from which a departure was not made.

Figure 2.2 is a hypothetical case which illustrates the computation method.

Actual departures on scheduled flights	(D) 390
Delays, 30 minutes to 3 hours	(d) 5 at 2 points each = 10
Delays, 3 hours to 12 hours	(e) 4 at 4 points each = 16
Delays, 12 hours to 24 hours	(f) 1 at 8 points each = 8
Delays, over 24 hours	(g) 0 at 16 points each = 0
Cancellations	(h) 1 at 8 points each = 8

$$\begin{aligned}
 & (D - (d + e + f + h)) / D = \\
 & (390 - (10 + 16 + 8 + 0 + 8)) / 390 = \\
 & 348 / 390 = .892 \times 100 = 89.2\%
 \end{aligned}$$

Figure 2.2 Sample Computation of Schedule Reliability.

E. OVERAGES, SHORTAGES AND DAMAGED (OSD) SHIPMENTS

1. Liability

The contractors have limited liability for loss or damage in the QUICKTRANS system. Unlike commercial air carriers which carry private insurance to cover all shippers, the contractor does not need to carry private insurance because they carry only government material and the government does not require it. If the government required the contractor to pay for all loss and damage the contractor would obtain private insurance to cover the cost. The government policy is to be a self insurer and not to pay for private insurance from any carriers. If the contractor should be required to carry private insurance then the government would have to pay for it through increased contract cost.

The government relieves the contractor of liability for loss and damage [Ref. 4] to any or all government cargo, except if such loss or damage results from the use of untrained personnel, unauthorized equipment operators, negligence or abuse of government cargo on the part of the contractor's cargo handlers, pilferage of government cargo while in the possession of the contractor, and the willful misconduct of any of the contractor's managerial personnel. Receipt of shipments by the contractor, without exception, is prima facie evidence that the shipment was received in good condition and in accordance with the information contained in the shipment document. When a consignee files a claim with NAVMTO and the claim is found to be due to one of these exceptions, the claim can be paid by check or set aside from the contract amount.

Instead of specifying dollar liability, the contract states that the contractor must give "optimum care and attention" to all shipments. More specifically, the

contract requires daily floor checks of on-hand cargo against documents to make sure that there is no astray freight. Procedures are specified for what to do when material is received without documents, material is received short, or extra material is received.

When shipments are received, or when found within the QUICKTRANS system but are improperly prepared for shipment, the agent will prepare a Report of Damaged or Improper Shipment (DD Form 6) reporting the discrepancy. When possible, a picture or drawing should be included with the form. The original is forwarded to NAVMTO and a copy is held at the reporting activity.

2. Tracking System

The Navy supplies the software for a tracking system of all QUICKTRANS shipments. In addition to shipment reporting and tracing this system provides data required for movement control, document processing, cargo receiving and palletizing, aircraft load planning and manifesting, and management reports. The terminal contractor is responsible for assuring that the shipments are properly entered upon receipt.

When material is noted short the terminal contractor enters the shortage in the computer and the item will appear on the daily OSD report for ten working days. This gives all personnel involved the time to search for and locate the material. If all the tracing is complete, the ten days have lapsed, and the material has not been located, a report is forwarded to NAVMTO. This report includes the names of all contacts along the way. If the material is located within 10 days and the material missed the correct destination due to the fault of the contractor, such as overflights due to the contractor failing to unload, the contractor is responsible for rectifying the problem. If the problem was due to

contractor error, the shipment will be moved at the complete discretion of the government and the contractor may be required to bear the cost of shipment. The contractor is allowed to make an offer of alternative shipment methods but final determination is made by NAVMTO.

When shipments are noted to be damaged, but not excessively, the contractor is required to take whatever steps are possible to minimize further damage during shipment. If damage is considered excessive, NAVMTO would be contacted for guidance.

F. TERMINAL CONTRACTOR

The primary duty of the terminal contractor [Ref. 3] is to stage freight, load and unload planes and trucks, and to keep track of the freight in the system. The terminal contractor also provides ramp services including: parking, dispatching, clocking, cleaning ramps and cabins, Auxilliary Power Units (APU's) and engine air starts (commercial fields only), fire guards, fresh water, wing walkers, loading, tiedown and unloading of ballast in the aircraft.

1. Procedures

Terminal agents are required to be on call or available to receive shipments during all scheduled hours. All shipments received are checked against shipping documents to assure that appropriate consignee markings including TCN, piece number, consignee address, and other appropriate labels are on each shipment. If any of the necessary information is missing, the contractor is required to affix it to the package. If tags are used, the contractor is responsible for assuring they will not come off during the loading, unloading, or transportation. The material in transit must be stored in a safe and proper manner.

a. Receiving Procedures

Upon receipt of QUICKTRANS shipments, the material is checked against documentation, weighed and signed for. The document is then returned to the shipper. If there are any problems with the shipment, they should be noted at this time for correction. The lot labels are made up from the documentation and attached to the material. The use of the documentation for determining appropriate labels is stressed to the contractor because of the strong possibility of extraneous marking on the boxes. The lot label includes the origin terminal code, date received, the last 7 digits of the TCN and the number of pieces. A copy of all shipping documents is required to be kept by the contractor where the material is received.

b. Palletization

After the shipments have been received, the contractor is responsible for palletizing them in a manner which conforms to the minimum of 80 percent system load factor. The weight and cube of each pallet is automatically computed and compared with pre-established standards for each size of pallet to verify load factors. All TP1 shipments are loaded prior to any lower priority shipment. The priority is determined by the labels on the shipment containers. To the maximum extent possible, each pallet should contain shipments for only one terminal, and shipment units should not be split between more than one pallet. If it is necessary to put freight for more than one destination on one pallet it should not contain more than two destinations and should be packed in a way that minimizes remaking of the pallet. If it is necessary to split shipments they will have separate documentation. Pallet buildup occurs in a place where all cargo is readily observable for maximum

utilization. When totally loaded the whole pallet is covered in polyethelene and netted, weighed, and the weight noted on the Pallet Tally Sheet (PTS).

2. Releasing Shipments

When the material arrives at destination the contractor notifies the consignee by telephone and arranges pick up. Upon notification of availability for pick up the contractor notes the name of the person called, date, and time on the Delivery Manifest Report (DMR). When the shipment is picked up the date and time of pickup and the signature of the person making the pick-up is put on the DMR for future reference. All incoming shipments are checked against the manifest when offloaded and will not be released without documentation.

