Logistics Management Institute

An EDI Strategic Plan for the Military Traffic Management Command

MT403MR1

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March 1996

W. Michael Bridges
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An EDI Strategic Plan for the Military Traffic Management Command

Executive Summary

One of the corporate visions of the Military Traffic Management Command (MTMC) is to eliminate as many paper handling and data entry tasks as possible by the year 2010. A strategy to realize this vision is to use electronic data interchange (EDI) where practical and economically feasible.

MTMC has a major role in leading Department of Defense (DoD) efforts to automate the exchange of transportation paperwork through EDI. Although it has used EDI to upgrade several of its business processes, such as the booking of ocean carriers, the submission of tenders, and the processing of government bills of lading, many other opportunities are available.

In this report, we identify the potential EDI opportunities within MTMC. These opportunities encompass over 100 information flows that generate over 50 million transactions annually. We also recommend a prioritization of these EDI opportunities based on the assessment of several factors including mission need, economic benefit, trading partner availability, existence of EDI standards, quality of data, and the stability of the business environment. We conclude that MTMC should focus its limited EDI resources on 15 projects that account for approximately 98 percent of potential EDI transactions.

Ten of the 15 projects are ongoing at MTMC and 5 are required to support the U.S. Transportation Command's Global Transporation Network (GTN). The ongoing projects include

- Transportation Discrepancy Report Distribution
- Guaranteed Traffic Freight Tender Solicitation
- Voluntary Freight Tender Partnership Expansion
- Personal Property Interstate and International Rate Solicitation
- Ocean Cargo Integrated Booking System (Mechanized Export Traffic System Replacement Project)
- U.S. Customs Interface Conversion
- Domestic Freight Government Bill of Lading Shipper Expansion
- Personal Property Government Bill of Lading Conversion

- Standard Army Acquisition and Contracting System Implementation
- Rating and Routing (DD Form 1085) Conversion.

Projects required to support the GTN include

- Advance Transportation Control and Movement Document Conversion
- Export Ocean Shipment Status Report Distribution
- Domestic (Surface) Shipment Status Report Distribution
- Domestic Freight Government Bill of Lading Distribution
- Domestic Freight Commercial Bill of Lading Conversion.

To support these 15 projects, we present a schedule for initiating and tracking each effort. We also detail the procedures that these EDI projects should follow during development and identify the MTMC components that should be assigned responsiblity for those procedures.

In summary, we believe MTMC should be able to implement all 15 projects by the first quarter of 1998. This implementation will lead to a well-balanced and effective EDI program that enables MTMC to continue as a leader in using EDI techniques to enhance Defense transportation.

Contents

Chapter 1. Introduction 1-1

Background 1-1

Report Organization 1-2

Chapter 2. EDI Program Vision 2-1

Introduction 2-1

EDI Project Candidates 2-1

Prioritization Strategy 2-11

Evaluation Criteria 2-11

Executability Factors 2-16

Short-Term EDI Focus Areas 2-17

Schedule for Implementing High-Priority Projects 2-19

Summary 2-20

Chapter 3. Implementing MTMC's EDI Program 3-1

Background 3-1

Roles and Responsibilities 3-1

Office of the Secretary of Defense 3-1

Defense Information Systems Agency 3-2

U.S. Transportation Command 3-2

Defense Logistics Management Standards Office 3-2

Military Traffic Management Command 3-3

Program Infrastructure Activities 3-5

Strategic Planning 3-5

Architecture Management 3-5

Program Coordination 3-6

Contents (Continued)

Promotion of Industry and DoD Participation 3-6

ASC X12 Maintenance Support 3-6

Trading Partner Agreement Management 3-7

Application System Technical Support 3-7

Application System Operational Support 3-7

Performance Monitoring 3-7

Training 3-8

Special Infrastructure Projects 3-8

Project Implementation Process 3-9

Initiating EDI Projects 3-10

Managing Project Development and Implementation 3-11

Establishing Trading Partner Relationships 3-13

Appendix A. Potential EDI Projects

Appendix B. Explanation of Basis of Estimates

Appendix C. System Descriptions

Appendix D. Glossary

Appendix E. ASC X12 Transaction Sets

CHAPTER 1

Introduction

BACKGROUND

In a May 1988 policy memorandum, Deputy Secretary of Defense William H. Taft IV directed DoD Components to make "maximum use of EDI for the paperless processing of all business related transactions." Since that time, MTMC has been committed to using EDI. Although MTMC has engaged in various forms of EC for internal DoD exchanges of information for more than 20 years, only within the past 10 years has it used similar techniques to exchange information with external activities. In addition, within the past 5 years MTMC has moved from a primarily mainframe environment toward an open systems architecture. Several EDI application projects accompanied that migration.

The Automated Carrier Interface (ACI) system, which provides the gateway between the Mechanized Export Traffic System (METS) II and commercial ocean carriers, was MTMC's initial EDI project. At that time, the Transportation Data Coordinating Committee (TDCC) maintained all public EDI transportation standards. More recently, under standards set forth by the American National Standards Institute (ANSI) Accredited Standards Committee (ASC) X12, MTMC has implemented EDI projects in support of the domestic freight voluntary tender process and the exchange of CONUS government bills of lading (GBLs) for DoD's transportation payment process. It also has initiated EDI projects in support of domestic freight guaranteed traffic tenders and personal property rate solicitations.

MTMC's recent EDI projects were not necessarily coordinated efforts to carry out its mission or to obtain a particular return on investment (ROI). Instead, they were primarily selective opportunities intended to form joint ventures with high-volume, EDI-capable trading partners. As we noted in a previous report, one of the lessons learned from these efforts is that MTMC has more potential EDI projects than it can fund, so it must be highly selective in targeting future EDI applications.[1] In this report, we present a strategic plan that identifies fifteen EDI projects that we believe MTMC should focus on over the next 3 to 5 years. We believe by concentrating its EDI efforts on these projects, MTMC will achieve a comprehensive, balanced, and effective EDI program.

[1] LMI Report AR308LN1, *Creating an Organizational Infrastructure to Manage EDI for the Military Traffic Management Command*, W. Michael Bridges and Ralph Notto, August 1994.

Report Organization

Chapter 2 identifies all potential EDI opportunities within MTMC, describes a methodology for assigning priorities to those opportunities, targets the projects that warrant investment during the next three to five years, and proposes a schedule for initiating and tracking the high-priority near-term projects. Chapter 3 focuses on implementing MTMC's EDI program by describing MTMC's (and other organization's) roles and responsibilities for EDI. It also details the procedures that EDI projects should follow during application development and identifies the MTMC components that are responsible for those procedures. A series of appendices provide supporting information, including a glossary of acronyms.

CHAPTER 2

EDI Program Vision

INTRODUCTION

The vision for MTMC's EDI program is influenced by guidance from the Office of the Secretary of Defense and Department of the Army, along with two key documents — *Defense Transportation System 2010 Action Plan* and *Army Enterprise Strategy*. The program is further shaped by the practical considerations of satisfying mission requirements and achieving adequate returns on investment.

The *Action Plan* provides DoD's vision for Defense transportation through the year 2010. That vision calls for using EDI to help create a seamless interface across commercial systems. It further states that:

> Data fields must be standardized or rules of interpretation must be developed and agreed to both within DoD and throughout the commercial transportation world.

The Army Enterprise Strategy is the single, unified vision for the Army command, communications, control, computers, and intelligence community to strengthen combat, combat support, and combat service support forces. EDI supports 2 of the 10 principles underlying that strategy: optimize the information technology environment and acquire integrated systems using commercial technology.

In many cases, MTMC's *Master Plan* (August 1994 — Draft) and *Information Mission Area Modernization Plan* (March 1995) expand upon this guidance. Additionally, several specific data interfaces have been mandated for accomplishment through EDI by the recently published *Defense Intransit Visibility (ITV) Integration Plan* that the Deputy Under Secretary of Defense for Logistics approved for implementation in March 1995.[1] With this extensive planning guidance and the realities of fiscal constraints, labor ceilings, and migrating system strategies, MTMC needs to first determine its potential EDI projects and then identify the ones that warrant near-term implementation.

EDI PROJECT CANDIDATES

As a result of a detailed review of MTMC's operations, we identified 37 potential EDI projects comprising more than 100 information flows. Most of those opportunities were identified during interviews with key MTMC personnel in

[1] DoD, *Defense Intransit Visibility Integration Plan*, February 1995.

such business areas as quality (MTOP-Q), transportation services (MTOP-T), operations (MTOP-O), resource management (MTRM), and contracting (MTAQ-PARC), along with applying the EDI candidate selection logic presented in Figure 2-1.

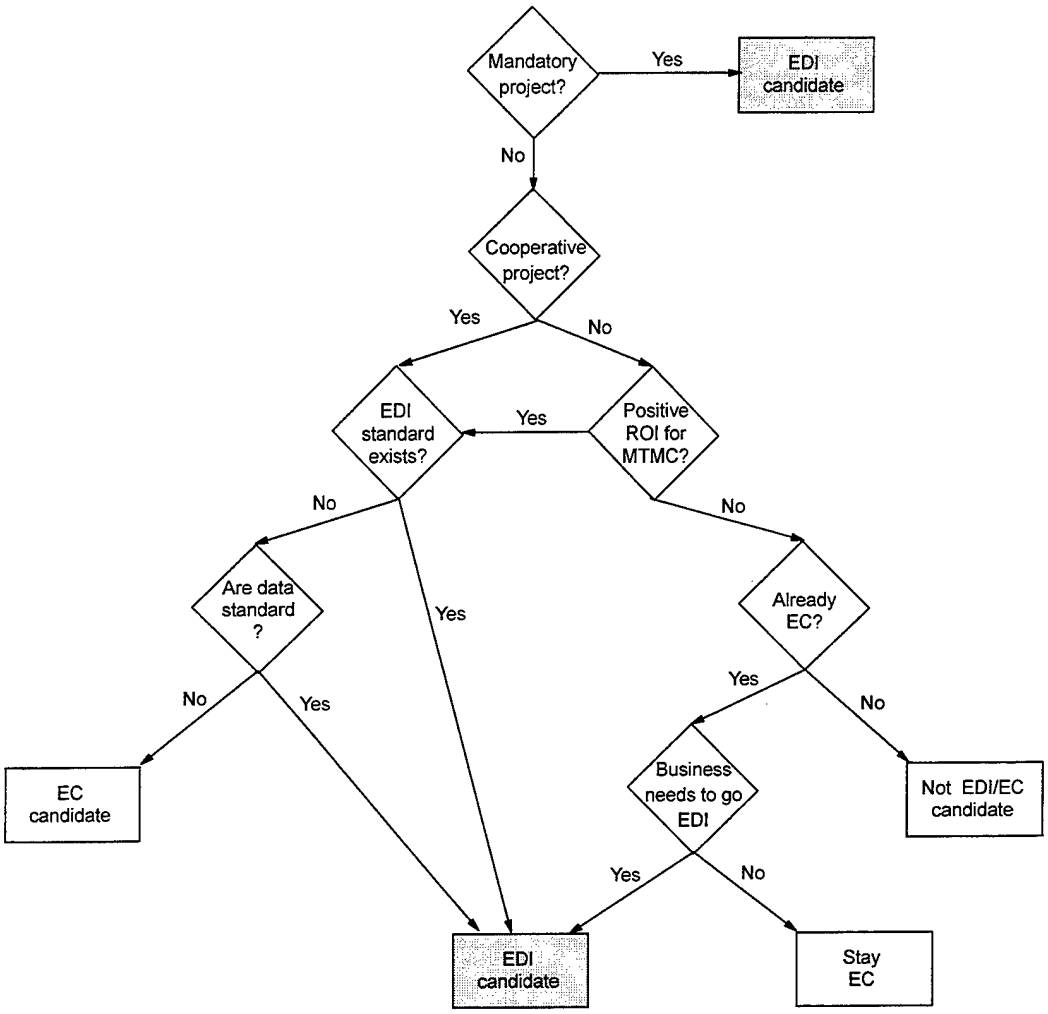

Figure 2-1.
EDI Candidate Selection Logic

We used the logic diagram to quickly determine whether an information flow is a candidate for EDI, EC (electronic other than EDI), or neither.

In applying the logic diagram, the first step identifies all mandatory EDI projects. Mandatory EDI data exchanges are generally associated with major efforts that have high-level approval from the Office of the Secretary of Defense, the U.S. Transportation Command (USTRANSCOM), or the Department of the Army, and are important strategically to Defense transportation. As an example,

USTRANSCOM's ITV program, which makes extensive use of EDI, has been endorsed by the Deputy Under Secretary of Defense (Logistics) and the Commander-in-Chief of USTRANSCOM.

The next step identifies the projects that require MTMC cooperation and can either be supported by existing EDI standards or could justify the development of an EDI standard. Cooperative EDI data exchanges are neither mandated nor offer significant savings to MTMC. These situations occur when a MTMC business partner (government or commercial) exchanges or plans to exchange similar data with several trading partners and has economic justification for using an EDI exchange with MTMC. To illustrate, MTMC has supported a Defense Finance and Accounting Service (DFAS) effort to audit and pay transportation bills electronically even though MTMC's involvement was not mandated and it receives few tangible savings.

Projects that are not mandatory or cooperative may still be good EDI candidates because of their return on investment. Most data currently transmitted on paper, distributed to or received from several business partners, and subsequently entered into several computer systems often are cost-effective EDI applications. EDI data exchanges can also be cost-effective because of the associated indirect savings, such as improved data quality and reduced total processing time. Both direct and indirect savings should be taken into account when justifying EDI data exchanges.

Interfaces with nonstandard data are usually not good EDI candidates, but they may be considered for other forms of EC. The logic diagram also identifies EDI candidates for data interfaces that are already electronic (but do not use public standards) and have a business need to be converted to EDI.

Appendix A describes all MTMC business processes with an EC or EDI potential. It also presents our justification for selecting the EDI project candidates.

Table 2-1 lists all of the potential EDI projects that we identified. MTOP-O has the most potential EDI projects (19), accounting for 58 information flows. MTOP-T has 9 potential EDI projects consisting of 28 information flows, while MTOP-Q and MTAQ-PARC have 4 potential EDI projects each, totaling 5 and 14 information flows, respectively. We also identified one potential EDI project under MTRM's sponsorship.

1

Table 2-1.
MTMC Potential EDI Projects

Business process	EDI project candidate	MTMC functional area/project number	Data flows	
Carrier qualification	Carrier submission	MTOP-Q-01	Carrier documentation submitted to MTMC	Conversion of carr EDI
			MTMC notification to carrier	Conversion of MTM review) to EDI
Carrier performance	Transportation discrepancy report (TDR) conversion	MTOP-Q-02	Generate/receive TDR reports	Convert paper excl EDI (a USTRANSC
	TDR distribution	MTOP-Q-03	Distribution of TDRs	Send and receive T and potentially GTI project)
EDI trading partner agreement (TPA) management	Trading partner profile (TPP) management	MTOP-Q-04	TPP changes	Generate, distribut rather than telepho
Guaranteed traffic (GT) freight tender	Requirements generation	MTOP-T-01	Requirements submission	Convert DLA and M requirements from
	Solicitation	MTOP-T-02	Solicitation	Convert paper soli
			Bid response	Convert paper bid
			Acknowledgement	Acknowledge recei requirement)
			Award	Convert paper noti
			Internal distribution	Convert paper cop rates, per traffic lar activities
			External (new) distribution	Develop EDI acces
	Performance notification	MTOP-T-03	Notification from consignees, shippers, and MTMC to carriers with copies CFM files	Convert paper cop removal to EDI
Voluntary freight tender	Voluntary freight tender partnership expansion	MTOP-T-04	Rate submission	Expand current ED standardizing tend the number of tradi
			Rate distribution	Distribute voluntar

Note: The basis for trading partner and current transaction volume estimates are described in Appendix B; acronym definitions are contained in Appendices C

2

	Project description	Trading partners (annual)	Current transaction volume to be replaced (annual)	Actual or potential MTMC application system	Potential EDI transaction set	Type data
d	Conversion of carrier documentation from paper submission to EDI	450	135,000 pages	None	838 841 864	75% nonstandard
	Conversion of MTMC paper notification (results of qualification review) to EDI	450	450 pages	None	864	Standard
	Convert paper exchange of TDRs from MTMC water ports to EDI (a USTRANSCOM/JLSC special interest project)	<25	200 pages	CFM and/or WPS	842	Standard
	Send and receive TDRs among consignee, CFM, JLSC (DRS), and potentially GTN (a USTRANSCOM/JLSC special interest project)	2	75,000 pages	CFM	842	Standard
	Generate, distribute, and receive changes for TPPs using EDI, rather than telephone and paper transactions	1,000	Unknown	None (CFM, WPS, and IBS potentially involved)	838	70% nonstandard
	Convert DLA and Military Service submissions of GT requirements from paper to EDI	<50	15,000 pages	GT*STEP/CFM	864/602	70% standard
	Convert paper solicitation to EDI	300 – 900	1.2 million pages	GT*STEP/CFM	864/602	Standard
	Convert paper bid submission from carriers to EDI	300 – 900	26,000 pages	GT*STEP/CFM	602	Standard
	Acknowledge receipt of bid submission via EDI (new requirement)	300 – 900	6,200 pages	GT*STEP/CFM	824	Standard
	Convert paper notification of award to EDI	>900	300 pages	GT*STEP/CFM	864	Standard
	Convert paper copy distribution of top 3 to 5 low-cost carrier rates, per traffic lane, to EDI for DoD and other government activities	<12	281,000 pages	CFM	602	Standard
	Develop EDI access to public rate file	2	Not available	CFM	602	Standard
	Convert paper copy letters of warning, suspension, and removal to EDI	300 – 900	300 pages	CFM	864	Standard
	Expand current EDI voluntary tender submissions by standardizing tender rules for all modes of traffic and expanding the number of trading partners	300 – 900	28,000 pages	CFM	602	Standard
	Distribute voluntary tenders to GSA	300 – 900	28,000 pages	CFM	602	Standard

ontained in Appendices C and D; ASC X12 transaction set definitions are presented in Appendix E.