3. Air Force Bases

At some of the Air Force Bases which are not fully serviced by the terminal contractor the Air Force personnel perform loading and unloading, which the contractor coordinates in addition to doing all documentation functions. At those bases the Air Force personnel will load, unload, reposition, segregate and palletize material. The terminal contractor still retains responsibility and processes all documentation.

4. Combined LOGAIR and QUICKTRANS

The Air Force Logistic Airlift (LOGAIR) system is another air freight system which is contracted by MAC. It is managed by the Air Force and utilizes some of the same aerial ports as QUICKTRANS. There are certain routes which utilize both LOGAIR and QUICKTRANS for the movement of the freight. In those cases where the freight moves through both systems the processing is slightly different. On the

combined routes the contractor maintains conformance to the LOGAIR requirements. Air Force freight which is manifested to QUICKTRANS terminals does not require documentation if it is to be offloaded at the destination QUICKTRANS terminal. If the shipment is to be transhipped at the destination QUICKTRANS terminal, a manual TCMD will be prepared and the shipment will move as regular QUICKTRANS material.

III. AUTOMATION SYSTEM

A. QUICKTRANS INFOSYSTEM

The government furnishes an automated management information system, the QUICKTRANS Infosystem, for contractor use with the QUICKTRANS system. The contractor may use that system or furnish its own. If the contractor uses its own system, it must keep the government up to date on all changes, and the government has unlimited rights to all data associated with the program. In order to maintain control of the system, in case the contractor should be replaced for some reason, the government is supplied a complete system description including such items as input/output formats, system data flow and other general specifications. The contractor supplies all the computer equipment to run the software. Not all of the truck terminals are equipped with the computer system; therefore, different procedures must be utilized at those points.

E. CHARACTERISTICS

The Infosystem is capable of continuous online, real time operations. As each item is loaded on a pallet it is recorded on the Pallet Tally Sheet (PTS). When the PTS is complete each pallet is designated by a number (the Pallet Designator Number or PDN) and a Pallet Load Report (PLR) is input. Once the PDN is assigned the pallet is processed in the system as a shipment unit [Ref. 3]. The PDN, as shown in Figure 3.1, identifies the pallet and contains information on the buildup of the pallet which may later be useful. All stations are capable of accessing their cargo on hand, by destination, for the purpose of performing warehouse

DOV32301F2

DOV: Building Terminal
323: Julian Date built
01: Sequence number by date built
F: Type pallet
2: pallet position

Figure 3.1 Pallet Designator Number.

checks at any time. As the cargo moves through the system it is added to or deleted from the applicable cargo on hand at all applicable stations. As each pallet flows through the system, it is weighed as it comes off each flight and differences in the weight will cause the originating station to be notified.

Flight Load Reports (FLR), which are made up from PDN's and assigned to the flights, are used for loading the airplane as well as accounting for all pallet movement from station to station or mode to mode. Aircraft departures are reported on Flight Departure reports which in turn initiate the Pallet Manifest Summaries (PMS). The PMS is a listing of cargo, by pallet, which is to be offloaded at a station including compartment, PDN and TCN. If there are any overages, shortages, or other discrepancies, they will be input to the Infocsystem at this time. If an overage is noted that was not previously noted, the inputting station must include appropriate information. The QUICKTRANS terminal listing in Appendix A lists all the terminals and shows that thirteen of the twenty-nine have communications terminals.

C. INFORMATION CATEGORIES

It is possible, by utilizing the INFOSYSTEM, to extract the following reports or categories (and others not included in this list) of information:

1. CCH - Cargo on Hand at each terminal.
2. PDN - Pallet Designator Number.
3. UIC - Unit Identification Code.
4. TCN - Transportation Control Number.
5. PSR - Flight Status Record.
6. TIR - Truck Load Report- Cargo loaded aboard the truck reported by TCN.
7. FFR - Flight Following Report- the Flight Following Report is a summary of the transactions pertaining to each flight. It includes at least the following types of information:
 - a) Total cnload and offload by station.
 - b) The actual time for flight point to point.
 - c) Ahead or behind time point to point.
 - d) Terminal delays at each station, if any.
 - e) Delay codes at each station, if any.
 - f) Delay time in hours and minutes at each station, if any.
 - g) Reasons for delays, if any.
8. MSR - Morning Status Report- The Morning Status Report consists of four parts. Part one covers all terminating flights flown during the previous 24 hours and contains the flight designator, time flight terminated, terminating terminal, total flight delay/ahead of schedule time, individual terminals and delays (in hours and minutes), and delay reason. Part two covers current flights including flight designator, ETA/ETD, current position, total flight delay/ahead

of schedule time. Part three covers terminating trucks including truck number, time truck terminated, terminating terminal, and total truck delay/ahead of schedule. Part four covers current trucks including the truck number, ETA/ETD, and terminal codes.

The system also puts out periodic reports including a Daily Over, Short and Damage (OSD) report which shows all coverages from the previous 24 hours and all shortages for the previous ten days, and all discrepancies during the past 24 hours.

D. NON-COMPUTERIZED TERMINALS

The procedures at some of the truck terminals differ slightly because all the truck terminals are not part of the Infosystem. If the destination terminal is not part of the system, then a Delivery Manifest Report (DMR) must be requested and sent with the truck. When the truck arrives at a communicating station the Shipment Input Report (SIR) will be input. Because of the inability of some stations to input the SIR into the system, the cargo on-hand or in-transit will not be accurate until the truck is processed at an input-capable destination.

IV. OPERATIONS REVIEW

The purpose of this chapter is to review the overall system and to compare the actual performance of the contractors to the system design.

A. OVERALL PERFORMANCE

A study was conducted in 1981 by the Logistics Management Institute (LMI) to determine if QUICKTRANS was operating efficiently or if changes should be made in the system [Ref. 7]. The study pointed out that QUICKTRANS is primarily airlift-oriented with trucks being used when they were considered more efficient. According to the study, 81 percent of all shipments, and 75 percent of the total tons shipped were air shipments. In the study, QUICKTRANS was compared to three other alternatives using a combination of commercial methods of shipment. The first alternative was to send all TP1 and TP2 normal air shipments by commercial air and the rest by commercial truck. The second alternative was to put all TP1 normal air shipments on commercial air, and all others on commercial trucks. The third was to put all TP1 and TP2 normal air shipments on commercial air, TP1 and TP2 oversized and special handling shipments on organic air, retain TP1 and TP2 dedicated trucks, and put all others on commercial truck. Comparison of these alternatives to the QUICKTRANS system led LMI to the following conclusions:

1. The QUICKTRANS system is efficiently operated. Aircraft load factors are nearly 90 percent and total transit miles exceed direct transit miles by only eight percent.

2. The average number of transship operations per shipment is low -- 70% for air shipment and 30% for truck only shipments.
3. The alternatives were either not cost effective or did not meet the UMMIPS time frames.

This study did not address the issues of loss and damage but was favorable from an overall viewpoint. No other studies of this sort are available for review.

B. DETAILED ACTUAL OPERATIONS

In order to review the actual operation of the QUICKTRANS system this author visited the terminals at Travis, San Diego, Pensacola, Jacksonville, Charleston, and Norfolk. The review was conducted from 13-19 December 1982. Operations at each of the terminals were observed and questions asked of the managers and the workers. It was not considered necessary to visit all the terminals in order to determine if the system is being implemented as it was designed. If instances of deviation from the designed system were detected at more than one activity the sample was considered indicative of the system as a whole.

1. Overview

The system does not always function as it is described in the procedures section. The system is rather loosely run with respect to the way the material and paperwork are dropped off at the QUICKTRANS terminals and processed afterwards. There are many cases when the material has mixed government-contractor accountability which would not lend itself to establishing responsibility for any damage that may occur. Deviation from the status quo would require many changes in the receiving procedures at the terminals resulting in additional costs and time.

2. Receiving

According to the terminal services contract, when a shipment is received it is supposed to be checked against the documentation, weighed and signed for. When the check is complete the document is returned to the shipper. This procedure, if strictly followed, clearly delineates custody and responsibility for the material. In many cases what actually occurs is that a truck will arrive with a large load, drop off the paperwork and the material, and complete delivery with a signature on the trucking bill, but not on the TCMD/1348-1. The trucking bill will often be the documentation for a combination of shipments, none of which are clearly defined on the bill. Each one of the shipments would have its own documentation but they would be consolidated into one trucking bill. The trucking bill will often be no more specific than "3 boxes" or "2 pallets", without any reference to shipment numbers. The delivery is not checked item by item and the TCMD/1348-1 is not signed until the terminal personnel take the time to process the freight which may not occur until it is being processed for the flight.

When freight arrives at the terminal the contractor is required to notify the consignee. In many cases this does not occur, instead the material is transhipped with one of the many trucking services mentioned. Notification also does not occur at some of the terminals where there are high volume customers who make regular deliveries and pick-ups without notification.

When terminal personnel begin to process the delivery they will use the documentation to make up all labels and verify that all pieces have arrived. At this point however, if a piece is missing the responsibility for loss is not clearly defined.

When shipments enter the QUICKTRANS system the gross weights are required to be verified against the documentation. This verification is necessary to make sure that future weights are accurate enough to reveal any shortages. The weights are not verified upon receipt as required by the contract. Because the weights are not verified, it reduces the likelihood that a shortage would be discovered prior to delivery at destination. The TCN weight from the documentation is used in determining the weights of the full pallets and some discrepancies could be detected by comparing the constructed weight to the actual weight of the pallet. In other words, it would be possible to trace some losses by adding all the weights the shippers have assigned to their documentation together to determine the constructed weight of the pallet. If the weights of the individual shipments were verified, this constructed weight, when added to the weight of the pallet and strapping, would be an accurate weight for the complete pallet. Any differences between the actual weight and the constructed weight at any further point during shipment would be an indication of a missing piece of freight. By not verifying the weights upon entry to the system, the ability to determine missing items in this fashion is reduced or lost.

3. Processing

If freight is damaged so badly that the container cannot be repaired for further shipping the contractor is supposed to notify NAVMTO for guidance. In actuality NAVMTO is never notified but, in most cases, the origin shipper is notified and proper arrangements are made. Some of the terminals have very good working relations with the local activities, making this an expedient procedure. Continued acceptance of these local procedures could lead to NAVMTO's inability to enforce this provision of the contract, should it become desirable in the future.

When freight is processed by the contractors and the labels are noted lost or missing, in some cases the contractor returns the freight to the shipper to affix labels. The contractor should be performing this service according to the contract. Contractor performance of this service would tend to reduce the shipping time necessary by eliminating the extra wait for the shipper to label the material.

The pallets are not weighed as they come off each flight as stated in the contract. This check, if performed, could also help to identify losses occurring in the system.

C. COMPARISON OF DESIGNED TO ACTUAL OPERATIONS

The contractor is performing most of the procedures as outlined in the contract. Once the freight has been received and input, the Infosystem has been utilized very effectively to keep track of the freight. It is possible to track the freight on a twenty four hour basis through the use of the Infosystem. The contractor personnel understand and utilize the checks and balances built into the system for locating missing freight. When material is noted short after it is entered into the system, the contractor follows the prescribed method of tracing the freight, and if unsuccessful, notifies NAVMTO as required.

The only potentially serious shortcoming in the procedures, as implemented by the contractor, is the method of processing the freight prior to its entering, and after it leaves, the QUICKTRANS system. Once the freight has been input to the Infosystem it is readily tracked and responsibility established. but not until then. Accountability for freight not actually in the system would be extremely difficult to establish.

V. ANALYSIS

A. OBJECTIVES

There are two objectives to the analysis. The first is to determine whether or not the loss or damage which occurs in the QUICKTRANS system is excessive. The second objective is to determine the best method for minimizing or compensating for the loss or damage which does occur. The method chosen for obtaining the second objective should not reduce the current level of service which the customers have come to expect with regard to timeliness and ease of use.

B. ALTERNATIVES

The criterion for selecting the best alternative will be maximum effectiveness at a fixed cost. A review of the objectives has led to the following possible alternatives to be compared:

1. Maintain the status quo. If the analysis reveals that the loss and damage which occurs in the system is not excessive and no further steps are necessary to control or reduce it, this would be the selected alternative.
2. Change the contracts to allow the government the right to claim reimbursement for all loss and or damage which occurs in the QUICKTRANS system. As mentioned in the introduction, it will be necessary to take into account for this alternative the cost of insurance which the contractor would be required to obtain. The cost of insurance would be a legitimate increase in the contract rate.