1

Table 2-1.
MTMC Potential EDI Projects (Continued)

Business process	EDI project candidate	MTMC functional area/project number	Data flows	
Personal property intrastate rates	Rate solicitation	MTOP-T-05	Solicitation	Convert paper sol
			Bid response (includes MIRF and "me-too" resubmissions and rate cancellations)	Convert paper bid
			Acknowledgement (acceptions/ rejections)	Acknowledge rec
			Awards	Notification of low
			Rate distribution	Data flow is comb
Personal property interstate and international (ITGBL) rates	Rate solicitation	MTOP-T-06	Solicitation	Convert paper co
			Bid response (includes MIRF and me-too resubmissions and rate cancellations)	Convert magnetic EDI
			Acknowledgement (acceptions/rejections)	Convert MTMC pr rejections that are
			Rate distribution	
			MTMC to carriers	
			MTMC to GSA	
			MTMC to DFAS	
Recruit movement rates	Rate solicitation	MTOP-T-07	Rate solicitation	Convert paper sol to EDI
			Bid response	Convert paper bid
			Award	Convert paper not
Commercial Travel Office (CTO) services requirements	Requirements generation	MTOP-T-08	Submission of CTO requirements	Convert paper rec include EDI transa

Note: The basis for trading partner and current transaction volume estimates are described in Appendix B; acronym definitions are contained in Appendices C

2

Project description	Trading partners (annual)	Current transaction volume to be replaced (annual)	Actual or potential MTMC application system	Potential EDI transaction set	Type data
Convert paper solicitation to EDI solicitation	<500	50,000 pages	WHIST	864/602	Standard
Convert paper bid responses and me-too responses to EDI	<500	21,600 pages	WHIST	602	Standard
Acknowledge receipt of bid submissions to carrier	<500	21,600 pages	WHIST	602	Standard
Notification of low-cost winners	<500	300,000 pages	WHIST	602	Standard
Data flow is combined with interstate rate distribution	<500	7,200 pages	WHIST	602	Standard
Convert paper copy solicitation to EDI	720	>100,000 pages	WHIST	864/602	70% standard
Convert magnetic tape/disk bid submissions from carriers to EDI	720	4 million magnetic tape records	WHIST	602	Standard
Convert MTMC printouts of acceptances of receipt and rejections that are sent to carriers	720	80,460 pages	WHIST	602	Standard
	720	18.6 million magnetic tape and electronic records	WHIST	602	Standard
	1	40,000 magnetic tape records	WHIST	602	Standard
	1	40,000 magnetic tape and electronic records	WHIST	602	Standard
Convert paper solicitation of passenger traffic rates from paper to EDI	60	2,400 pages	PSRO	840/602	70% standard
Convert paper bid response from carrier to EDI	60	900 pages	PSRO	843/602	Standard
Convert paper notification of carrier award to EDI	60	1,260 pages	PSRO/GOPAX	843/602	Standard
Convert paper requirements submission to a formal process to include EDI transactions	150	300 pages	None	864	Standard

ed in Appendices C and D; ASC X12 transaction set definitions are presented in Appendix E.

(1)

Table 2-1.
MTMC Potential EDI Projects (Continued)

Business process	EDI project candidate	MTMC functional area/project number	Data flows	
Rental car rates	Rate filing and rate distribution	MTOP-T-09	Submission of rental car rates	Convert paper su
			Distribution of rental car rate to *Official Airline Guide* (OAG)	Convert paper/dis MTMC to publishe
Negotiated freight tender (180 days or less)	Customer request/response	MTOP-O-01	Customer (shipper) request for shipment	Convert current D transaction set
			MTMC response to shipment request	Convert current D EDI response
	Solicitation	MTOP-O-02	Solicitation	Convert EC (Easy special interest fr
			Bid response	Convert EC (Easy
			Award	Convert EC (Easy
Negotiated personal property tender (180 days or less)	Customer request/response	MTOP-O-03	Customer (shipper) request for shipment	Convert current D transaction set
			MTMC response to shipment request	Convert current D EDI response
	Solicitation	MTOP-O-04	Solicitation	Convert EC (Easy
			Bid response	Convert EC (Easy
			Award	Convert EC (Easy
Ocean cargo booking	METS II replacement	MTOP-O-05	Vessel schedule	Replace current M ACI and ASPUR f
			Cargo offer	Replace current M ACI and ASPUR f
			Confirmation	Replace current M ACI and ASPUR f
			Cancellation	Replace current M ACI and ASPUR f
	MSC controlled fleet booking	MTOP-O-06	Vessel schedules	Convert current pa fleet vessel sched

Note: The basis for trading partner and current transaction volume estimates are described in Appendix B; acronym definitions are contained in Appendices C

2

Project description	Trading partners (annual)	Current transaction volume to be replaced (annual)	Actual or potential MTMC application system	Potential EDI transaction set	Type data
Convert paper submission of rates to EDI	60	60 pages	None/TBD	843 or 602	Standard
Convert paper/diskette distribution of rental car rates from MTMC to publishers of the OAG	1	40 pages	None/TBD	843 or 602	Standard
Convert current DDN message/letter and phone request to EDI transaction set	>500	2,000 pages	CFM	858/602	70% standard
Convert current DDN message/letter and phone response to an EDI response	>500	2,000 pages	CFM	858	Standard
Convert EC (EasyLink) solicitation to EDI (the project has special interest from the rail carrier industry)	500	2,000 transactions	CFM	864/602	70% standard
Convert EC (EasyLink) response to EDI	500	90,000 pages and 30,000 electronic transactions	CFM	602	Standard
Convert EC (EasyLink) award notification to EDI	500	2,000 transactions	CFM	602	Standard
Convert current DDN message/letter and phone request to EDI transaction set	560	5,000 transactions	TOPS and WHIST	858/602	70% standard
Convert current DDN message/letter and phone response to an EDI response	560	5,000 transactions	TOPS and WHIST	858	Standard
Convert EC (EasyLink) solicitation to EDI	50	5,000 transactions	OTO/WHIST	864/602	70% standard
Convert EC (EasyLink) bid response to EDI	50	65,000 transactions	OTO/WHIST	602	Standard
Convert EC (EasyLink) award notification to EDI	50	5,000 transactions	OTO/WHIST	602	Standard
Replace current METS II system to include incorporation of the ACI and ASPUR functions	12	12,000 transactions	IBS	323	Standard
Replace current METS II system to include incorporation of the ACI and ASPUR functions	<100	100,000 transactions	IBS	300	Standard
Replace current METS II system to include incorporation of the ACI and ASPUR functions	<100	100,000 transactions	IBS	301	Standard
Replace current METS II system to include incorporation of the ACI and ASPUR functions	<100	<1,000 transactions	IBS	303	Standard
Convert current paper/DDN message/phone MSC controlled fleet vessel schedules to EDI	1	300 transactions	IBS	323	Standard

ained in Appendices C and D; ASC X12 transaction set definitions are presented in Appendix E.

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Table 2-1.
MTMC Potential EDI Projects (Continued)

Business process	EDI project candidate	MTMC functional area/project number	Data flows	
Ocean cargo booking (continued)			Cargo offer	Convert current pa fleet booking reque
			Confirmation	Convert current pa fleet booking confir
			Cancellation	Convert current pa fleet booking cance
Export cargo documentation	Advance transportation control and movement document conversion	MTOP-O-07	ATCMD to MTMC	Convert current ele TCMD from shippe USTRANSCOM be
			TCMD to DTSS	Expand DTTS tracl Army depots
			TCMD to GTN	Distribute all TCMD
Intransit visibility	Export ocean shipment status	MTOP-O-08	Shipment inquiry	Convert paper/tele (special interest fro *Integration Plan*)
			Export shipment status	Convert paper, fax, carriers to EDI; rep when one of the fol • Shipment • Change in • Cargo is tr • Delivery to
	Domestic (surface) shipment status	MTOP-O-09	Domestic freight shipment status	Convert paper, fax, freight carriers to E part of the *ITV Inte* CBL as well as GB • Shipment • Change in • Cargo is tr • Delivery to
			Shipment inquiry	Convert paper/tele
Vessel manifest documentation	Ocean cargo manifest (OCM) conversion	MTOP-O-10	OCM to MSC	Convert paper data manifest with an oc provide the comple reconciliation)
			OCM to GTN	This data exchange EDI ATCMD is impl base; if required, it

Note: The basis for trading partner and current transaction volume estimates are described in Appendix B; acronym definitions are contained in Appendices C

2

Project description	Trading partners (annual)	Current transaction volume to be replaced (annual)	Actual or potential MTMC application system	Potential EDI transaction set	Type data
current paper/DDN message/phone MSC controlled ›king request to EDI	1	Not available	IBS	300	Standard
current paper/DDN message/phone MSC controlled ›king confirmation to EDI	1	Not available	IBS	301	Standard
current paper/DDN message/phone MSC controlled ›king cancellation to EDI	1	Not available	IBS	303	Standard
current electronic 80 character MILSTAMP advance 'om shipper systems to EDI (special interest from NSCOM because it is part of the *ITV Integration Plan)*	<100	2.3 million transactions	WPS (IBS/ACI?)	858/856	Standard
DTTS tracking by accepting 858 transaction data from pots	1	15,000 transactions	WPS (IBS/ACI)	858	Standard
e all TCMD to GTN (new requirement)	1	2.3 million transactions	WPS (IBS/ACI)	858	Standard
paper/telephone shipment inquiries to EDI inquiries interest from USTRANSCOM as part of the *ITV on Plan*)	<1,000	Not available	WPS (IBS/ACI?)	313	Standard
paper, fax, proprietary electronic reports from ocean to EDI; reports will normally be automatically submitted ıe of the following occurs: Shipment departs origin Change in mode of transport Cargo is transshipped Delivery to consignee	<1,000	500,000 electronic transactions	WPS (IBS/ACI?)	315	Standard
paper, fax, and proprietary electronic reports from arriers to EDI (special interest from USTRANSCOM as ıe *ITV Integration Plan*); reportable events that apply to well as GBL traffic are Shipment departs origin Change in mode of transport Cargo is transshipped Delivery to consignee	<500	10.8 million transactions	CFM	214	Standard
paper/telephone shipment inquiries to EDI inquiries	<500	Not available	CFM	213	Standard
paper data exchange required to reconcile a ship's with an ocean carrier's invoice (this transaction would :he complete manifest for MSC to perform automated ation)	1	44,000 pages	WPS (IBS/ACI?)	858/309/312	Standard
a exchange may be required, depending on how the :MD is implemented and the design of GTN's data 'equired, it would represent a new requirement	1	44,000 pages	WPS (IBS/ACI?)	858/309/312	Standard

›pendices C and D; ASC X12 transaction set definitions are presented in Appendix E.

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Table 2-1.
MTMC Potential EDI Projects (Continued)

Business process	EDI project candidate	MTMC functional area/project number	Data flows	
Vessel manifest documentation (continued)	U.S. customs interface conversion	MTOP-O-11	Advance U.S. customs manifest Customs manifest acceptance/ rejections Customs arrival notice	Convert paper cu Convert paper co customs manifest Convert paper no
Water port cargo operations planning	Vessel/cargo estimated time of arrival (ETA) conversion	MTOP-O-12	Vessel ETA	Convert telex, tele carriers of vessel
Domestic freight shipment information	GBL shipper expansion program	MTOP-O-13	Data exchanges include GBLs from the following shipper systems to CFM: • TRAMS (vendor shipments) • CMOS (Air Force) • SDS (Army ordnance) • DSS (DLA depots) • DLA legacy systems: – SC&D – NAVADS – SDS	Exchange all GBL EDI (a special inte *Integration Plan*)
	GBL distribution	MTOP-O-14	Data exchanges include GBLs from CFM system to the following activities: • Shipment consignee (from CFM-FM sites) • Carriers (from CFM-FM sites) • DTTS (HAZMAT Expansion Program) • GTN • (DFAS-IN from CFM system)	Develop capability
	CBL/small parcel manifest conversion	MTOP-O-15	Data exchanges include: • CFM system to consignee (from CFM-FM sites) • CFM system to carrier (from CFM-FM sites) • CFM system to GTN • CFM system to DFAS-IN	Convert commerc interest project of *Plan*)

2

Project description	Trading partners (annual)	Current transaction volume to be replaced (annual)	Actual or potential MTMC application system	Potential EDI transaction set	Type data
onvert paper customs clearance document to EDI	<20	44,000 pages	WPS (IBS/ACI?)	309/ EDIFACT	Standard
onvert paper correspondence on acceptance/rejections of ustoms manifest to EDI	<20	1,000 pages	WPS (IBS/ACI?)	355/ EDIFACT	Standard
onvert paper notice of cargo arrival from paper to EDI	<20	1,000 pages	WPS (IBS/ACI?)	312/ EDIFACT	Standard
onvert telex, telephone, and paper notification by ocean arriers of vessel ETA to standard EDI transaction	<90	<1,000 telephone messages	WPS (IBS/ACI?)	312	Standard
xchange all GBLs, inquiries, and transaction error notices via DI (a special interest from USTRANSCOM as part of the *ITV ntegration Plan*)	7	100,000 GBLs 100,000 GBLs 100,000 GBLs 560,000 GBLs 145,000 GBLs 60,000 GBLs 50,000 GBLs	CFM	858 213/214 994/824	Standard
evelop capability to transmit EDI GBLs to external activities	19	100,000 GBLs 100,000 GBLs 15,000 GBLs 1.2 million GBLs 1.2 million GBLs	CFM	858	Standard
onvert commercial bill of lading papers to EDI (a special terest project of USTRANSCOM as part of the *ITV Integration lan*)	21	Not available Not available 4 million CBLs Not available	CFM	858	Standard

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Table 2-1.
MTMC Potential EDI Projects (Continued)

Business process	EDI project candidate	MTMC functional area/project number	Data flows	
Domestic freight shipment information (continued)	Initial load tender conversion	MTOP-O-16	CMOS to CFM system SDS to CFM system DSS to CFM system	• CMOS to CFM sy • SDS to CFM syst • DSS to CFM syst
	Rating and routing (DD Form 1085) conversion	MTOP-O-17	Request for movement Response to request for movement	Convert paper/mes planned project) Convert paper/mes EDI
Personal property shipment information	Personal property GBL conversion	MTOP-O-18	GBL data exchanges from WHIST to the following external activities: • DFAS • Carriers	Convert all paper G (a special interest p Defense Transporta
	Personal property shipment status	MTOP-O-19	Shipment status inquiry Shipment status response	Convert paper/mes personal property s WHIST and carriers Convert paper/mes messages
Stevedore services payment	Stevedore invoice (DD Form 1034) conversion	DCSRM-01	DD Form 1034 from MTMC to DFAS	Develop DD Form 1 forward validated D
Procurement (small purchase procedures)	SAACONS EDI implementation	MTAQ-PARC-01	Solicitation/request for quote Bid response Purchase order (PO)/Award Delivery orders (DOs) Contract/DO/PO modifications	Convert less compl paper forms to EDI Department of the A Convert less compl EDI Convert standard p Convert paper stan Convert paper form EDI

Note: The basis for trading partner and current transaction volume estimates are described in Appendix B; acronym definitions are contained in Appendices C

2

Project description	Trading partners (annual)	Current transaction volume to be replaced (annual)	Actual or potential MTMC application system	Potential EDI transaction set	Type data
• CMOS to CFM system		Not available Not available Not available			
• SDS to CFM system	500	100,000 telephone messages	CFM (CFM-FM)	858	Standard
• DSS to CFM system	500	100,000 telephone messages	CFM (CFM-FM)	858	Standard
Convert paper/message/fax DD Form 1085 to EDI (a CFM planned project)	4	156,000 (paper forms)	CFM	858	Standard
Convert paper/message/fax rating and routing instructions to EDI	4	156,000 (paper forms)	CFM	858	Standard
Convert all paper GBLs for personal property shipments to EDI (a special interest project of the DoD Comptroller as part of the Defense Transportation Payment System)	>900	650,000 GBLs 650,000 GBLs	TOPS/WHIST	858 213/214 859	Standard
Convert paper/message/phone inquiries/responses for personal property shipment (movement) status between TOPS/ WHIST and carriers (estimated at 10% of total shipments)	>900	65,000 phone inquiries	TOPS/WHIST	213	Standard
Convert paper/message/phone responses to inquiries into EDI messages	>900	65,000 phone responses	TOPS/WHIST	214	Standard
Develop DD Form 1034 invoice from MTMC database files and forward validated DD Form 1034 from MTMC to DFAS	2	400 forms	WPS	810/859	Standard
Convert less complex paper solicitation (SF 33/SF 18) from paper forms to EDI (standard system developed by the Department of the Army)	50 per RFQ	55,000 pages	EDI SAACONS	840/864	Standard
Convert less complex paper bid responses to solicitations to EDI	25 per RFQ	10,000 pages	EDI SAACONS	843	Standard
Convert standard paper PO form (DD Form 1155) to EDI	<200	200 pages	EDI SAACONS	836	
Convert paper standard DO form (DD Form 1155) to EDI	<200	400 pages	EDI SAACONS	850	Standard
Convert paper form (DD Form 1155) DO/PO change orders to EDI	<200	100 pages	EDI SAACONS	860	Standard

ned in Appendices C and D; ASC X12 transaction set definitions are presented in Appendix E.