3. Change the contract to allow for compensation on extraordinary cost items. The method for administering this alternative would determine whether or not additional costs would be incurred by the government. In cases of negligence and other faults of the contractor, a claims procedure already exists in the current contract to require compensation from the contractor.
4. Set up an incentive-reduction method in the contract whereby payments to the contractor are reduced based on loss and damage. As mentioned above, the ability already exists in the current contract to recover payments from the contractor in cases of negligence or other faults of the contractor, as mentioned in Chapter II.
5. Tighten up the procedures to minimize possible loss or damages to cargo.

C. EFFECTIVENESS

The first objective is to determine whether or not the loss or damage which occurs in the system is excessive. The only reporting system common to all forms of government transportation is the Discrepancy in Shipment Reporting (DISREP) system. Since QUICKTRANS is essentially an air freight transportation system it should be compared to other air freight systems to determine whether or not the loss or damage which occurs is excessive. It could be compared to other government systems such as LOGAIR or MAC but commercial air is selected as a better basis for comparison since the contractor is a commercial carrier. Commercial air carriers could be considered a possible alternative to QUICKTRANS as well.

1. Model

In order to make the comparison the following information was requested from the Military Traffic Management Command (MTMC) broken down for commercial air and QUICKTRANS:

1. Total number and weight of DOD shipments.
2. Total number and weight of DOD shipments for which a loss, damage or shortage was reported.
3. Total dollar value of any loss, damage or shortage reported.

From this information [Ref. 8], and the information contained in other MTMC reports, it is possible to determine the percentage of shipments which are lost or damaged within each system by shipment and by weight, and the estimated cost to the government. The other statistics needed were already reported by MTMC on a quarterly basis in the Military Traffic Management Command's World Wide Traffic Management Statistics published each quarter based on information taken from DISREPs and GBLs. [Ref. 9].

2. DISREPs

The formal method for reporting shipment discrepancies in DOD is through the use of Discrepancy in Shipment Reports (DISREP), SF 361. The specifics of when they are required to be used and who must use them are contained in the DISREP manual [Ref. 10]. For the most part, all DOD activities are required to report short, damaged or astray freight valued at fifty dollars or more. There are numerous variations and exceptions but, for the purposes of this study, the general rule will suffice. When these conditions are met, a DISREP is required to be submitted. However, there is a lack of incentive for many activities to file a DISREP if they feel that reimbursement is not likely.

Because the QUICKTRANS system is operated by government contractors there is no reimbursement to shippers or consignees for lost or damaged material. Another reason activities would want to file DISREPS is to identify a shortage and clear it from their records, or at least to establish that it was not the fault of their activity. The higher the value of the shipment, or the more sensitive, the more it is expected that activities would want to identify the discrepancy.

Hence, despite the fact that a DISREP would be required for almost any damage or loss in the QUICKTRANS system, it is possible that much goes unreported. Therefore, when using the DISREP data as a source of the loss which occurs in the QUICKTRANS system it should be noted that, the lower the dollar value or the sensitivity of the loss, the less likely it is that it will be reported.

D. CCST ANALYSIS

The cost to be used in the analysis is the total dollar value of loss and damage which is reported in the DISREPS. If the reported loss is less on QUICKTRANS than it is on commercial air this will be an indicator that no change to the system may be necessary. If the difference is very small, or if more loss is reported on QUICKTRANS, then steps should be taken to increase contractor care.

One of the alternatives called for the use of private insurance by the contractor. Because of the size of the air transportation system it is not possible to obtain an accurate assessment of what the insurance would cost. Information on what other air carriers pay for insurance would not necessarily be an accurate indication of the rates which would apply to QUICKTRANS. It would be necessary to

be able to take bids from various large insurance companies after they have a chance to review the system.

E. QUANTIFIABLE FACTORS

The data for Table I was derived from the MTMC World Wide Traffic Management Statistics [Ref. 9] taken from GELs and DISREPs, and a special report done for this study, by MTMC [Ref. 8]. The statistics listed were selected from these sources to compare the QUICKTRANS system to commercial air.

As can be seen in Table II, the number, and configuration of shipments has changed over the three years recorded. The number of DISREPs recorded for commercial air has remained fairly stable over this time period while those for QUICKTRANS have risen from 4 in 1980 to 264 in 1982. Some of the rise in DISREPs could be attributed to increased shipments, and some to increased reporting. As mentioned previously there has been some difficulty in getting all discrepancies reported for QUICKTRANS, and the increased emphasis on reporting could be part of the reason for the big jump from 1980 to 1981. In order to effectively compare the two systems it is necessary to compensate for the larger volume and ton-miles of shipments on QUICKTRANS. This is done in Table II.

The first comparison in Table II shows that on commercial air the percentage of shipments short or damaged has decreased over the last three years while QUICKTRANS has increased slightly. However, in 1981 and 1982 the percentage of discrepant shipments reported on commercial air was almost double that of QUICKTRANS. The average short or damage cost (line 2) does not exhibit a conclusive trend for commercial air or QUICKTRANS but it does show that the cost for commercial air has remained higher. The average

TABLE I
ALL DEPARTMENT OF DEFENSE SHIPMENTS

CATEGORY	FY 1980	FY 1981	FY 1982
<u>COMMERCIAL AIR</u>			
Number of shipments	160,940	176,730	209,998
Weight (tcns) of shipments	10,123	9,645	10,563
ton-miles	15,479,963	14,477,473	15,886,520
Number of DISREFS	271	216	253
Weight (lbs) of DISREFS	14,158	15,042	16,136
Total cost of DISREFS (\$)	270,003	430,979	393,619
<u>QUICKTRANS</u>			
Number of shipments	-	400,485	428,131
Weight (tcns) of shipments	54,312	56,550	56,509
ton-miles	56,151,176	54,592,852	55,143,120
Number of DISREFS	4	218	264
Weight (lbs) of DISREFS	135	26,368	19,352
Total cost of DISREFS (\$)	3627	434,695	584,196

cost of an OSD shipment (line 3) has risen steadily on QUICKTRANS to over \$2,200 per shipment while commercial air has varied and was \$1,500 in 1982. As mentioned earlier, the higher the value of a discrepancy the more likely it is to be reported. This may have had the effect of inflating