1

Table 2-1.
MTMC Potential EDI Projects (Continued)

Business process	EDI project candidate	MTMC functional area/project number	Data flows	
Procurement (large purchase procedures) (continued)	Stevedore services acquisition	MTAQ-PARC-02	Solicitation	Convert paper
			Bid response	Convert paper
			Award	Convert paper
	CTO services solicitation	MTAQ-PARC-03	Proposal request	Convert paper
			Proposal	Convert paper
			Award	Convert paper
	Nontemporary storage acquisition	MTAQ-PARC-04	Basic Ordering Agreement (BOA)	Convert paper
			Rate changes	Convert paper
			Contract modification	Convert paper
			Delivery service order	Convert paper

Note: The basis for trading partner and current transaction volume estimates are described in appendix B; acronym definitions are contained in Appendice

2

Project description	Trading partners (annual)	Current transaction volume to be replaced (annual)	Actual or potential MTMC application system	Potential EDI transaction set	Type data
Convert paper solicitation to EDI	20	28,000 pages	EDI SAACONS	840/864	85% standard
Convert paper, bid responses to EDI	20	4,000 pages	EDI SAACONS	843	50% standard
Convert paper award notices to EDI	20	240 pages	EDI SAACONS	836	Standard
Convert paper requests for proposal to EDI	100	50,000 pages	EDI SAACONS	840/864	85% standard
Convert paper proposals to EDI	5 – 15	20,000 pages	EDI SAACONS	843	95% nonstandard
Convert paper notification of award to EDI	5 – 15	20 pages	EDI SAACONS	836	Standard
Convert paper BOA to EDI	1,200	12,000 pages	EDI SAACONS	836/840/864	Standard
Convert paper rate change to EDI	1,200	Not available	EDI SAACONS	843	Standard
Convert paper contract modifications to EDI	1,200	Not available	EDI SAACONS	860	Standard
Convert paper DO form (DD Form 1164) to EDI	1,200	150,000 pages			

ained in Appendices C and D; ASC X12 transaction set definitions are presented in Appendix E.

Prioritization Strategy

To aid in assigning priorities to the potential EDI projects listed in Table 2-1, we developed a set of evaluation factors. The two most important factors are mission need and economic benefit. We used them to determine the priority category for each project, and five other factors, which we call executability factors, to rank projects within a priority category. Executability factors include the stability of the business environment, EDI capability of the trading partner environment, existence of EDI standards, quality of data available to the EDI application, and status of supporting application systems. The evaluation factors are described in more detail below.

Evaluation Criteria

We assigned all projects judged to have a positive relationship with mission need or economic benefit a value of 1, while those with neutral or negative relationships were assigned a value of zero. All projects receiving values of 1 on both mission need and economic benefit were considered to be high-priority projects. Projects with a value of 1 for only one of the two priority factors were considered mid-level projects, while projects that were assigned zeros for both priority factors were assigned to the low-priority category. The evaluation scoring results for MTMC's potential EDI projects are summarized in Table 2-2.

Mission Need

The project has a positive correlation to mission need if any one of the following questions can be answered affirmatively:

- Is the data exchange mandated to be EDI? Does the data exchange present such a large workload that MTMC has a risk of mission failure without using EDI?
- Has MTMC already approved the project, or is it an approved project within another DoD activity that MTMC must support?

Economic Benefit

The project has a positive economic correlation if the answer to any of the following questions is yes:

- Does the project have a documented positive return on investment? Would the project eliminate or reduce greatly a large number of hard copy documents or phone transmissions?

Table 2-2.
EDI Potential Project Evaluation Matrix

Functional area	Evaluation factors							Total score		
	Priority (P)		Executability (E)							
Project	Mission need	Economic benefit	Stability of business environment	Trading partner environment	Existing EDI standards	Data quality	Status of supporting AISs	(P)	(E)	Remarks
Carrier Qualification Submission (MTOP-Q-01)	0	1	1	0	0	Unk	0	1	1	Mission success not dependent on EDI; significant paper handling cost avoidance; low economic value to trading partners; high volume of nonstandard data; many developmental uncertainties
TDR Conversion (MTOP-Q-02)	1	0	1	1	1	1	1	1	5	JLSC cooperative project supporting DRS; low document volume; no known developmental barriers
Distribute TDRs (MTOP-Q-03)	1	1	0	1	1	Unk	1	2	3	JLSC cooperative project supporting DRS; high document volume; requires organizational and process ownership issue resolution
Trading Partner Profile Management (MTOP-Q-04)	0	0	0	1	1	1	0	0	3	Mission success not dependent on EDI; volume of TPP addendums unknown; requires organizational and process definition
GT Freight Tender Requirements Generation (MTOP-T-01)	0	0	0	0	1	Unk	0	0	1	Mission success not dependent on EDI; manual quality assurance review offsets EDI opportunity; no clear CONOP; little EDI experience and application support
GT Freight Tender Solicitation (MTOP-T-02)	1	1	1	1	1	1	1	2	5	Project in process; high document volume; no known developmental barriers; internal distribution likely to be EC; external distribution provides more payback to carriers than MTMC
GT Freight Tender Performance Notification (MTOP-T-03)	0	0	0	1	1	1	1	0	4	Mission success not dependent on EDI; low document volume requires organizational and process issue resolution
Voluntary Freight Tender Partnership Expansion (MTOP-T-04)	1	1	1	1	1	1	1	2	5	Project in progress; high document volume; no known developmental barriers
Personal Property Intrastate Rate Solicitation (MTOP-T-05)	0	1	1	0	1	1	0	0	3	Mission success not dependent on EDI; high document volume; little EDI experience and application support at TP levels; on hold because of business process reengineering efforts
Personal Property Interstate and International Rate Solicitation (MTOP-T-06)	1	1	0	1	1	1	1	2	4	Planned project; high document volume; no known developmental barriers; on hold because of business process reengineering efforts

Note: See Appendices C and D for definition of acronyms.

Table 2-2.
EDI Potential Project Evaluation Matrix (Continued)

Functional area	Evaluation factors							Total score		
	Primary (P)		Executability (E)							
Project	Mission need	Economic benefit	Stability of business environment	Trading partner environment	Existing EDI standards	Data quality	Status of supporting AISs	(P)	(E)	Remarks
Recruit Movements Rate Solicitation (MTOP-T-07)	0	0	1	0	0	Unk	0	0	1	Mission success not dependent on EDI; low document volume; many developmental uncertainties
CTO Services Requirements Generation (MTOP-T-08)	0	0	1	0	0	Unk	0	0	1	Mission success not dependent on EDI; low document volume; many developmental uncertainties
Rental Car Rate Filing and Distribution (MTOP-T-09)	0	0	1	0	0	1	0	0	2	Mission success not dependent on EDI; low document volume; low economic value to TP; many developmental uncertainties
Negotiated Freight Tender Customer Request/ Response (MTOP-O-01)	0	0	0	0	0	0	1	0	1	Mission success not dependent on EDI; low document volume; many developmental uncertainties; CONOP not defined; requires organization and process definition; requirement could be potentially satisfied by implementing project MTOP-O-17
Negotiated Freight Tender Solicitation (MTOP-O-02)	1	0	0	1	1	1	1	1	4	Planned project; currently EC; requires standard rules and process definition
Personal Property Negotiated Tender Customer Request/ Response (MTOP-O-03)	0	0	0	0	0	1	1	0	2	Mission success not dependent on EDI; partially EC; informal process; TP environment not EDI capable; on-hold because of process reengineering efforts
Personal Property Negotiated Tender Solicitation (MTOP-O-04)	0	0	0	1	1	1	1	0	4	Mission success not dependent on EDI; currently EC; on hold because of business process reengineering efforts
METS II Replacement (MTOP-O-05)	1	1	1	1	1	1	1	2	5	Already planned system replacement project; relatively high transaction volume; no known developmental barriers
MSC Controlled Fleet Booking (MTOP-O-06)	1	0	1	0	1	1	1	1	4	Already planned system replacement project; low transaction volume; relatively few developmental barriers for MTMC; single TP (MSC) EDI capability uncertain

Note: See Appendices C and D for definition of acronyms.

Table 2-2.
EDI Potential Project Evaluation Matrix (Continued)

Functional area	Evaluation factors							Total score		Remarks
	Primary (P)		Executability (E)							
Project	Mission need	Economic benefit	Stability of business environment	Trading partner environment	Existing EDI standards	Data quality	Status of supporting AISs	(P)	(E)	
Advance Transportation Control and Movement Document Conversion (MTOP-O-07)	1	1	1	0	1	0	1	2	3	Planned ITV integration project (mandate); high transaction volume; TP EDI capability mixed; known data quality problems
Export (Ocean) Shipment Status (MTOP-O-08)	1	1	0	1	1	1	1	2	4	Planned ITV integration project (mandate); high transaction volume; new reporting requirement; requires organization and process definition
Domestic (Surface) Shipment Status (MTOP-O-09)	1	1	0	1	1	1	1	2	4	Planned ITV integration project (mandate); high transaction volume; new reporting requirements; requires organizational and process definition
Ocean Cargo Manifest Conversion (MTOP-O-10)	0	1	0	1	1	0	1	1	3	Mission success not dependent on EDI; high document volume; requires organizational and process definition
U.S. Customs Interface Conversion (MTOP-O-11)	1	1	1	1	1	0	1	2	4	Planned project; high document volume; data quality subject to quality of ATCMD data, which is poor
Vessel Cargo ETA Conversion (MTOP-O-12)	0	0	1	0	1	1	1	0	4	Mission success not dependent on EDI; low document volume; EDI capability directly from ship to port is uncertain
GBL Shipper Expansion (MTOP-O-13)	1	1	1	1	1	0	1	2	4	Planned ITV integration project (mandate); high document volume; current data quality is poor; high visibility cooperative program in support of DTRS
GBL Distribution (MTOP-O-14)	1	1	0	1	1	0	1	2	3	Planned ITV integration project (mandate); high document volume; highly visible cooperative program in support of DTRS; current data quality is poor; operating concept for consignees and carriers not fully defined
CBL/Small Parcel Manifest Conversion (MTOP-O-15)	1	1	0	1	1	Unk	1	2	3	Planned ITV integration project (mandate); highly visible cooperative program in support of DTRS; high document volume; requires organizational and process definition

Note: See Appendices C and D for definition of acronyms.

Table 2-2.
EDI Potential Project Evaluation Matrix (Continued)

Functional area	Evaluation factors							Total score		
	Primary (P)		Executability (E)							
Project	Mission need	Economic benefit	Stability of business environment	Trading partner environment	Existing EDI standards	Data quality	Status of supporting AISs	(P)	(E)	Remarks
Initial Load Tender Conversion (MTOP-O-16)	0	1	0	Unk	1	Unk	1	1	2	Mission success not dependent on EDI; high transaction volume; requires organizational and process definition (CONOP development) to understand TP environment
Rating and Routing (DD 1085) Conversion (MTOP-O-17)	1	1	1	1	1	Unk	1	2	4	Planned project; high document volume; minimal development barriers
Personal Property GBL Conversion (MTOP-O-18)	1	1	1	1	1	0	1	2	4	Planned project; high document volume; data quality is known to be poor; highly visible cooperative program in support of DTRS
Personal Property Shipment Status (MTOP-O-19)	0	1	0	1	1	1	1	1	4	Mission success not dependent on EDI; high transaction volume; requires CONOP and process definition
Stevedore Invoice (DD 1034) Conversion (DCSRM-01)	1	0	0	1	1	Unk	1	1	3	Planned project; low document volume; requires CONOP and process definition
SAACONS EDI Implementation (MTAQ-PARC-01)	1	1	1	Unk	1	1	1	2	4	Planned project; implementation project only (no development); relatively high document volume; little developmental cost
Stevedore Services Acquisition (MTAQ-PARC-02)	0	0	0	Unk	1	Unk	0	0	1	Mission success not dependent on EDI; low document volume; process more complex than PARC-01; data partially nonstandard; many developmental uncertainties
CTO Services Solicitation (MTAQ-PARC-03)	0	1	0	Unk	1	Unk	0	1	1	Mission success not dependent on EDI; high document volume; process more complex than PARC-01; data partially nonstandard; many developmental uncertainties
Nontemporary Storage Acquisition (MTAQ-PARC-04)	0	1	0	Unk	1	Unk	0	1	1	Mission success not dependent on EDI; high document volume; process more complex than PARC-01; data partially nonstandard; trading partners small with lminimal automation capability; many developmental uncertainties

Note: See Appendices C and D for definition of acronyms.

Would the use of EDI enable MTMC to avoid costs associated with work backlogs, overtime, or other labor categories?

- Assuming the organization is convinced the project has significant financial justification or has waived the need for a financial justification, has the organization approved funding for the project?

- Can a case be made for the project to yield sizable indirect savings, such as improved transportation management, reduced transportation rates, or enhanced customer relations?

Executability Factors

Within each priority category, we used the five executability factors to rank the individual projects. The higher the total executability score, the easier (presumably faster with fewer developmental barriers) that MTMC could develop and implement an EDI project.

The executability scores were assigned in accordance with the answers to several standard questions. A "yes" answer to any one of those questions resulted in a project earning a value of 1. The questions for each executability factor are presented below.

Stability of Business Environment

The relationship of a potential EDI project to a business process or organizational structure can have an important effect on the project's executability.

Are the functional processes supporting the project relatively stable? Is the organizational ownership of the project clearly defined? If the answers to these questions are yes, the project is given a value of 1. If, on the other hand, a significant reorganization or business process redesign is now being, or soon will be, undertaken, or the process is accomplished in a number of ways without formal organizational ownership, a value of zero is assigned to this factor.

Trading Partner Environment

Have any trading partners expressed a willingness to exchange EDI business transactions? If yes, the project is assigned a 1.

Is there any evidence that the associated trading partner industry has already invested in EDI or is willing to invest? If yes, assign a 1.

If the trading partner environment has not been surveyed or no expert opinion exists on the readiness of the trading partner industry to invest in EDI, assign the factor "Unk" (unknown).

If the trading partners consist of small businesses operating at numerous locations, or MTMC has evidence that the intended trading partners are not likely to support EDI, then the trading partner environment factor should be assigned a zero.

Existing EDI Standards

Does the project propose to use existing standard EDI transaction sets? If the answer is yes, assign a value of 1, otherwise assign a zero.

Data Quality

Does the automated system that generates the data have sufficient edits to ensure high-quality data? Are the required data available to the application system? If the answers to these questions are yes, then the factor is assigned a 1.

Does MTMC control the data exchange process from the source to its placement into a database that will be used to support the EDI transaction. If yes, assign a score of 1.

If the data quality is known to be bad or inconsistent, assign a value of zero.

If the data quality has not been examined, assign the designation "Unk."

Status of Supporting Automated Information Systems

Do the automated support systems that would prepare or receive the EDI transactions have established program management offices? If the answer is yes, assign a value of 1.

Does the organization that will maintain the system have experience in EDI project development and implementation? If yes, assign a score of 1.

If the answers to these two questions is no, assign a value of zero to this evaluation factor.