TABLE II
SELECTED COMPUTATIONS

CATEGORY	FY 1980		FY 1981		FY 1982	
	Commer Air	QUICK TRANS	Commer Air	QUICK TRANS	Commer Air	QUICK TRANS
1. % of ship- ments short or damaged	.168	n/a	.122	.054	.120	.061
2. avg short or damage cost (\$) for all shipments	1.68	n/a	2.44	1.09	1.87	1.36
3. avg cost of short or damaged (\$) shipments	996	907	1,994	1,995	1,555	2,213
4. avg cost of damage /ton-mile	.0174	-	.0297	.0079	.0368	.0106
5. avg ship- ment weight (lbs)	125.80	n/a	109.2	282.40	100.60	264.00
6. standard insurance payable at \$.50/lb	62.90	n/a	54.60	141.20	50.30	132.00
7. avg loss to the gov't with insurance	(94%) 933	n/a	(97%) 1,939	(93%) 1,854	(97%) 1,506	(94%) 2,080
8. avg loss for all ship- ments (\$)	1.58	n/a	2.37	1.01	1.81	1.28

Note: Insurance amounts for QUICKTRANS are assuming the same coverage afforded commercial shipments.

the average cost of a discrepancy, especially on QUICKTRANS. The average cost per ton-mile (line 4) indicates that QUICKTRANS has incurred less than one third the damage incurred by commercial air on this basis.

The commercial air carriers have a fairly standard rate they will pay for shipment loss and damage which was used in completing Table II. If a shipment is over 100 pounds they

will pay \$0.50/pound. As shown in line 5 of Table II the average shipment weight in both systems is over 100 lbs so the \$0.50/lb rate was used as a standard rate for comparison. Extra insurance can also be purchased and it will be discussed after the standard insurance.

The standard insurance payable (line 6) was computed by using the average shipment weights from line 5 and the \$0.50/lb standard insurance. A comparison of the amount payable with standard insurance (line 6) and the average cost of an OSD shipment (line 3), shows that the standard insurance would be inadequate to cover the average losses. To amplify this point line 7 shows the average loss to the government with the standard insurance in both dollars and as a percentage of total loss. Line 8, which was computed by multiplying line 2 by the percentage loss in line 7, shows the effect this insurance would have over all shipments, as compared to line 2 without insurance coverage.

There are two other types of insurance commonly available from commercial air freight carriers. These are declared value insurance and lump sum insurance. Declared value requires the shipper to show that the OSD was the fault of the carrier and may require proof of the value of the shipment. Lump sum, or full value, insurance is paid regardless of fault and proof of value is not normally required. The declared value insurance is less expensive than lump sum if the carrier offers both. The rates on both vary from \$0.25 to \$0.50 per \$100 dollars in value of the shipped commodity. The amount which insurance of this nature would cost for the whole QUICKTRANS system cannot be determined without getting an insurance company's estimate but the range above should be representative.

If insurance is to be feasible it would have to cover the OSD which occurs without costing more than it saves. Line 2 of Table II shows the cost of OSD which occurs if it

were spread over all shipments. Assuming the full coverage would be desired, insurance would be purchased for all items, and using the figure in line 2 for 1982, the insurance could not cost more than \$1.36 per shipment. Using the \$0.25 to \$0.50 range, the insurance would be feasible if the average shipment is valued under \$272.00 for the \$0.50/\$100 rate or \$544.00 for the 0.25/\$100 rate. If the average shipment value was more than these figures the insurance would cost more than \$1.36 per shipment and would not be economically effective. If the cost of insurance, or the average loss were to change, it would also change the feasibility of insurance.

F. NON-QUANTIFIABLE FACTORS

In order to minimize the loss which occurs it may be possible to tighten up the procedures for processing the freight, leaving less opportunity for loss. This alternative would require shippers to spend more time on some shipments and would make it more difficult to get some shipments out in the same time frames. It would result in better tracking of shipments and should reduce unidentifiable losses.

While no non-negligence claims are filed against the contractor, there is little need for the contractor to be very careful about the condition of the freight which is received from the shippers. If the contractor is put in a situation of more accountability for the condition of the freight which is shipped it may be assumed that the contractor would be more demanding on the requirements to the shippers. This could serve to reduce the flexibility which the shippers currently enjoy.

The question of incentive to the contractor is another factor which cannot be quantified. Under the current system the contractor is not penalized for lost or damaged freight. The only incentive under the current system is professional pride and assuring the ability to compete for future contracts. If the insurance alternative is chosen the claims would be paid by the insurance company and the cost of insurance borne by the government through increased contract cost. Again there is no monetary incentive to the contractor to minimize loss and damage. Only the prospect of reduced earnings provides a direct monetary incentive to the contractor.

Because of the nature of the system, the cost of the item being shipped, and whether or not the government is reimbursed is not always the most important factor. In some cases the shipment can be much more important operationally than the dollar value would indicate. The nature of a high priority system is dealing with shipments that are needed very quickly regardless of the dollar value. If the shipment does not arrive as intended, the effects could be much more costly than the value of the part.

G. DISCUSSION OF ALTERNATIVES

The first alternative suggests maintaining the status quo. This alternative was to be selected as the preferred alternative if the loss and damage which occurs on the system is not considered excessive and no further steps were necessary to control it. It has been shown that the reported loss and damage problem on QUICKTRANS is less than that on commercial air. It has not been shown whether or not the loss and damage which occurs is excessive, or if further measures are necessary. The other alternatives, which are expected to reduce the effect of loss and damage on the system, should be reviewed for feasibility.

Alternative two suggested that the contract be changed to allow the government the right to claim reimbursement for all loss and damage which occurs on QUICKTRANS. Table II showed the benefits to the government if the QUICKTRANS system had the same insurance coverage the government typically receives when shipping on commercial air. The table shows that the proportion of loss which could be recovered is very small and would not be cost effective for the government. More comprehensive insurance coverage, which the current government policy prohibits using, was also compared to show the possible benefits. The comparison showed that if the average shipment is valued under \$544.00 this insurance could be cost effective to the government. Since the average reported loss on QUICKTRANS in 1982 was \$2,213 this may indicate that the average shipment is valued at more than \$544.00. If the average shipment value was less than \$544.00 and insurance was to be used, the cost of the insurance would be borne by the government and the contractor would incur no additional cost if freight was damaged or lost. The use of insurance would not provide incentive for the contractor to reduce loss and damage in the system.

Alternative three requires contractor compensation for loss and damage on extraordinary cost items. This alternative would require special procedures for differentiating the extraordinary cost items in order to assure compensation if lost or damaged. Singling out these items would allow for better control of them and would give the contractor more incentive to avoid loss and damage, but would do nothing to provide more incentive for the routine shipments. Because of the unclear accountability upon entry to the system, which was mentioned above, special processing would be required for this freight. Signature Service is already available on QUICKTRANS and would clearly establish fault in

most cases of loss and damage. Because this alternative does not deal with all freight in the system it will not be considered as a viable alternative for the system. It is a procedure which could reduce overall cost of loss and damage to be used in conjunction with one of the other alternatives.

The incentive-reduction method was suggested in alternative four. An incentive-reduction plan would not require the contractor to obtain insurance and would therefore not result in increased direct cost to the government. A reduction in the incentive payments made to the contractor could be based on actual loss or on a random sampling of shipments to determine a percentage lost or damaged. The advantage of these methods is that they would give the contractor direct incentive to reduce loss and damage in order to assure the incentive payments are not reduced. The disadvantages to this incentive-reduction method would be higher costs and less expedient processing because the contractor would undoubtedly insist on better accountability for the freight. It was mentioned in the beginning of the operations review that the responsibility for the freight is unclear because the freight was not always checked and signed for upon receipt. If this procedure was enforced by the government or the contractor, it would increase the processing time and probably the contractor cost.

Alternative five suggests another way to reduce the loss and damage through tightening up the procedures as defined in the contract. This alternative would have the same disadvantages as alternative four, namely, increased processing time and increased costs. In addition it would require the government to monitor procedures to assure the contractor was complying with the contract. The advantage would be increased accountability and control of freight moving through the system, and the resultant reduction in

loss and damage. This alternative would not require any change to the contract since the provisions already exist, but it may require renegotiation because the procedures have not been previously enforced. Therefore, because of the increased cost and difficulty in enforcing this alternative, it should not be considered further.

VI. CONCLUSION

The QUICKTRANS system is reasonably effective based on the the computerized material control and the way it is designed to be implemented. In other words the system, as designed, is complete, with no major loopholes in the procedures as written. The format and schedules were designed from the bottom up to be convenient for the DOD shippers, and the documentation is simple and straightforward. However some of the procedures which the contractor performs are not in strict compliance with the contract as pointed out in the operations review. Some of these inconsistencies have the potential for becoming serious problems on the system should the contractor become less interested in performing the job correctly.

A. RECOMMENDATIONS

In studying the possible alternatives, the lack of complete loss and damage information makes an accurate recommendation difficult. It is recommended that steps be taken to ensure all loss and damage is reported in order to more accurately assess the problems in the future. The data used is considered adequate for the purposes of this study but further refinement would require more accurate information.

Based on the available data shown in Table II, the QUICKTRANS system does not incur as much loss and damage as the commercial air system. Therefore, any changes in the overall system would not be considered necessary. Some items which move in the QUICKTRANS system are valuable enough, or strategically important enough, to warrant

different procedures. A different method should be implemented for this type of shipment through the use of signature security or similar procedures. Shipments lost or damaged using this method should result in a reduction in the incentive paid to the contractor, as discussed in alternative four, rather than by processing claims as discussed in alternative two. Reduction of the incentive payments to the contractors would not be considered an expense to the contract which could be used to justify increased rates. The signature security, or similar procedures, would clearly identify the responsibility and show non-performance of the contract. Utilizing these procedures for everything in the system would require unnecessary additional workload and additional cost to the government, and should not be implemented at this time.

The damage statistics should continue to be refined and compared to assure the system does not begin to deteriorate. If the loss and damage in the system ever exceeds the amount in the commercial air system or some other standard then measures should be taken to increase the overall financial responsibility of the carrier through the use of reduced incentive payments. The use of reduced incentive payments is selected by the author as the best method for minimizing the impact on the government. Other methods may compensate the government financially but do not provide as much direct incentive to the contractor to reduce the loss and damage on the system. The financial cost may also be minimal compared to the effect of missing freight on operations.

APPENDIX A
QUICKTRANS TERMINALS

DESTINATION LOCATION	COMMUNICATION	
<u>IDENTIFIERS</u>	<u>TERMINAL</u>	<u>LOCATION</u>
BOS		Boston, MA
NCO	X	Newport, RI (NETC)
WRI		Wrightstown, NJ (McGuire AFB)
PHL		Philadelphia, PA (Naval Shipyd)
FNE		Philadelphia, PA (Forms Ctr)
DOV	X	Dover, DE (Dover AFB)
DCA		Washington, D.C. (NAVSTA)
NHK		Patuxent River, MD (NATC)
NGU	X	Norfolk, VA (NAVAIRSTA)
IND	X	Weir Cook Airport, IN
NKT		Cherry Point, NC (MCAS)
CHS	X	Charleston, SC (AFB)
KBY		Kings Bay, GA (SUBASE)
NIP	X	Jacksonville, FL (NAVAIRSTA)
COP	X	Cape Kennedy, FL (AFB)
NOX	X	Key West, FL (NAVAIRSTA)