Short-Term EDI Focus Areas

Of the 37 potential EDI projects, we recommend that MTMC focus its efforts over the next 3 years on 15 projects that have both a significant mission need and a positive economic benefit or are mandatory projects in support of Defense transportation's ITV efforts. Those projects are shown in Table 2-3.

Table 2-3.
High-Priority Projects

Project name	Functional area and project number	Information flows	Executability factor scores	Comments
TDR distribution	MTOP-Q-03	1	3	USTRANSCOM/JLSC cooperative project
GT Freight Tender Solicitation	MTOP-T-02	6	5	Expansion of a current MTMC EDI project, GT*STEP
Voluntary Freight Tender Partnership Expansion	MTOP-T-04	2	5	Expansion of a current MTMC EDI project, GT*STEP
Personal Property Interstate and International Rate Solicitation	MTOP-T-06	6	4	Project partially developed; undergoing a business process reengineering
METS II Replacement	MTOP-O-05	4	5	Expansion of a current MTMC EDI project, ACI
Advance Transportation Control and Movement Document Conversion	MTOP-O-07	3	3	Mandated by *ITV Integration Plan*
Export (Ocean) Shipment Status	MTOP-O-08	2	4	Mandated by *ITV Integration Plan*
Domestic (Surface) Shipment Status	MTOP-O-09	2	4	Mandated by *ITV Integration Plan*
U.S. Customs Interface Conversion	MTOP-O-11	3	4	Project planned; supports MTMC mission along with ROI potential
GBL Shipper Expansion	MTOP-O-13	7	4	Ongoing project and mandated by *ITV Integration Plan*
GBL Distribution	MTOP-O-14	4	3	Mandated by *ITV Integration Plan*
CBL/Small Parcel Manifest Conversion	MTOP-O-15	7	3	Mandated by *ITV Integration Plan*
Rating and Routing (DD Form 1085) Conversion	MTOP-O-17	2	4	Project planned; supports MTMC mission along with ROI potential
Personal Property GBL Conversion	MTOP-O-18	2	4	High-level interest within DoD Comptroller/DFAS communities
EDI SAACONS Implementation	MTAQ-PARC-1	5	4	Implementation of Standard Army System
Total	Projects — 15	Information flows — 56		

Note: See Appendices C and D for definition of acronyms.

MTOP-Q has one high-priority project that supports its carrier performance efforts. That project replaces the SF 361, Transportation Discrepancy Report, with an EDI transaction. The project supports the Joint Logistics Systems Center (JLSC), which is developing a DRS that uses EDI.

MTOP-T has three high-priority projects. Two of those projects continue the expansion of ongoing projects, including the guaranteed traffic (GT) tender solicitation and bid response process, and the voluntary tender submission process. One project, the personal property domestic interstate and international rate submission process, ranks high in mission need and economic value, but it is on hold pending results of the personal property reengineering effort.

MTOP-O has 10 high-priority projects. Three of those projects are in its ocean business processes — transferring ocean cargo booking functions into the new (IBS), replacing the MILSTAMP 80 column advance transportation control and movement document (ATCMD) with an EDI transaction, and automating an interface with customs. (USTRANSCOM's ITV effort is the primary reason why the ATCMD project is designated as high priority.) Four projects cover the replacement of paper GBLs and commercial bills of lading (CBLs) with EDI transactions — shipper GBL interface expansion, distribution of GBLs to GTN, personal property GBL interface with DFAS — Indianapolis Center, and CBL interfaces. Two projects are concerned with receiving ocean and surface shipment status in support of DoD's ITV effort, while another replaces the DD Form 1085, which is used for rating and routing, with an EDI transaction.

MTAQ-PARC also has one high-priority project, small business purchases using the Standard Army Acquisition and Contracting System (SAACONS). That project has a high return on investment because it requires no development costs.

Several potential EDI projects fall into the mid- or low-priority ranges. The mid-level projects listed in Table 2-4 either do not have a clearly justified mission need or they do not have an identified economic benefit. The low-priority projects shown in Table 2-5 have neither a supporting mission need nor an identifiable economic advantage.

Schedule for Implementing High-Priority Projects

Figure 2-2 provides a schedule for developing and implementing MTMC's 15 high-priority projects described in the previous chapter. Most of the dates were either extracted from the *Defense Intransit Visibility Integration Plan* or provided by the project management offices of the specific systems involved. The three exceptions are the personal property rate solicitation project (MTOP-T-06), which is on hold pending a business process redesign; the customs interface project (MTOP-O-11), which does not have an established implementation date but is currently be developed and tested; and the personal property GBL project (MTOP-O-18), which depends on the resolution of several data quality issues and DFAS's implementation of the third phase of its automated payment system.

As Figure 2-2 shows, we estimate that MTMC should be able to implement all 15 high-priority projects by the first quarter of 1998. Ten of these projects are expected to be complete by the end of 1996. Only five of the projects are expected to extend into 1997 or early 1998.

Table 2-4.
Mid-Level Priority Projects

Project name	Functional area and project number	Information flows	Executability factor scores	Comments
Carrier Qualification Submission	MTOP-Q-01	2	1	High volume of nonstandard information
TDR Conversion	MTOP-Q-02	1	5	JLSC cooperative project; low document volume
Personal Property Intrastate Rate Solicitation	MTOP-T-05	6	3	High document volume; trading partner environment not ready for EDI
Negotiated Freight Tender Solicitation	MTOP-O-02	3	4	Planned project; currently EC
MSC Controlled Fleet Booking	MTOP-O-06	4	4	Planned project; low document volume
Ocean Cargo Manifest Conversion	MTOP-O-10	2	3	High document volume; requires business process definition
Initial Load Tender Conversion	MTOP-O-16	2	2	Mission success not dependent on EDI; high economic benefit
Personal Property Shipment Status	MTOP-O-19	2	4	Mission success not dependent on EDI; high document volume
Stevedore Invoice (DD Form 1034) Conversion	DCSRM-01	1	3	Planned project; low document volume
CTO Services Solicitation	MTAQ-PARC-03	3	1	High document volume; requires EDI SAACONS implementation experience
Nontemporary Storage Acquisition	MTAQ-PARC-04	3	1	High document volume; requires EDI SAACONS implementation experience
Total	Projects — 11	Information flows — 29		

Note: See Appendices C and D for definition of acronyms.

SUMMARY

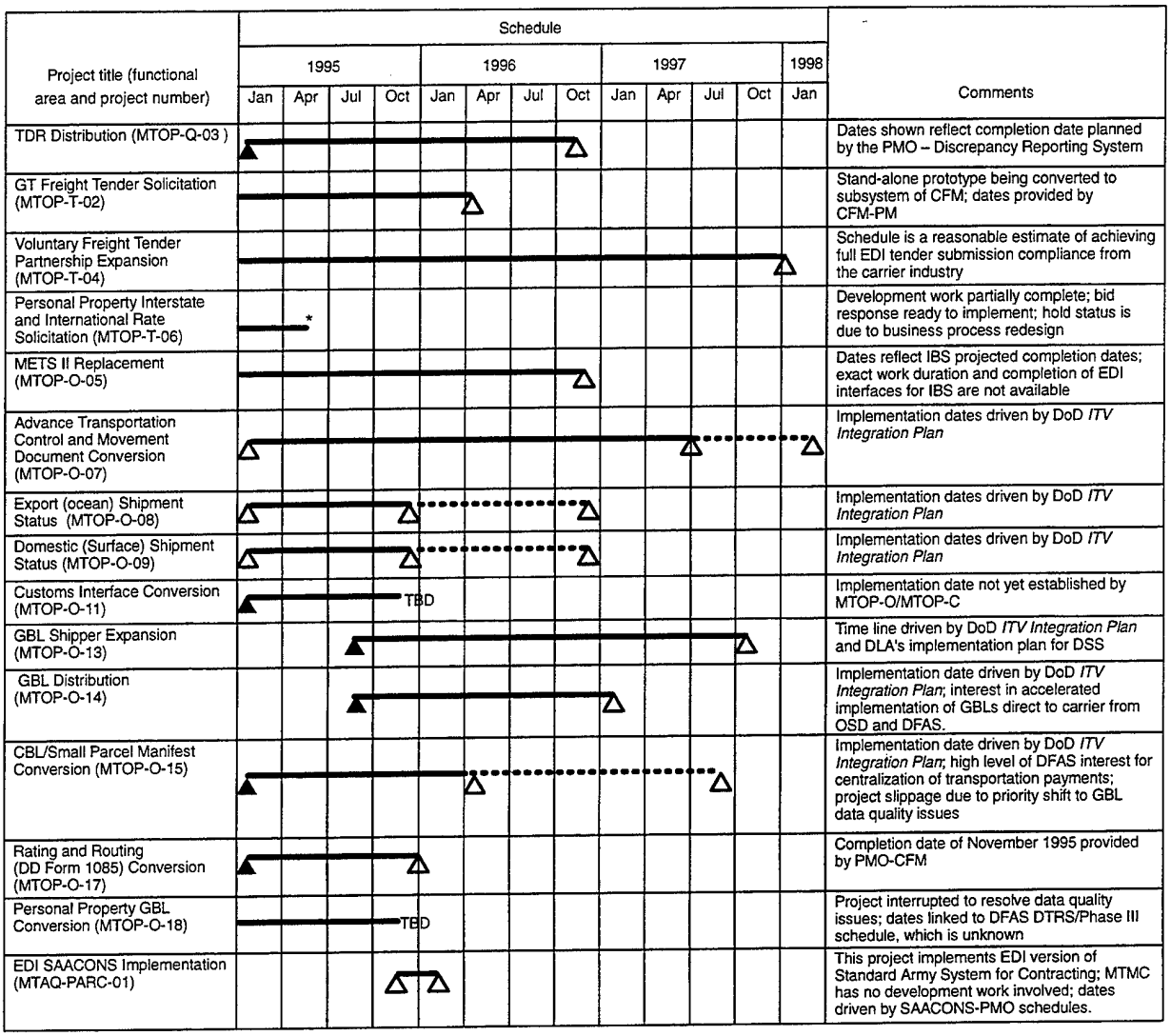
This chapter identifies 37 potential EDI projects accounting for more than 50 million transactions annually, including approximately 9 million pieces of paper, 2 million MILSTAMP transactions, 17 million ITV GTN transactions, and 23 million magnetic tape or electronic records as shown in Table 2-1.

It also targets 15 high-priority projects for short-term implementation using criteria that consider MTMC's mission and its need to reduce costs and improve service. Those projects account for 98 percent of the MTMC's EDI-potential transactions. The next chapter focuses on implementing MTMC's EDI program, particularly the roles, responsibilities, program infrastructure requirements, and project implementation processes.

Table 2-5.
Low-Priority Projects

Project name	Functional area and project number	Information flows	Executability factor scores	Comments
Trading Partner Profile Management	MTOP-Q-04	1	3	New requirement in support of EDI management; may become important as trading partner volume increases
GT Freight Tender Requirements Generation	MTOP-T-01	1	1	Process requires manual intervention
GT Freight Tender Performance Notification	MTOP-T-03	1	4	Low document volume; requires process definition
Recruit Movement Rate Solicitation	MTOP-T-07	3	1	Low document volume; requires improved automated system support
CTO Services Requirements Generation	MTOP-T-08	1	1	Low document volume; business process environment not ready for EDI
Rental Car Rate Filing and Distribution	MTOP-T-09	2	2	Low document volume
Negotiated Freight Tender Customer Request/Response	MTOP-O-01	2	2	Low document volume; potential CFM-FM application using EDI version of DD Form 1085 (reevaluate priority in future)
Negotiated Personal Property Tender (180 days or less) Customer Request/Response	MTOP-O-03	2	2	Low dovument volume; undergoing business process reengineering
Negotiated Personal Property Tender (180 days or less) Solicitation	MTOP-O-04	4	4	Currently EC; undergoing business process reengineering
Vessel/Cargo ETA Conversion	MTOP-O-12	1	4	Low transaction volume; EDI business process uncertain
Stevedore Services Acquisition	MTAQ-PARC-02	3	1	Low document volume; requires EDI SAACONS implementation experience
Total	Projects — 11	Information flows — 20		

Note: See Appendices C and D for definition of acronyms.



Legend

▲ – Actual start/stop point

△ – Planned start/stop point

* – Project on hold

▬ – Project duration

•••••• – Slippage in project status date

Note: See Appendices C and D for definition of acronyms.

Figure 2-2.
High-Priority Project Schedule Estimates

CHAPTER 3

Implementing MTMC's EDI Program

BACKGROUND

In 1994, we were tasked to recommend an organizational structure for overseeing MTMC's EDI program. We subsequently proposed that MTMC establish an EDI Coordination Office under the Deputy Chief of Staff for Information Management (MTIM).[1] Among other responsibilities, the director of that office would chair an EDI Coordination Committee comprising representatives from key elements throughout the command. The committee's responsibilities would include identifying EDI opportunities, ensuring that a standard EDI implementation process is followed, and addressing any functional or technical problems related to EDI implementations.

This chapter expands on that earlier work by focusing on MTMC's EDI roles and responsibilities; identifying infrastructure activities required to sustain its EDI program; and proposing a standard implementation process for initiating, developing, and implementing EDI projects.

ROLES AND RESPONSIBILITIES

All staff and field elements share responsibility for MTMC's EDI program. That program is characterized by centralized program coordination and decentralized project development and implementation. The remainder of this section identifies who is responsible for various aspects of MTMC's program and discusses the responsibilities of external organizations that have an impact on MTMC's program.

Office of the Secretary of Defense

The Under Secretary of Defense for Acquisition and Technology [USD(A&T)] has overall management responsibility for DoD's enterprise integration program, which includes EDI. That responsibility has been delegated to the Deputy Under Secretary of Defense for Acquisition Reform [DUSD(AR)], who has designated the DUSD(AR-EC) responsible for establishing all EDI policy and planning throughout DoD.

The Deputy Under Secretary of Defense for Transportation Policy [DUSD(TP)] has staff responsibility for EDI program management in the

[1] See footnote 1, Chapter 1.

functional area of transportation. In that capacity, the DUSD(TP) is responsible for coordinating and establishing policy with respect to the application of EDI in the Defense Transportation System (DTS).

Defense Information Systems Agency

The Director, Defense Information Systems Agency (DISA), is responsible for coordinating technical EDI standards, acquiring and maintaining DoD's EDI technical infrastructure, and recommending EDI technical policies to the DUSD(AR-EC). DISA also serves as the DUSD(AR-EC) technical representative to the ASC X12 and UN/EDIFACT standards committees.[2]

U.S. Transportation Command

The Commander-in-Chief, USTRANSCOM, has been designated lead agent for the Defense transportation EDI program by the DUSD(TP). In this capacity, USTRANSCOM is responsible for

- chairing the Defense Transportation EDI (DTEDI) Committee;
- developing an integrated plan for expanding EDI within Defense transportation and coordinating that plan with the DUSD(AR-EC);
- representing DoD as the single functional focal point to the commercial transportation industry on EDI implementation issues;
- identifying transportation EDI requirements and establishing priorities, in coordination with the Military Services, Defense agencies, and DUSD(AR-EC);
- resolving EDI quality and data standardization issues; and
- providing DoD transportation functional representation to standards coordinating committees, as required.

Defense Logistics Management Standards Office

The Director, Defense Logistics Management Standards Office (DLMSO), is responsible for establishing, coordinating, and maintaining EDI standards and conventions for Defense transportation.

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[2] UN/EDIFACT, or United Nations/Electronic Data Interchange for Administration, Commerce, and Transport, is the international EDI standard.

Military Traffic Management Command

The Commander, MTMC, is responsible for making the maximum practical use of EDI in meeting the Command's mission. In carrying out this responsibility, the Commander, MTMC, is responsible for

- managing the EDI program applicable to the Command's business processes;
- supporting USTRANSCOM in the development and implementation of an integrated Defense transportation EDI program; and
- supporting EDI initiatives associated with USTRANSCOM's ITV program and GTN.

Information Management

The Deputy Chief of Staff for Information Management (DCSIM) is MTMC's senior program manager for EDI. In this capacity, the DCSIM is responsible for

- advising the Commander, MTMC, on matters pertaining to DoD's transportation EDI program;
- establishing, maintaining, and providing staff supervision for MTMC's EDI Coordination Office;
- establishing MTMC EDI policies and procedures; and
- ensuring that MTMC's EDI program is fully coordinated.

EDI Coordination Office

The Chief of Systems Integration (MTIM-I) is responsible for maintaining MTMC's EDI Coordination Office. As MTMC's focal point for EDI matters, the EDI Coordination Office is responsible for

- formulating, coordinating, and recommending EDI policies and procedures to the DCSIM;
- chairing MTMC's EDI Coordinating Committee;
- coordinating MTMC's EDI program efforts with other DoD Components;
- participating in Defense transportation's process for updating implementation conventions and standards, and attending ASC X12 meetings in support of that process, as required;

- coordinating EDI application development among the functional sponsor, process owners, technical program management implementation teams, and external organizations;
- developing and presenting core-level EDI competency training to management, functional users, and technical systems support personnel;
- leading workshops that promote EDI with commercial and government trading partners;
- monitoring the performance of EDI applications;
- updating MTMC's *EDI Strategic Plan*; and
- performing other program infrastructure activities, as required.

Principal Staff and Subordinate Commanders

MTMC's Deputy Chiefs of Staff, heads of principal staff, and subordinate commanders are responsible for making maximum use of EDI within their functional areas of operation. In that capacity, they are responsible for

- developing strategic visions for EC and EDI within their functional areas;
- identifying EDI opportunities and sponsoring the development of EDI applications;
- appointing representatives to the EDI Coordination Committee who have broad expertise in their respective business processes and familiarity with basic EDI concepts; and
- initiating business process improvement projects within their functional areas to capitalize upon the capabilities of EDI.

Assistant Deputy Chief of Staff for Operations for Quality

The Assistant Deputy Chief of Staff for Operations (ADCSOPS) for Quality, in addition to those responsibilities identified above, is also responsible for

- managing all trading partner agreements (TPAs), both commercial and government; and
- evaluating the quality of trading partner EDI data exchanges.

Members of MTMC's EDI Coordinating Committee are responsible for

- identifying data exchanges within their functional areas that are potential EDI candidates;
- identifying and resolving issues that impede EDI integration; and
- ensuring that new systems, both automated and manual, are examined during their conceptual development stage for potential EDI applicability.

PROGRAM INFRASTRUCTURE ACTIVITIES

Several activities not related to the development or implementation of individual EDI business applications are required for MTMC's EDI program to succeed. Those activities are described below to ensure planners do not overlook the associated staffing and contract-labor investments. As noted in our earlier report, we estimate that MTMC requires approximately 13,000 labor hours annually to support its EDI efforts.[3]

Strategic Planning

MTMC's *EDI Strategic Plan* is a dynamic document that must be updated annually. As the office of primary responsibility (OPR), the EDI Coordination Office should monitor the progress of all EDI projects. Any deviation from the planned cost, schedule, and performance could affect related projects. In addition, new EDI requirements, priorities, and business process changes should be incorporated into the plan at least annually.

Architecture Management

Architecture management requires a continuing review of MTMC's EDI hardware, software, and communications requirements. MTMC plans to manage EDI hardware platforms, software packages, and communications networks as configured sets of an overall approved architecture, avoiding site-unique components as much as possible.

In support of that approach, MTMC will need to define and maintain architectural standards including EDI translation software, EDI hardware, communications protocols and access methods, and value-added network (VAN) requirements. The OPR for architecture management is the EDI Coordination Office. The DoD EDI Program Office, DISA, may define a common user EDI

[3] See footnote 1, Chapter 1.

network architecture; however, there are few DoD-wide standards or guidance publications currently available.

Program Coordination

A myriad of potential EDI staff support actions by external organizations can affect MTMC's EDI program. As the lead agent for the DTEDI program, USTRANSCOM will require support from MTMC on a number of initiatives consistent with the electronic business environment envisioned in the *Defense Transportation 2010 Action Plan*. As an example, the Joint Transportation Coordinating Committee (JTCC) will require MTMC to ensure the EDI functionality of the Transportation Coordinator — Automated Command and Control Information System legacy system as it migrates to the Transportation Coordinator, Automated Information Management Systems. USTRANSCOM will also need technical and functional support in coordinating and promoting better DTEDI standardization and data quality.

As the joint functional focal point for transportation business practices and EDI, USTRANSCOM will require input from its components on matters related to common interfaces, such as the EDI interfaces to the Joint Logistics Systems Center's (JLSC's) automated Deficiency Reporting System and DFAS's Defense Transportation Payment System. MTMC may also be tasked to provide functional analysis support for the Models II effort and the efforts to replace the paper Transportation Control and Movement Document (TCMD). The OPR for these activities is the EDI Coordination Office.

Promotion of Industry and DoD Participation

Promoting industry and DoD participation includes the development of technical and information system workshops, symposiums, and conferences aimed at promoting the use of EDI and informing commercial carriers, shippers, and DoD organizations about the advantages of participating in MTMC's EDI program. The role of the OPR for this activity is shared by the ADCSOPS for Quality and the EDI Coordination Office.

ASC X12 Maintenance Support

Because of the number of its potential EDI applications, MTMC has a vested interest in the process for maintaining ASC X12 EDI standards and implementation conventions. As the OPR for this activity, the EDI Coordination Office will need to represent MTMC's interests before the DTEDI Data Maintenance Work Group, to include submitting data maintenance requests and evaluating requests submitted by other organizations. It may also need to provide functional expertise at ASC X12 meetings in support of DoD proposals for changes to standards.

Trading Partner Agreement Management

Currently MTMC is managing TPAs for all Defense transportation EDI applications. This activity involves establishing new and maintaining existing agreements. The associated administrative tasks include cataloging, renewing, and terminating TPAs. The number of TPAs will range in the hundreds. The OPR for establishing and managing TPAs is the ADCSOPS for Quality.

Application System Technical Support

Technical support includes evaluating EDI products, helping functional and systems development teams to create implementation conventions for existing transaction sets, and developing proposals for new standards. The OPR for this activity, MTIM, will need to be knowledgeable of MTMC's translation software; be capable of operating a customer hotline; and serve as the technical interface between users, proprietary translation software companies, and application development and maintenance organizations.

Application System Operational Support

An underlying principle of EDI is that it should be transparent to users and capable of operating without human intervention. Although every EDI project has these goals, the business practices of some trading partners may not, at least initially, permit routine, unattended operations. An example is a trading partner who cannot support continuous data exchanges — 24 hours per day, 7 days per week. In those situations, a VAN will need to store and forward batches of transaction sets according to the schedule established in the TPA. This practice will create a recurring workload for the functional staff until arrangements can be made to migrate to an unattended exchange of information.

Additionally, the functional office overseeing the data exchange must be knowledgeable of MTMC's translation software and capable of operating a customer hotline to assist trading partners engaged in specific EDI applications where the data are owned by an MTMC functional staff element. The OPR for functional, routine operations support is the functional staff section responsible for the data exchange.

Performance Monitoring

The EDI Coordination Office should monitor the progress of all MTMC projects involving EDI by attending management reviews, Transportation Systems Review Committee presentations, and system in-process reviews. The information gathered in those reviews should be used to update the status of projects in MTMC's *EDI Strategic Plan*. In addition, the EDI Coordination Office should develop data collection plans for capturing key measurements of performance

for all EDI projects. Those measurements typically include such factors as number of transactions, percent of electronic volume versus paper, and number of trading partners.

The functional sponsor should monitor the performance of all implemented EDI projects. It should focus on determining whether a project has satisfied its mission need as called for in the capability request and documenting the benefits obtained, primarily to provide accurate data for estimating the investments and benefits of future EDI projects.

ADCSOPS for Quality has the primary responsibility for monitoring the EDI performance problems of MTMC's commercial trading partners. Those problems could include inaccurate data, untimely data, and others experienced during project implementation. This information may be useful to the ADCSOPS for Quality in managing trading partner agreements and participating in industry workshops.

Training

With an increasing dependence on EDI, MTMC should maintain a core of EDI competency among its technical cadre and functional users. At least three tiers of the MTMC staff should receive periodic training — managers (EDI orientation), technical staff (EDI technical issues), and functional staff (EDI software).

Special Infrastructure Projects

Special infrastructure projects may surface periodically. These projects typically affect more than one business area or automated system application. Described below are four special projects that the EDI Coordination Office has defined.

Generic Trading Partner Agreement

DoD already uses several mode-specific agreements. This project entails the development, coordination, and implementation of a generic TPA that could serve as a baseline for all trading partners. The goal of this project is to streamline the process of documenting TPAs, and thereby reduce the amount of time required to manage them.

Standard Translation Software Acquisition

The objective of standard translation software acquisition is to create a central vehicle for acquiring all EDI translation software. MTMC subordinate activities would use the vehicle to procure EDI translation software, saving them the time and cost of major procurement actions and avoiding the appearance of

piecemeal procurement actions through small purchasing procedures. This project would need to be coordinated with the DTEDI program.

United Nations/Electronic Data Interchange for Administration, Commerce, and Transport

The UN/EDIFACT project is an initial requirements study aimed at determining the data exchanges between MTMC and international entities that use EDIFACT standards. This effort could expand significantly if ANSI decides to migrate to EDIFACT standards and MTMC identifies several potential EDIFACT opportunities. Currently, ANSI has decided to give activities the option of remaining with the ASC X12 standards or migrating to UN/EDIFACT standards. Some organizations with international data exchange requirements, such as MTMC and its ocean carrier industry trading partners, may be required to support both standards. In addition, we found that the U.S. Customs Service intends to mandate UN/EDIFACT standards for all trading partners by the year 2000.

Automated Identification Technology Devices

This project involves analyzing potential automated identification technology (AIT) applications and determining the associated technical, functional, and economic issues that could result in MTMC supporting the concept of radio frequency data messages being transmitted in EDI standard formats. DoD does not currently have an approved concept for using AIT to capture source data.

Project Implementation Process

All EDI applications development efforts should follow MTMC's system development procedures. Normally, a one- or two-page capability request, describing what is needed and why, is required for projects costing $50,000 or less, including the EDI portion. Smaller efforts are generally submitted to the DCSIM for approval and then funded through the expense account from the Information Mission Area funds. All projects costing between $50,000 and $250,000 are approved by the DCSIM, while those costing more than $250,000 must be approved by the Transportation Systems Review Committee.

Integrating EDI into MTMC's business processes requires extensive coordination among functional, technical, and financial components. The following steps outline a standard process for initiating, developing, and implementing EDI applications.

Initiating EDI Projects

Just as data standardization is routinely built into automated systems to foster open systems architecture and ease of future maintenance, EDI applications also need to be routinely assessed. Generally, EDI interfaces are more economically built into systems and processes rather than modifying them after implementation.

Before MTMC launches any EDI project, its potential should be validated and its relative priority among competing projects established. Chapter 2 provides a selection logic diagram (Figure 2-1) that can be used to identify potential EDI projects.

Setting Priorities for Projects

Selection as an EDI candidate does not guarantee application development. EDI opportunities compete with other MTMC automation efforts in accordance with normal resourcing procedures. MTMC always has more requirements for automation systems than its rate structures can fund in a given year, so it must establish priorities. Establishing priorities will assist in budget projections for the Information Mission Area. (Chapter 2 describes a process for assessing the priorities of EDI projects.)

Submitting Projects for Funding Approval

All potential EDI projects should be included in the Information Mission Area budget planning cycles. If the estimated project cost is $50,000 or less, functional sponsors will normally obtain funding from an expense account that MTIM manages. Even though these projects may not be listed as a line item in automation and budget planning, functional sponsors should ensure that the required funds have been included in the expense account budgeting process. Projects with estimated costs above $50,000 are funded from MTMC's Defense Business Operating Fund (DBOF), so they should be identified as early as possible. The functional sponsor should submit the total requirement, including the EDI portion, to the DCSIM for inclusion in the command automation planning and budget cycle. Since unfunded, out-of-cycle requests must compete with a wide range of other command priorities, it is best to submit broadly defined EDI modernization programs early.

If costs are known, they should be included in the capability request; otherwise, MTMC Information Management-Plans Division (MTIM-P) will assist the functional sponsor in estimating them. For more complex and costly projects, DCSIM may direct the sponsor to prepare a cost requirements study. If the project is expected to cost more than $250,000, a mission needs statement prepared in accordance with DoD Standard 7935A may be required.

Managing Project Development and Implementation

When a project has been approved and its priority established, functional sponsors and their MTIM support team will oversee its development and implementation following the same documentation, review, and approval process as other automated system projects of comparable value. The EDI project development and implementation process consists of several steps. An overview of those steps is provided below.

Developing Concept of Operation

The MTIM support team in conjunction with the EDI coordinator should develop an EDI concept of operation that identifies the information to be exchanged, trading partners, frequency of exchange, and estimated annual transaction volumes. Developing a concept of operations consists of several steps.

Surveying Potential Trading Partners

The functional sponsor, in coordination with the EDI Coordination Office and the ADCSOPS for Quality, should meet with potential trading partners identified in the EDI concept of operation. The purpose of these meetings is to identify the trading partners that can support EDI exchanges or are willing to invest in EDI, and to develop a mutually acceptable implementation schedule.

Identifying the Automated Systems Involved and Potential Communications Access Methods

If the proposed project has any automated system issues (such as lead time, system reengineering, or major redesign plans) that could affect the cost, schedule, and performance of the EDI data interface, the project should be coordinated with the activities charged with accomplishing those actions to ensure that realistic milestones, developmental funds, and implementation dates are factored into the project's plan. The EDI Coordination Office should perform this step with assistance from the functional sponsor.

Developing Initial Costs and Savings Estimates

Functional sponsors should perform cost-benefit analyses for all potential projects. If a project is mandated by the Office of the Secretary of Defense, USTRANSCOM, or Department of the Army, or if it is being fully funded by a DoD activity external to MTMC, a formal economic analysis is usually not required. However, the preparation of an economic analysis should be common practice because it will serve as a useful historical record for similar projects in the future.

Identifying Functional Requirements

The project team begins by identifying the operational, business, legal, security, data, and technical issues that could affect an electronic operating environment. Since EDI is considered more of a business decision than a technical issue, the team should be prepared to devote significant resources to this step. The step includes detailing the data elements required to accomplish data flows between trading partners, determining the level of data quality assurance that must be met, identifying needed enhancements to existing systems, investigating and resolving business process issues, and examining legal and security issues affecting data integrity. The project team should document functional requirements through the use of memorandums of understanding or other types of agreements when interfacing with other DoD trading partners.

Specifying Operating Requirements

Following the identification of functional requirements, the project team should address the associated hardware, software, telecommunications, facility, and manpower requirements. The technical architecture, including system throughput and VAN service requirements, should be examined because they drive the operating requirements. MTMC may be forced to integrate its telecommunications solutions with a technical infrastructure that DISA has adopted. The project team should examine the telephone lines, electrical outlets, and office space of each project site to ensure that they are adequate to support an electronic operating environment. Finally, the team should assess whether the staff at each site has the needed EDI skills and capabilities.

Identifying EDI Standards and Implementation Convention Requirements

The project team should review the existing ASC X12 standards and implementation conventions and propose any needed modifications to the DTEDI Data Maintenance Work Group. The modification process is accomplished by matching data requirements for each business flow to specific locations in the applicable EDI transaction set and resolving deficiencies through the work group. The DTEDI work group is responsible for publishing the implementation conventions that detail the rules DoD trading partners will follow when transmitting information through EDI.

Integrating and Testing the System

Integrating and testing the system involves the efforts required to field an EDI capability. It includes procuring hardware, arranging for telecommunications services, developing translation software interface programs, developing detailed operating procedures, training operators, and testing and modifying the application system.

All EDI projects involve two types of software interface programs. One program connects the application software with the translation software by developing a "flat" file of application data elements for the translator. The second program provides information to the translator on how to read the flat file. The process of programming the translator is called mapping.

The project team should formulate detailed operating procedures for day-to-day EDI operations. Those procedures should address software operations, transmission times, customer service, back-up routines, and business procedures. The team should also review internal procedures for manual processing of documents and compare them to the new procedures.

All initial testing of EDI applications should be accomplished using sample data. Then, a controlled operational test should be conducted using actual data transmitted to or from a small number of trading partners. The second type of testing should be conducted in parallel with the existing business process. Each component of the new system — telecommunications, translation software, host processing, interface programs — should be evaluated and modified, as appropriate.

Establishing Trading Partner Relationships

In this step, the project team formulates a strategy for soliciting and implementing commercial and DoD trading partners. The strategy should include the development of an implementation package that details the procedures for doing business with MTMC including the execution of trading partner agreements for commercial enterprises or memorandums of understanding for DoD partners. Those agreements and memorandums should specify EDI passwords, VAN mailbox codes, points of contact, and procedures for using specific standards.

MTOP-Q should qualify all new commercial trading partners, while the project teams should certify all trading partners for EDI capability. The certification process should include technical compliance with EDI syntax and testing of communications and functional compliance with application specific data requirements. This effort should be started early in the EDI project development process.

APPENDIX A

Potential EDI Projects

This appendix contains detailed descriptions of the Military Traffic Management Command's (MTMC's) potential electronic data interchange (EDI) projects grouped into five functional areas. Projects that are considered to be good candidates carry a project number beside the title. Projects considered to be better EC candidates than EDI are also identified. Many of the acronyms and other terms used in this appendix are explained in Appendices C and D. Acronyms that start with the letters "MT" will most often be the MTMC office symbol designations.