DESTINATION

LOCATION

COMMUNICATION

IDENTIFIERS

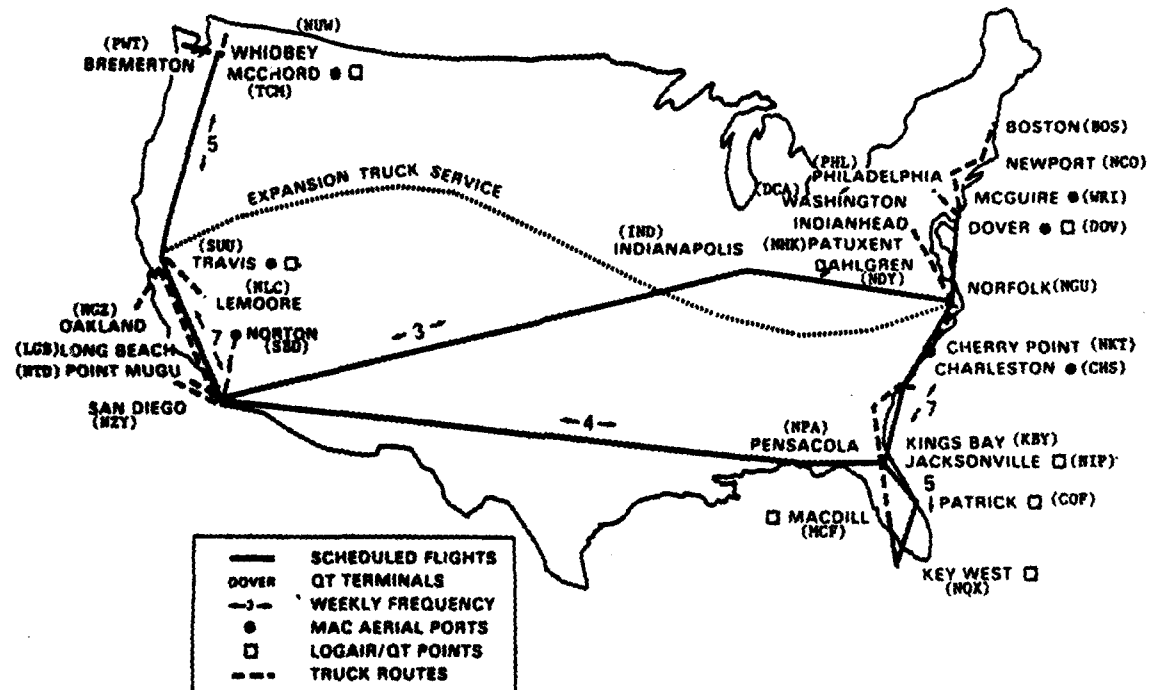
TERMINAL

LOCATION

NPA	X	Pensacola, FL (NAVAIRSTA)
NZY	X	San Diego, CA (NAVAIRSTA)
NTD		NAS Point Magu (NCBC)
NGZ		Oakland, CA (NSC)
NLC		Lemoore, CA (NAVAIRSTA)
SUU	X	Travis AFB, CA
IGB	X	Long Beach, CA (NSC)
TCH	X	Tacoma, WA (McChord AFB)
PWT		Bremerton, WA (NSC, Puget Sd)
NUW		Whidbey Island, WA (NAVAIRSTA)
INH		Indianhead, MD (NAVORDSTA)
DAG		Dahlgren, VA (NAVWEAPSTA)
GCN		New London, CT (SUBASE)

Source: ref 3

APPENDIX B **QUICKTRANS MAP AND SCHEDULES**



QUICKTRANS FLIGHT SCHEDULE

'READ DCWN'

ALL TIMES ZULU

'READ UP'

-----L100-----AIRCRAFT-----L100-----

<u>222</u>	<u>232</u>	<u>133</u>	<u>141</u>	<u>TRIP</u>	<u>142</u>	<u>134</u>	<u>634</u>
SUN	TUE	SUN	TUE	TERMINAL	MON	SAT	SUN
6	THU	MON	WED		TUE	SUN	MON
<u>WED</u>	<u>FRI</u>	<u>THU</u>	<u>FR/SA</u>		<u>TH/FR</u>	<u>WED</u>	<u>THU</u>
		ORIG	ORIG	DOV	TERM		TERM
		0915	0845		0630		0715
		1015	0945	NGU	0535		0620
		1130	1100		0420		0505
			1245	CHS	0250		0335
			1345		0150		0235
			1455	NIP	0045	TERM	0130
			1610		2330	2359	ORIG
				CHS		2250	
						2150	
				NGU		2005	
						1850	
			1740	NPA	2210		
			1840		2110		
		1400		IND		1640	
		1500				1540	
		2130	0100	NZY	1535	1005	
		2245	0215		1420	0850	
ORIG	ORIG	0045	0415	SUU	1230	0701	
0845	0320	TERM	TERM		ORIG	ORIG	
1105	0540			TCM			
1235	0710						
1450	0925			SUU			
TERM	TERM						

APPENDIX C
DEDICATED TRUCK SCHEDULE A

----all times local----

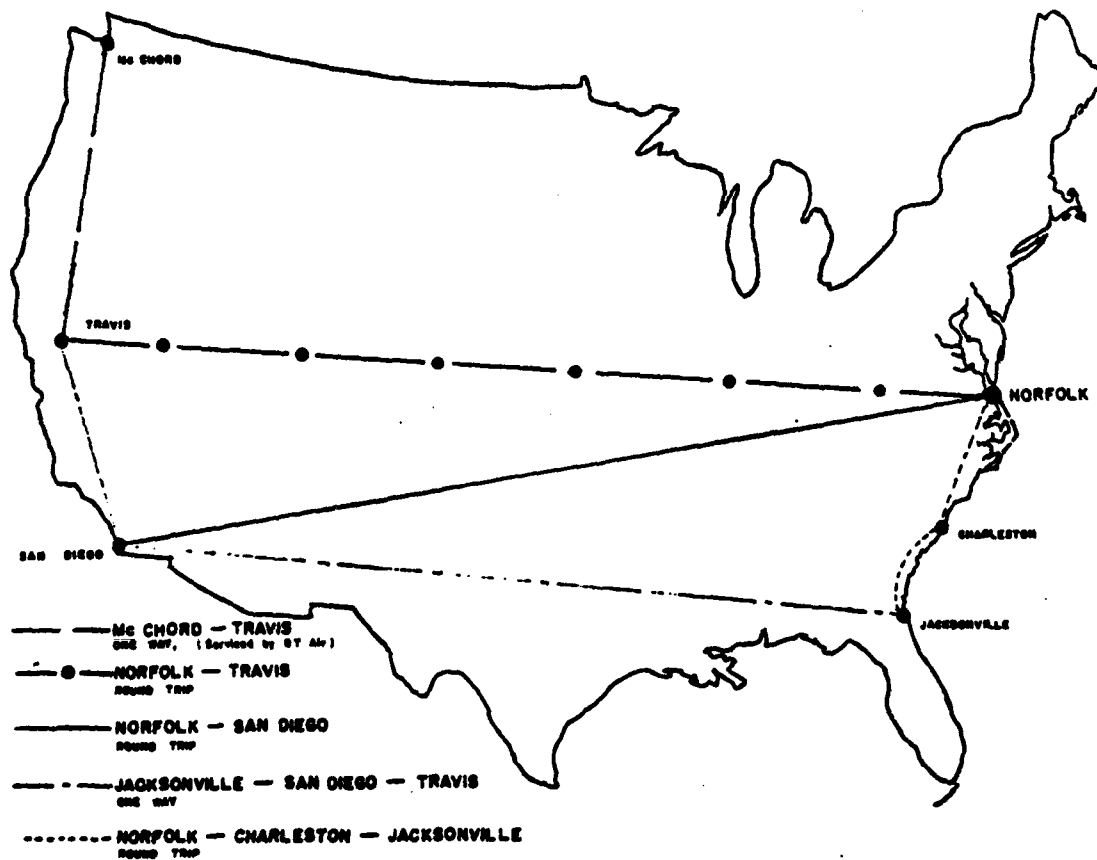
737	735	733	731	725	72B	72A	721	Trip Identity
MON	F/SA	MON	MON	MON	WED	WED	MON	OPER
thr		thr	thr	TU/TH			TU/TH	Terminal
FRI	SU-TH	FRI	FRI	FRI			FRI	DAYS
27'	40'	54'	54'	40'	40'	35'	35'	Size of Truck
				ORIG	CRIG	ORIG	ORIG	
				0600	0930	0830	0500	L McChrd AFB
						1130	0800	A
						TERM	TERM	L Whidby Isl
				0730	1100			A
				TERM	TERM			L Bremerton
		ORIG	ORIG					A
		0430	1800					L San Diego
			2100					A
			2200					L Long Beach
								A
	ORIG							L NSC Oakland
	1600							A
ORIG	1800		0800					L Travis AFB
0730	TERM		TERM					A
								L El Toro
		0700						A
		0800						L Long Beach
		1000						A
		1100						L Point Magu
		1130						A Port
		TERM						L Hueneme
1130								A
TERM								L Lemocre