ASSISTANT DEPUTY CHIEF OF STAFF FOR OPERATIONS FOR QUALITY

Carrier Qualification Submission (MTOP-Q-01)[1]

The Assistant Deputy Chief of Staff for Operations (ADCSOPS) for Quality (MTOP-Q) is responsible for ensuring that carriers doing business with DoD are qualified and have satisfied various license, insurance, financial, and other requirements. The carrier qualification process consists of four information exchanges between MTOP-Q and carriers: carrier inquiry, carrier inquiry response, carrier qualifications submission, and qualification review notification. An average of 450 carrier inquiries are made annually on how to become a DoD business partner. The inquiries are received by the area commands or MTMC Headquarters, usually by telephone but also by letter and personal appointments. MTMC responds with instructions on where the carriers should submit their information and what they are required to submit. The annual volume of this data exchange might suggest a potential EDI project; however, the carriers would not, at this point in the information exchange process, be EDI trading partners with MTMC. For this reason, we conclude that the carrier inquiry and government response processes are not good candidates for EDI. Another form of electronic commerce (EC), such as the Internet World Wide Web, which is available to the public, may be suitable for MTMC to provide information on now carriers could become qualified to do business with DoD.

The carriers currently submit all the required qualification support documentation on paper. Approximately one-fourth of the required information is standard "fill in the blank" type data [such as the standard carrier alpha code

[1] The letters and numbers shown in parentheses, such as MTOP-Q-01, are the office designation for a functional area, and the number is a project number that we have arbitrarily assigned.

(SCAC), address, and point of contact] or could be standardized with a structured redesign of the process. The remainder of the required information, or approximately 75 percent of the entire package, is nonstandard information such as insurance policies, Department of Transportation hazardous carrier certificates, small and minority-owned business certification, Interstate Commerce Commission licenses, and other such documents. The review of the carrier's qualification documentation is accomplished manually, although there is currently a limited effort to scan some of the documents and retrieve them electronically. Carriers are notified of the results of the qualification review by a one-page letter sent through the mail. A diagram of the applicable data exchanges is presented in Figure A-1.

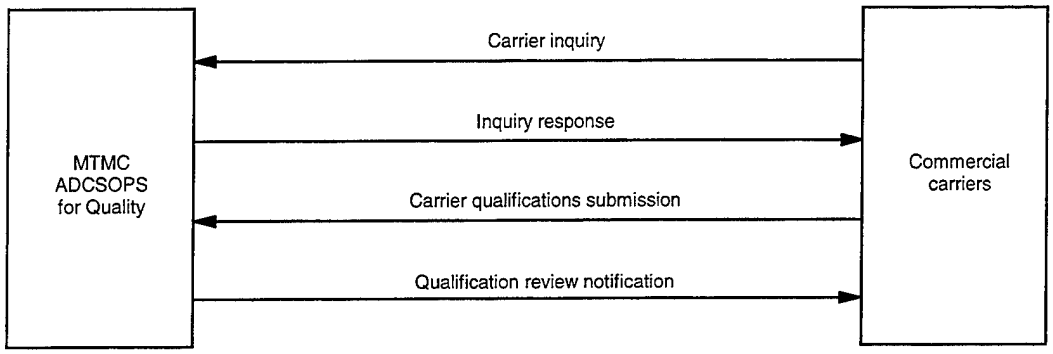


Figure A-1.
Carrier Qualification Process

Using the EDI candidate selection logic, we found that two of the four information exchanges in the carrier qualification process have EDI potential. One is the carrier qualification information submission to MTMC and the other is the notification of the results of the qualification review to the carrier. For the carrier submission process, the standard information that carriers submit may be accommodated by the existing EDI Accredited Standards Committee (ASC) X12 Transaction Set 836, Trading Partner Profile. In addition, some of the nonstandard documents such as insurance forms, small business certifications, and hazardous carrier certifications may be standardized within their respective industries and could be exchanged electronically in the future. The information required to notify a carrier of the qualification review results is fairly standard. While no specific EDI transaction exists, ASC X12 Transaction Set 996, File Transfer, is available to exchange that type of information. Pursuing this EDI project would require MTMC to invest in an automated system for capturing and manipulating the carrier qualification documentation.

Carrier Performance (MTOP-Q-02 and -03)

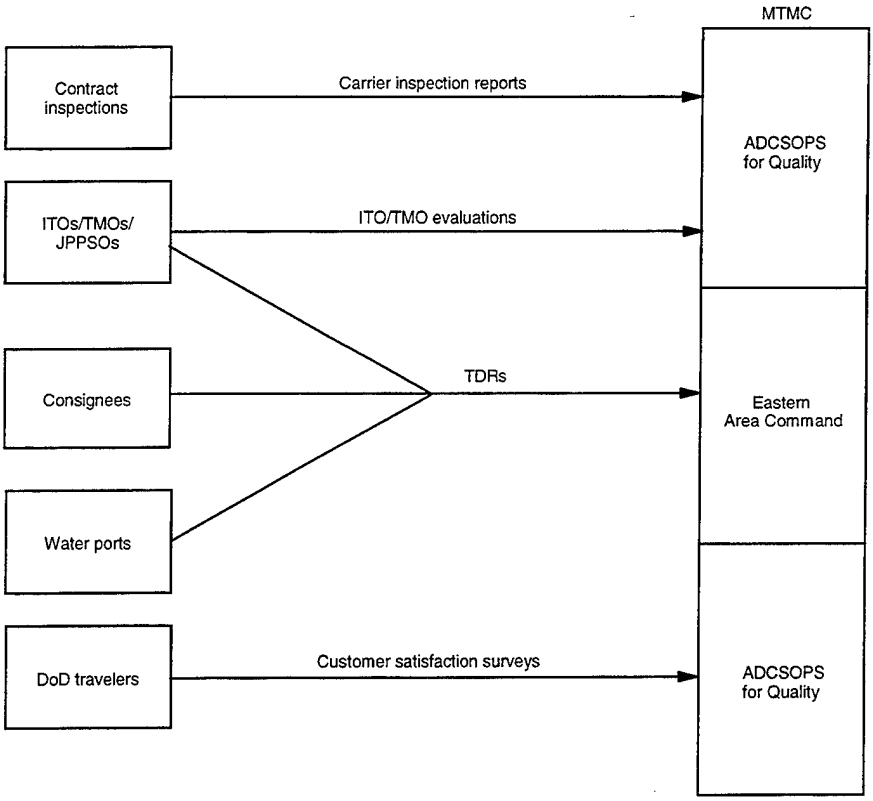
When a carrier is qualified to support DoD carrier and signs a standard carrier agreement, MTOP-Q must ensure the carrier continues to comply with the agreement and maintains the required level of performance. Carrier compliance

and performance evaluation is primarily manual. Most performance reporting data are exchanged in four subprocesses. The first involves one or two firms hired by MTMC to inspect and submit hard copy reports on carrier compliance and performance. The contractor reports and subsequent copies total approximately 25,000 to 30,000 pages annually, mostly consisting of standardized evaluation criteria and subjective text evaluations. No portions of these reports are subsequently input to a standard computer database. We conclude that this application is not a good EDI candidate in view of the limited number of trading partners involved and the absence of requirements for subsequent data conversion.

The second performance data exchanged consist of installation transportation offices' (ITOs') evaluations, which are collected as messages, letters, telephone calls, and data input into automated systems. There is insufficient workload data from the letters, phone calls, and messages to determine the volume and ability to standardize these methods of data exchange. It is difficult to assess the volumes of customer feedback received from the CONUS Freight Management (CFM) system because less than 20 percent of the sites that have the CFM system routinely use the performance reporting capabilities of the system, and many sites that use DoD carrier services do not have access to the CFM system. Similar carrier performance feedback, the Total Quality Assurance Program (TQAP) reporting system has been designed for the Transportation Operational Personal Property Standard System (TOPS). Since these CFM and TOPS system information flows are already a form of EC, are internal DoD and are not formats commonly found in the commercial industry, we conclude that they are not good EDI candidates.

The third process is the Transportation Discrepancy Report (TDR) system, whereby transportation officers at installations, depots, and transportation nodes submit standard paper reports to the MTMC area commands. Currently, approximately 25,000 paper TDRs (SF 361) are mailed to Eastern Area Command, where they are keyed into a CFM system data file. A 1992 General Accounting Office (GAO) report estimated that only a third of the actual discrepancies that occur are reported, partly due to the time-consuming process of filling out the paper form. The area commands and MTMC Headquarters use the file to produce weekly, monthly, annual, and special reports. These reports are prepared in hard copy and distributed by mail or courier to the MTMC internal activities that need the information. Several potential TDR-related EDI projects are discussed below.

The fourth carrier performance data exchange occurs with paper copy feedback from individuals who have been provided DoD travel services and elect to mail MTMC their assessments of that service. While we determine there is a good opportunity for a voice response application, this information exchange is not a good candidate for EDI because government employees are not expected to routinely have EDI communications capability. Figure A-2 depicts the exchanges of carrier performance data.



Note: TMO = transportation management office; JPPSO = Joint Personal Property Shipping Office.

Figure A-2.
TDR Monitoring Process

Of the four data exchanges related to carrier compliance and performance evaluations, we found only one, TDRs, that offers a realistic EDI potential. The 1992 GAO report on DoD's recoupment of damages and shortages described the potential high return on investment if transportation discrepancies were documented and processed by a more effective system. As a consequence of the GAO report, DoD tasked the Joint Logistics Systems Center (JLSC) to develop a new Discrepancy Reporting System (DRS). The system will have full EDI capability. In addition, all EDI-capable activities submitting reports or retrieving report data from the system will be requested to interface with the system through EDI transaction sets. The new DRS system will most likely use the ASC X12 842 Transaction Set, Nonconformance Report. The U.S. Transportation Command (USTRANSCOM), in response to a request from the Program Management Office, DRS, has taken the lead in developing the EDI transaction set for this project. Specific data requirements and implementation conventions, concepts for data flows, and trading partner agreements (TPAs) for this project are not fully defined.

DoD will use the DRS data for two purposes. One, the Defense Finance and Accounting Service (DFAS) will use it to collect reimbursement from vendors and carriers for product and transportation deficiencies. And second, MTMC

will use it to capture carrier performance and astray freight information for purposes of quality control and resolution of frustrated shipments.

The new ASC X12 TDR presents MTMC with two specific data exchange projects. The first is to develop the functionality in either the CFM system or Worldwide Port System (WPS) to prepare and transmit EDI-formatted TDRs from MTMC water ports and other facilities. MTMC water ports initiate approximately 200 TDRs each year. We have assigned this project a number of MTOP-Q-02.

The second project is related to the process of distributing TDR data between MTMC and DRS and potentially to the Global Transportation Network (GTN). The GTN requirement is not fully defined and was not part of the *Defense Intransit Visibility (ITV) Integration Plan,*[2] although it is now a topic of discussion between the CFM and GTN program management (PM) offices. MTMC's concept for the data flow to DRS envisions the data being sent from CFM field module sites directly to the CFM host. In contrast, the JLSC concept is for all field sites to use DRS-developed software to transmit TDRs to the DRS host and for the CFM system to obtain the TDR data via inquiry or file transfers from the DRS host database. Although the Joint Transportation Coordinating Committee (JTCC) and the system development PM offices must resolve the data flow concept, the requirement for an exchange of TDRs between the JLSC and CFM program management office is not disputed. We have assigned this project the number of MTOP-Q-03.

Since the current hard copy reports are keyed into the performance module of the CFM system, it is anticipated that the CFM system will be the automated tool MTOP-Q would use to capture the new EDI TDR data for quality assurance and identification of astray freight. As noted in the 1992 GAO report, a fully compliant DoD-wide program will probably create 75,000 TDRs each year. Based on this volume and multiple users needing the data for different purposes, the intent to convert TDRs to EDI transaction sets appears to be justified. Figure A-3 presents the CFM program management office's view of the anticipated data flow for the TDR.

EDI Trading Partner Agreement Management (MTOP-Q-04)

The Assistant Deputy Chief of Staff for Quality has been assigned the responsibility for maintaining TPAs and trading partner profiles (TPPs). TPAs are legally accepted agreements that document the data exchange relationship between two EDI trading partners. TPPs include attributes that are used for identifying customers and for establishing telecommunications linkages. MTMC activities and external trading partners should have the most up-to-date profile information resident in their respective EDI translators.

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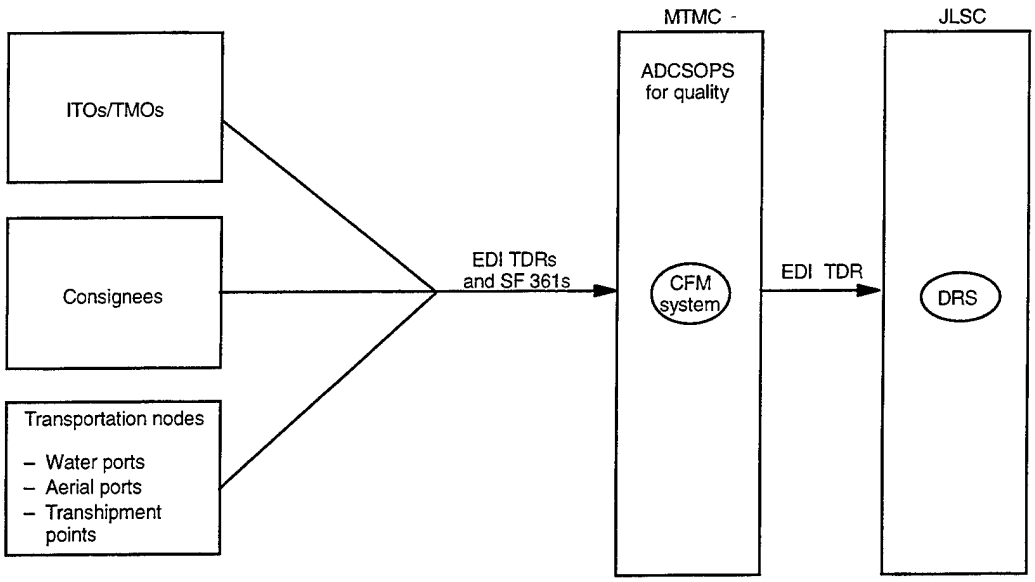
[2]U.S. Transportation Command, *Defense Intransit Visibility Integration Plan,* February 1995.



Note: SF = standard form.

Figure A-3.
TDR Distribution Process

The initial TPA data exchange, which establishes the trading partnership relationship and furnishes the initial TPP information, will continue as a signed paper agreement for the foreseeable future. The ASC X12 838 Transaction Set, Trading Partner Profile, was developed by the industry to transmit trading partner profile data. After the initial TPP is established, exchanging subsequent changes to TPPs presents an excellent candidate for EDI because the transaction set already exists, all parties involved are EDI capable, and numerous trading partners are available to exchange data.

As the TPA administrator, MTOP-Q should be the focal point for TPAs and TPPs. Although the volume of changes to established TPPs is not expected to be high, a more precise number cannot be determined at this time because TPA/TPP administration is new to MTMC.

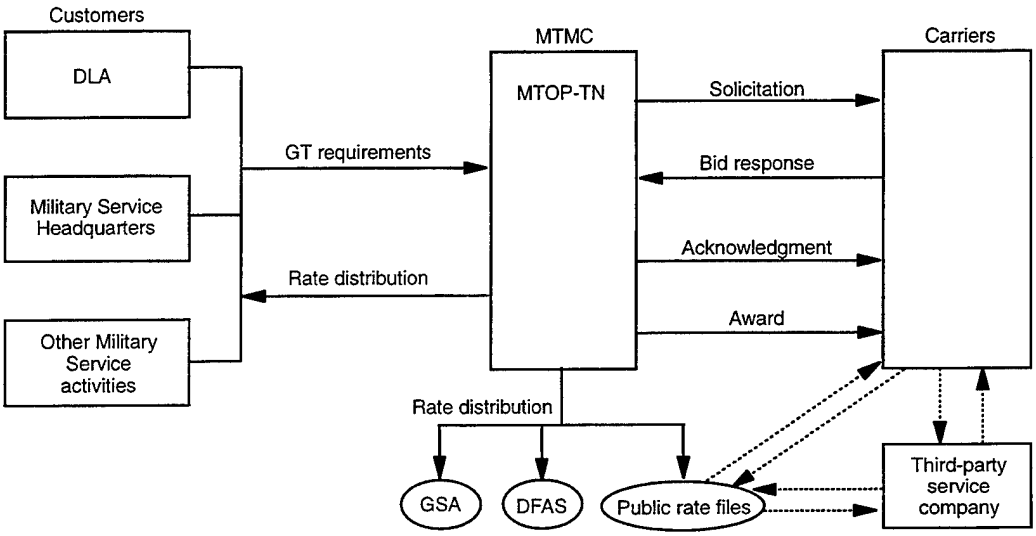
ADCSOPS for Transportation Services (MTOP-T)

Guaranteed Traffic Freight Tender Requirements Generation and Solicitation (MTOP-T-01 and -02)

The guaranteed traffic (GT) process consists of seven key information flows. Those flows are described below:

- Transportation service requirements are collected from historical data and coordinated with the Military Service or Defense Logistics Agency (DLA) activity concerned.
- Solicitations are then prepared by MTOP-T and presented to industry.
- Carriers then respond with tender bids.
- MTOP-T acknowledges receipt of the bid package.
- MTMC notifies carriers of solicitation award.
- MTOP-T distributes the tenders to DoD, government activities, and some carriers upon request.
- MTMC provides an informal information exchange with carriers via a public rate (tender) file room maintained at MTMC Headquarters and the area commands. This exchange involves manual (paper files) as well as a PC-based retrieval system.

Carriers often hire third-party agents to go into the tender file rooms, look up various rates of their competitors, and copy the rates. Many carriers, particularly the rail carriers, have requested electronic remote access to those files. Figure A-4 presents a diagram of the GT tender data flows.



Note: Dotted line indicates manual research; TN = transportation services-negotiations.

Figure A-4.
GT Freight Tender Requirements Generation and Solicitation Processes

Requirements for GT solicitations may be generated from the Military Services, Coast Guard, DLA, and analysis of the ADCSOPS (Future System Concepts)

database of actual traffic patterns. Except for the historical database, the data are gathered in a hard-copy, nonstructured format. MTOP-T uses the previous solicitation as a baseline requirements document, making adjustments based on the new requirements received since that solicitation was issued. Adjustments are usually infrequent, but the same careful review process must be undertaken even if there are only a few changes.

Although this information flow could be converted to EDI, a formal, structured requirements submission process would need to be established with a diverse set of internal government trading partners. As a consequence, converting this data flow to EDI has been labeled as a single project (MTOP-01), separate from the remainder of the Guaranteed Traffic Standard Tender Electronic Processing (GT*STEP) system development process. Military Service and DLA requirements data could be standardized and transferred electronically to MTOP-T, where they could be reviewed, adjusted as necessary, and moved into a solicitation package format. The ASC X12 602 Transaction Set, Transportation Services Tender, and 864 Transaction Set, Text Message, may require some modification but they could be used for this application.

When MTMC has gathered all requirements, they are analyzed and clarified, and then rules (specification of terms and conditions) for the application are prepared. MTMC already has an ongoing effort to standardize the rules to accommodate more efficient and modern methods of communicating the solicitation package. The average solicitation package consists of approximately 200 pages. An announcement is made in the *Commerce Business Daily* and solicitations are typically mailed out to an average of 62 carriers. About 100 solicitations go out each year. The manual GT solicitations equate to approximately 1.2 million pages of paper annually. Most of those solicitations could be eliminated if they were converted to EDI. The solicitation information flow is already planned as an EDI ASC X12 combination of the 602 and 864 transaction sets through current development the GT*STEP system. This system may eventually become a subset of the CFM system host software.

MTMC currently receives approximately 8,800 bids annually, although they may increase by as much as 20 percent if a proposal to accept carrier error corrections, "mistakes in rate filing" (MIRFs), is implemented. Carrier responses are usually pen-and-ink entries into the original solicitation matrix presented by MTMC. The bids are then mailed to MTMC. Altogether, an estimated 26,000 pages of paper are involved annually in bid responses.

Currently, MTMC sends approximately 6,200 bid acknowledgments back to carriers. Before evaluating the bids, MTMC checks to verify that the carriers submitting the bids are approved. Carriers are not notified of bid errors until after the date specified as the bid opening date. The process and cost of acknowledging bids, ensuring carriers are qualified, and checking for errors will become automatic, with greatly reduced cost, when the GT EDI process is fully implemented. The low-cost carriers are notified via mail of the solicitation award and their rates are then filed (keyed) into the GT*STEP system with subsequent transfer to the CFM system.

The carrier bid information flow, acknowledgment, and award are good EDI candidates and, like the solicitation flow, are planned for inclusion in the GT*STEP system. Obvious returns on investment include labor savings from no longer keying in the rates from more than 8,800 bids returned annually, automatic EDI bid receipt acknowledgments, and better data quality through immediate edit check responses. Additionally, the process cycle time should improve, since reaction to errors could be spontaneous. The ASC X12 602 Transaction Set, Transportation Services Tender, will be used to transmit bids to MTMC. The ASC X12 824 Transaction Set, Application Level Acknowledgment, which is returned to the sender by the EDI translator, will serve as the bid receipt acknowledgment and application-level notice of transaction acceptance or rejection.

MTMC grants about 2,000 awards annually to the 3 to 5 lowest-cost carriers in each traffic lane. Most carriers win more than one of the traffic lanes, so the estimate of the number of pages equates to approximately 300 award letters annually. Award notifications, which are distributed by mail, are another excellent EDI candidate that is also scheduled to become part of the GT*STEP system. The ASC X12 864 Transaction Set, File Transfer, will be used for the award notification.

Copies of the tenders, which total approximately 281,000 paper pages, are distributed by mail each year. Two to three copies of the 3 to 5 lowest-cost carriers' tenders for every traffic lane in each solicitation are distributed internally to Eastern Area Command, MTMC Headquarters, Western Area Command, General Services Administration (GSA), DFAS, and Norfolk Naval Base. Additionally, MTMC provides carriers with copies of their tenders on file if they are among the lowest-cost 3 to 5 carriers for every traffic lane.

MTMC could use EDI in the distribution process, although other EC options are available. Trading partners could receive tenders through EDI using the ASC X12 602 Transaction Set, Transportation Services Tender, while EC options include making rate inquiries via the CFM field module or direct connection to the CFM host for complete tender file transfers. Additionally, to make the public tender files available to electronic inquiry and selective retrieval by carriers, MTMC could establish a bulletin board service or use EDI to transmit quarterly copies of the complete tender file to carrier trade associations, who already have networks and bulletin boards. The carriers and their trade associations could then be responsible for developing and maintaining on-line query systems for their members.

GT Freight Tender Performance Notification (MTOP-T-03)

The MTMC Quality office, in coordination with Transportation Services, typically issues approximately 50 letters of removal and 250 letters of suspension or warning annually to carriers whose performance is below the requirements specified in their DoD carrier agreement. The letters are manually prepared and distributed through the mail. Field activities such as ITOs and TMOs also issue

letters of warning and suspension. Although MTMC should receive copies of those letters, as many as half of the letters are not forwarded to MTMC or, because the process is a totally manual effort, they are never written. As a consequence, MTMC does not have a complete picture of the adverse actions that may have been taken against a carrier. Although the number of such letters is relatively small, this information flow is considered an EDI candidate because the data could be standardized and the performance notices could be sent electronically to the CFM performance module for centralized filing, regardless of their origin.

Voluntary Freight Tender Expansion (MTOP-T-04)

MTMC accepts, files, and distributes voluntary (unsolicited) rates from both large and small freight companies for interstate and intrastate freight services. After MTOP-Q has validated that the carriers submitting the rates are qualified, the rates are placed on file and distributed. The data flows are simply the carrier's tender submission to MTMC and distribution to GSA. No solicitation or award process exists.

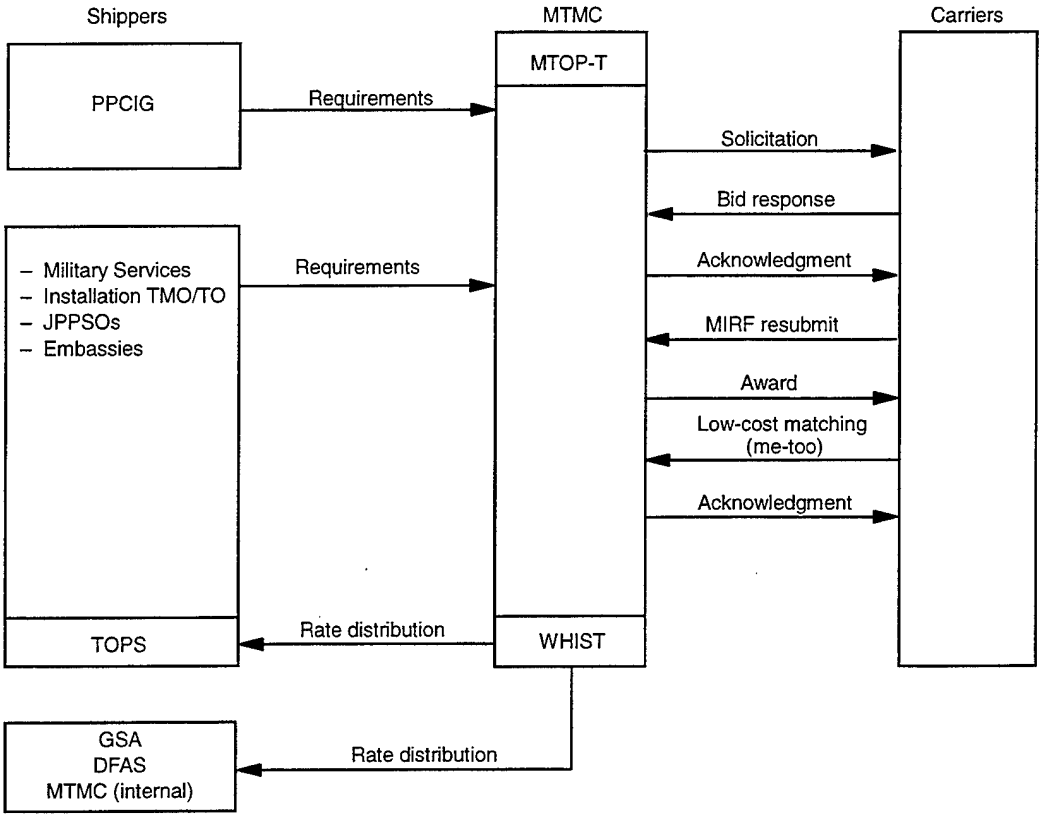
Currently, over 100 of approximately 500 qualified domestic freight carriers have trading partner agreements with MTMC for EDI rate filing. Of the approximately 18,000 active standardized freight tenders that could be filed through EDI, these EDI capable carriers now account for more than 50% of all tenders submitted. It is anticipated that the number of EDI tenders filed will jump significantly when GT tender submissions are converted to EDI, primarily because companies that submit both voluntary and GT tenders usually do business with a customer in either hard copy or EDI, but not both. The remaining tenders are mostly from small companies that have not yet ventured into EDI. MTMC has a goal to mandate the use of EDI for all tender filing. These carriers mail voluntary tenders to MTMC, and Eastern Area Command manually keys them into the CFM rate files. Some of the smaller carriers have hired a third-party organization to submit their tenders using EDI techniques. Carriers currently use the ASC X12 602 Transaction Set, Transportation Services Tender, to submit tenders, and MTMC plans to use the same transaction set for distributing tenders to GSA.

Plans for expansion of the EDI tender submission program include developing standard rules and CFM software for GT tenders by the 2nd quarter of fiscal year 1996, driveaway and towaway tenders by the 3rd quarter of fiscal year 1996, and barge and air freight tenders by the 1st quarter of fiscal year 1997. Implementation dates for mandatory submission of EDI tenders are being planned but have not been formally published.

Personal Property Intrastate, Interstate, and International Rate Solicitation (MTOP-T-05 and -06)

The personal property rate process involves three types of carrier service markets: intrastate, interstate, and international. The data flows in the three

environments do not vary significantly. They include requirements generation, solicitation for tender bids, bid response, acknowledgment of bid response, resubmission to correct MIRFs, notification of award (low-cost carriers), low-cost carrier matching bid submission (me-too bids), acknowledgment of me-too bids, and rate distribution. The data flows are depicted in Figure A-5.



Note: PPCIG = Personal Property Consignment Installation Guide; TO = Transportation Office; TOPS = Transportation Operational Personal Property Standard System; WHIST = Worldwide Household Goods Information System for Traffic Management.

Figure A-5.
Personal Property Intrastate, Interstate, and International Rates Process

As evidenced by more than one million bid responses received with each semiannual solicitation, MTMC has an excellent opportunity to use EDI in the personal property rate area. We believe, however, the intrastate trading partner environment should be treated separately because of the smallness of that market. While the intrastate carriers (estimated at 500) may eventually position themselves to conduct business via EDI, the low volume of 1,800 paper bids submitted and a Federal regulatory process that tends to favor small business concerns presents MTMC with a different set of barriers to overcome, without as high a potential return on investment as the other two environments. The personal property rate process for interstate and international tenders occurs in a business market that is generally more receptive and capable of doing business

through EDI. The market consists of approximately 570 domestic and 150 international carriers.

We recommend MTMC consider using EDI in its intrastate carrier business only after the interstate and international projects are well on their way toward completion. To ensure the interstate and international opportunities are tracked and evaluated for EDI applicability separately, we have assigned separate project numbers for Personal Property Intrastate Solicitation (MTOP-T-05) and Interstate/International Solicitation (MTOP-T-06).

Requirements for intrastate, interstate, and international personal property (PP) rate solicitations may be generated from the Military Services; JPPSOs; ITOs and TMOs; and analysis of the PPCIG. Except for the PPCIG, rate solicitation are gathered in a hard-copy, nonstructured format. MTOP-T uses the previous solicitation as a baseline and uses new requirements received since that solicitation to make adjustments.

When the requirements are fully known, the next semiannual solicitation incorporates them into a solicitation package, usually in the form of changes to the baseline requirements. Adjustments are infrequent, but the informal data gathering process can be time-consuming. In an electronic environment, MTOP-T could review and adjust the requirements as necessary and then move them directly into an EDI solicitation transaction set. The ASC X12 602 Transaction Set, Transportation Services Tender, with different implementation conventions, could support this data exchange. However, any attempt to formalize this process will probably not be well received by the Military Services, and it would not produce significant savings for MTMC because the quality assurance review would still be required. Other options include building a requirements module in TOPS, which local users could use to submit their requirements directly to the WHIST host. This option would probably consist of an EC file transfer or TOPS E-mail application. After careful consideration, we do not believe this information flow warrants serious consideration for conversion to EDI.

Paper copy solicitations for PP rate bids are mailed twice annually for both domestic and international traffic. In addition to these four solicitations, special solicitations are done for ad hoc requirements such as for Base Realignment and Closure. In its full format, with complete rules and traffic lane data, the solicitation package typically consists of more than 300 pages with numerous nonstandard sections. To reduce the volume, each solicitation references the baseline solicitation previously issued and only conveys bid submission forms and changes to the baseline of the current solicitation package. This practice reduces the size of a typical domestic solicitation to approximately 50 pages and an international solicitation to between 150 and 200 pages.

In response to MTMC's solicitations, interstate and international carriers submit rate bids via magnetic tape cartridge in an established format, while intrastate carriers submit their bids on paper. MTMC acknowledges the bids by mailing a printout to each carrier.

Following MTMC's acknowledgment, interstate and intrastate carriers are allowed to correct MIRFs by submitting add, change, and delete transactions against their initial submissions. International carriers do not normally submit MIRFs but may submit a written appeal to MTMC if they believe they have a made an honest mistake in rate filing. These appeals are handled on a case by case basis. After the MIRFs from domestic carriers are processed, MTMC sends these interstate and intrastate carriers a magnetic tape of all the final rates (awards). Carriers are then permitted to match the low-cost carriers with a me-too rate filing, generally on magnetic tape. MTMC follows with another acknowledgment printout of each carrier's rates.

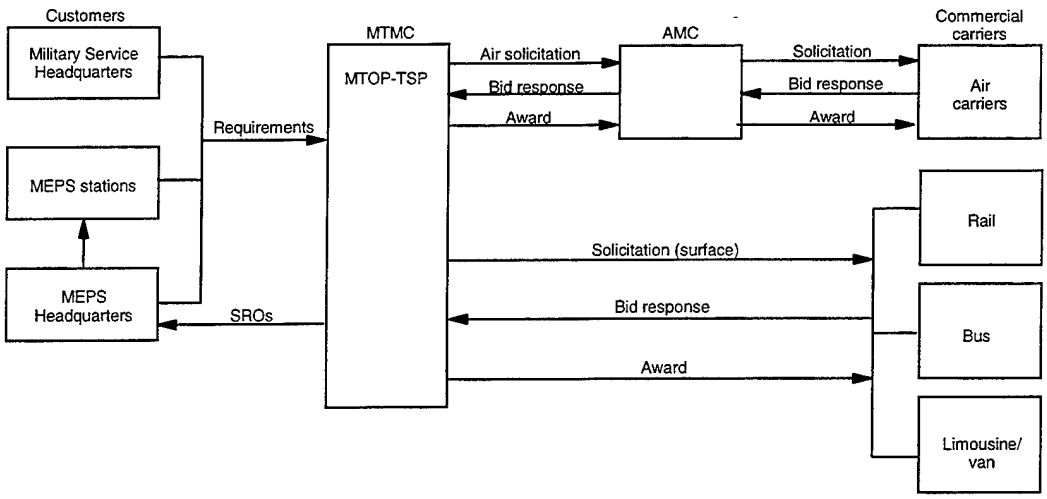
Distribution of interstate, intrastate, and international personal property rates after the completion of the solicitation process is mostly by proprietary format EC file transfers using the Defense Data Network (DDN) file transfer protocol (FTP). Currently, DFAS and GSA are mailed magnetic tapes or tape cartridges of complete rate files. TOPS sites are sent rate table structures applicable to their respective geographic area after the rates are converted to electronic flat files. MTMC Headquarters personnel transfer the data with special file creation utilities using the WHIST host as the source database. Other activities that do not have TOPS are mailed copies of rates applicable to their geographic area. All electronic file distributions are proprietary data exchanges and must be initiated from the MTMC Headquarters. The carriers currently review all rates by visiting, or hiring a third party to visit, one of the rate file rooms available to the public at MTMC Headquarters and its area commands. MTMC Eastern Area Command also mails copies of tenders to carriers upon request.