SCHEDULE B

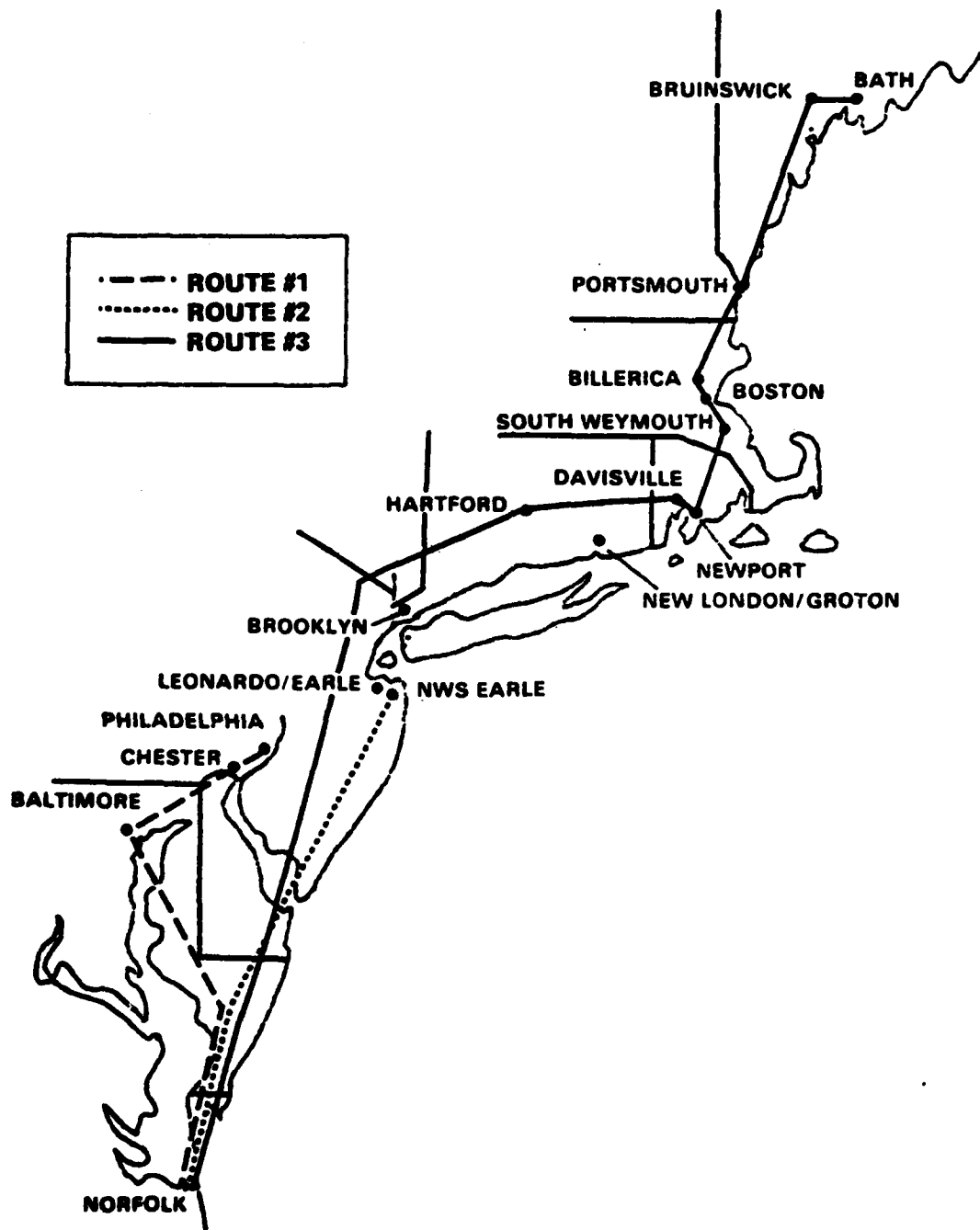
---all times local---

Trip Identity		722	726	732	734	736	738
CFER		MON	MON	MON	MON	MON	MON
Terminal		thru	thru	thru	thru	thru	thru
DAYS		FRI	FRI	FRI	FRI	FRI	FRI
Size of Truck		35'	40'	54'	54'	40'	27'
		TEFM	TERM				
McChord AFB	A	1800	1700				
	L	1500					
Whidbgv Isl	A	ORIG					
	L		1530				
Emmertcn	A		ORIG				
	L			TERM	TERM		
San Diego	A			0300	2230		
	L			2400			
Long Beach	A			2300			
	L			1400		TERM	
NSC Caklard	A			1200		0830	
	L			1000		0700	TERM
Travis AFB	A			ORIG		ORIG	1900
	L				2000		
El Tcro	A				1930		
	L				1630		
Long Beach	A				1730		
	L				1530		
Point Magu	A				1430		
Fort	L				1400		
Hueneme	A				ORIG		
	L						1500
Lenocre	A						ORIG

APPENDIX D **CONTRUCK MAP**



APPENDIX E
NORTHEAST DEDICATED TRUCK SERVICE



LIST OF REFERENCES

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7. Study of Dedicated Transportation System For High Priority Cargo, Logistics Management Institute, 10 March 1981.
8. Discreps for QUICKTRANS and Commercial Air Loss and Damage, a special NMIC report for this study including data for FY 1980 - 1982, dated 31 Mar 1983.
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