We believe the same potential and options available for distribution of GT rates also applies to distribution of personal property rates. Since an EC solution is already available for internal MTMC distribution, we do not see a need to change it. However, distribution of rates to the carriers, DFAS, and GSA could be converted to EDI data exchanges or posted on a bulletin board available to all carriers subscribing to the bulletin board host.

Except for the initial generation of requirements, all the data exchanges shown in Figure A-5 are good EDI candidates. The potential benefits of those data exchanges were previously identified in LMI report MT001LN4, *Modernizing DoD's Personal Property Program with Electronic Data Interchange: A Status Update*, August 1992. Subject to the results of the current personal property business process reengineering effort, MTOP-T intends to proceed with an EDI program for the interstate and international rate solicitation process.

Recruit Movement Rate Solicitation (MTOP-T-07)

The objective of this process is to publish Standing Route Orders (SROs) for recruit movements to and from DoD's military entrance point (MEP) stations. The data exchanges for the recruit movement process are shown in Figure A-6.



Note: AMC = Air Mobility Command; TSP = Transportation Services — Passenger.

Figure A-6.
Recruit Movement Rates Process

The initial step of the recruit movement process is to collect requirements from MEP stations and Military Service Headquarters. Since requirements change infrequently between solicitations, this step is an informal data exchange and does not appear to offer much potential for EDI. Approximately 120 solicitations for tenders are made annually to about 60 carriers. The solicitations are spread over geographical regions to ease the processing workload. A total of 6 incremental solicitations are made to 15 to 20 carriers by mail over a typical 12-month period. The solicitation package is usually less than 20 pages and appears to be amenable to standardization.

Currently, paper solicitations are keyed into word processing software and released in hard copy to AMC for air carriers and directly to rail, bus, and limousine/van companies. Air carrier solicitations are then remailed to the air carriers without any identifiable changes.

The carrier's paper response from bus, passenger rail, and limousine (van) companies are sent directly to MTMC by mail. Airline responses (bids) are mailed to AMC and then forwarded to MTMC. In turn, MTMC uses letters to notify carriers, through AMC, of the awards. The MEP station SROs are then prepared using the low-cost carrier winners. The SROs are manually prepared for each of the MEP stations included in the solicitation action and then keyed into a file and sent to the MEP Headquarters via DDN FTP. The headquarters then distributes the SROs electronically to all 63 MEP activities using a dedicated network. A new MTMC automated system supporting this process has not been accepted by the functional sponsor and is pending further definition. The current process is mostly manual.

We believe the solicitation, bid response, and award notification to carriers are good candidates for EDI. The distribution of SROs is currently EC (DDN FTP) and offers little advantage to convert to EDI.

This EDI project should be developed and implemented in conjunction with efforts to refine the automated system that will build and store the solicitation, bid, and award data. If EDI is implemented, the air carriers' solicitations and bids should be sent directly from and to MTMC with information copies distributed to AMC when it becomes EDI-capable. This practice would enable AMC to be the single face to industry, with MTMC in the role of a third party to negotiate MEP station traffic rates.

Commercial Travel Office Services Requirements Generation (MTOP-T-08)

MTOP-T is responsible for obtaining contract requirements for commercial travel office (CTO) services from Military Service headquarters and installations. Those requirements are submitted to MTMC's Commercial Travel Branch under the Principal Assistant Responsible for Contracting (MTAQ-PARC) for solicitation, proposal evaluation, and contract award. MTAQ-PARC solicits to acquire CTO services for the Army and some Air Force activities and DoD agencies. As a result of a DoD reengineering study, MTMC may be required to perform the function for all of DoD in the future.

While this project is an EDI candidate for MTOP-T, the volume of paper currently supporting contract requirements is low, the business is informal, and the trading partners are not versed in EDI. This project should be reconsidered in the future if MTMC becomes the central contract office for DoD. See project number MTAQ-PARC-03 for details regarding other potential EDI information flows involving CTO services contracting.

Rental Car Rate Filing and Distribution (MTOP-T-09)

The DoD Rental Car Rate Program publishes rates that are most favorable to official government travelers. The rates are published commercially in the *Official Airline Guide* (OAG). MTMC is the only Federal activity that performs this task since GSA discontinued its program. Only three data exchanges are involved in this process: rental car company rate submissions (2 to 3 pages from approximately 60 carriers); MTMC receipt acknowledgment (1 page to the submitting company); and distribution of the most favorable rates to the OAG (estimated at approximately 40 pages of data per year).

Since the data involved in this process are adaptable to EDI and four or five large rental car companies could probably support EDI, we believe this project is a good candidate for EDI. However, the limited subsequent processing by MTMC and low number of transactions do not justify giving this data exchange a high priority among the list of projects. If exchanges of rental car rate

distribution data are expanded into other processes such as the travel reimbursement business process or direct to commercial travel offices, the potential payoff and priority for converting this data exchange to EDI should be reassessed.

"City-Pair" Rate Requirement Generation (Not Selected as an EDI Candidate)

This project would involve converting airline "city-pairs" requirements from hard copy to EDI format. Key information flows for the city-pair rate solicitation process are shown in Figure A-7.

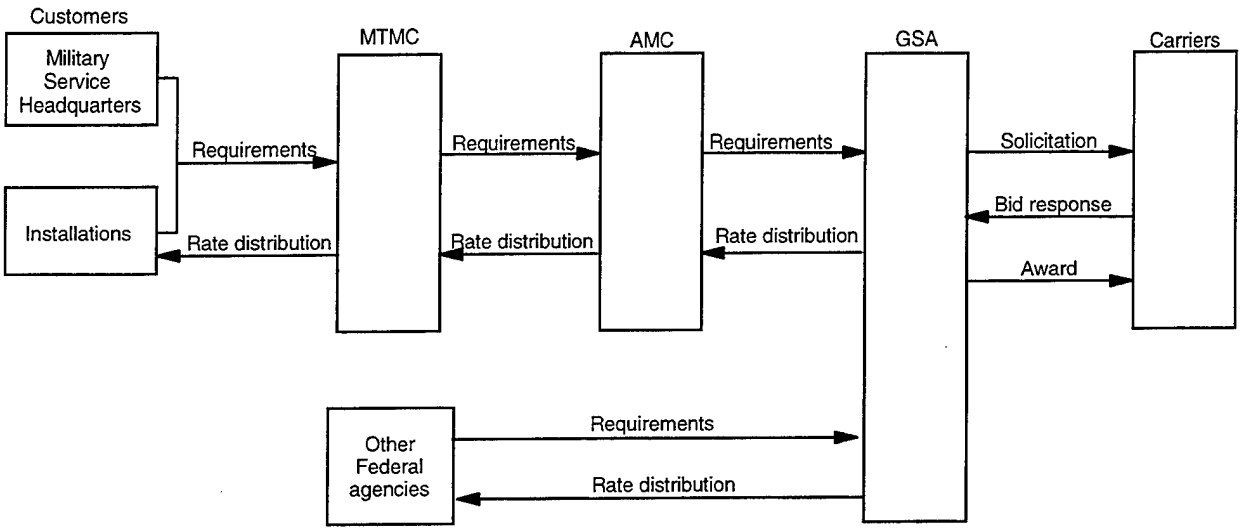


Figure A-7.
City-Pair Rates Process

MTMC receives requirements from the Military Services that include no changes to some city-pair markets, changes to others, and new requirements and service features. MTMC Headquarters reviews the requirements and historical usage data/trends and develops a city-pair requirements package once each year. This package is sent to AMC for purposes of monitoring channel airlift and Civil Reserve Air Fleet usage. AMC sends the requirements to GSA, which solicits bids from carriers in accordance with Federal Acquisition Regulation (FAR) procedures. GSA receives bids and, with the help of MTMC evaluations, awards contracts to carriers based on the lowest rates for each city-pair requirement.

We believe these data exchanges should not be changed. There appears to be no pressing mission need nor a prospective high return on investment for MTMC to proceed with introducing EDI into this process. MTMC only controls the requirements generation phase of the process, and AMC and GSA are not pressing to receive the requirements in an EDI format. In addition, EDI standards for passenger rates do not exist, the process is already EC, and only a few trading partners, all internal to DoD, are involved.

Stevedore Services Requirement Generation (Not Selected as an EDI Candidate)

This project involves conversion of paper data exchanges for contract solicitation, bid, and award for stevedoring services. The area commands develop the requirements for vessel loading/unloading, container freight station stuffing, privately owned vehicle (POV) stuffing, and container chill and freeze support. Those requirements are sent to MTMC MTAQ-PARC in both diskette and paper media. MTAQ-PARC then reviews the input, notes any changes from previous solicitations for the same services and customer, and updates the previous solicitation package using word processing software. It also develops a contract solicitation package and coordinates it through MTOP-T before it is released as a normal FAR-negotiated procurement action. This data exchange is primarily an informal staff coordination process between the contracting office and functional representatives. As a consequence, we found no EDI opportunities in the area of stevedore contracting.

Ocean Carrier Container Requirements Generation (Not Selected as an EDI Candidate)

MTMC solicits export seavan container requirements from the Military Services and adjusts them as necessary using historical data and telephonic coordination. The requirements data that MTMC planners gather may total 700 or more pages, but the data are eventually reduced to a spreadsheet format and provided to the Military Sealift Command (MSC) once each year. The final data exchange consists of only 4 to 6 pages of requirements, which are printed and mailed or hand carried to MSC, where they become input to MSC's contract solicitation process. The solicitation is then sent to all the major U.S. ocean carriers by mail. The carriers' bids are returned by mail. The exchange between MSC and the ocean carriers appears to be suitable for conversion to EDI; however, the volume of data that MTMC and MSC exchange cannot justify an investment in EDI.

ADCSOPS FOR OPERATIONS

Group Movements Requests (Not Selected as an EDI Candidate)

This process is supported by MTMC's Groups Operational Passenger (GOPAX) system that is available within local ITOs through the Transportation Coordinator Automated Command and Control Information System (TC-ACCIS) software or as a direct-dial into the GOPAX system, which operates at MTMC Headquarters. Access to the GOPAX system is also available from ADCSOPS, which will process requests received through telephone and facsimile.

The request for group movements is prepared as a request for rate quote in a standard format and placed in a GOPAX system mailbox depending on the mode selected. Essentially only three mailboxes are involved — bus, rail, and

mode selected. Essentially only three mailboxes are involved — bus, rail, and air. The bus and rail carriers have direct access to their mailboxes, but AMC controls the third mailbox. Most of the requests are for air service.

AMC reviews the solicitations to determine whether its aircraft (either a channel or special assignment mission) can meet the requirement. If they can, AMC provides reservation confirmation and schedule information back to MTMC and terminates the solicitation. If AMC cannot meet the requirement with organic or long-term charter aircraft, the solicitation is then sent to each carrier that advertises it can provide service between the origin and destination. The carrier with the lowest bid is awarded the contract.

Since this process consists of EC data exchanges and most transactions are internal to DoD (between AMC and MTMC), we conclude that it is not a good EDI candidate for MTMC to pursue.

Negotiated Freight Tender Process (180 Days or Less) (MTOP-O-01 and -02)

This process involves a FAR-exempt acquisition of transportation services for contingency unit deployments; exercise requirements that cannot use guaranteed freight tenders; and special, high-volume movement requests for one-time or short-term movements. The requests also include one-time solicitations for hard-lift/low-volume requirements that are not covered by a negotiated long-term rate tender.

The solicitations include domestic and international movement requirements as needed. Approximately 2,000 annual requirements, or transportation requests, are received via letters, DDN messages, or faxes from ITOs, TMOs, or Defense Contract Management Command contract activities. When the request is sent to MTMC Headquarters for action, an information copy is also sent to the applicable area command. The process is similar to the one-time-only (OTO) system described in project MTOP-O-03, except that a fully automated process and system has not yet been developed. Telephonic coordination is used to gain further details and clarify requirements, especially for unit movements. It is planned that the CFM system, and possibly the Transportation Coordinator, Automated Information Management System (TC AIMS) and CFM field module sites, will be able to receive and pass requirements through a disciplined electronic format. Non-CFM sites, such as embassies, will continue to pass requirements via faxes or messages.

After the customer's requirement is refined, the solicitations are sent to AT&T's EasyLink network where distribution is made to carrier mail boxes. Typically, approximately 60 carriers submit mostly fax bid responses (some are through EasyLink mailboxes) to a given solicitation. MTMC awards the qualified low-cost carrier through EasyLink, fax notifications, and phone calls. Follow-up notice of the awards also placed on an EasyLink bulletin board for all

bidders to review. The winning carrier is required to submit the applicable tender to cover the move as if it was a voluntary tender.

When the arrangements have been made, movement details and coordination points of contact (rating and routing data) are passed to the servicing area command, which then gives the information to the shipper and monitors the movement until it is complete.

An estimate of the annual number of potential EDI transactions in this process include approximately 2,000 paper and phone requests from shippers to MTMC Headquarters, 2,000 electronic solicitations distributed over the AT&T EasyLink network, 120,000 bid responses (mostly fax, some through EasyLink), and 2,000 awards.

Although the process is already partially EC, the project is included in the future workload of the CFM Program Management Office (PMO) and will be subject to the CFM system development schedules. Because of recent rail carrier interest in this project, the CFM PMO may develop an interim capability to receive at least a portion of the less complex bid submissions electronically. Since this project will probably be developed in stages, we identify the customer request interface as project MTOP-O-1 and the carrier interface as project MTOP-O-2.

Negotiated Personal Property Tender Customer Requests and Solicitation (180 Days or Less) (MTOP-O-03 and -04)

This process involves approximately 4,500 to 5,000 FAR-exempt solicitations annually for personal property requirements that are one-time or short-term movements. These movements typically include mobile homes, boats, house trailers, and recreational vehicles. They also include one-time solicitations for hard-lift/low-volume requirements that are not covered by a negotiated long-term rate tender. The movements include domestic and international shipments. The requirements arrive from embassies, JPPSOs, ITOs, and TMOs by faxes and DDN messages. Requirements may be submitted via TOPS if available at the requesting location.

MTMC has developed a command-unique software system, OTO, that headquarters operations personnel use to convert these requirements into electronic solicitations. A companion personal computer software package (Quicksilver) has been developed for use by household goods carriers in formatting their bid responses. The software is free to all carriers that MTOP-Q has qualified for the program. The AT&T EasyLink network provides communications services.

About 40 household goods carriers participate in this program. All carriers that want to bid must have the MTMC software, subscribe to EasyLink, and be qualified. TOPS sites have the capability to generate and receive data from the OTO software system electronically. Non-TOPS sites, such as embassies, will continue to send their requirements via faxes or messages.

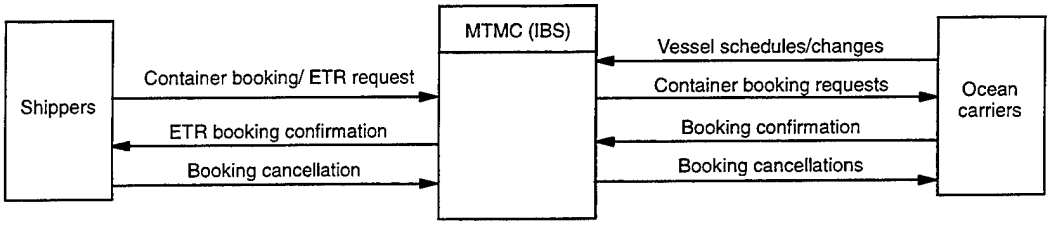
MTMC announces awards once a day using an EasyLink bulletin board made available to all carriers in the program. Although figures are not available on how many carriers may want to trade this information using EDI, most carriers are large enough to do so or are already using third-party services. Following the awards, movement details and coordination points of contact (rating and routing data) are passed to the original requesting activity as well as the servicing area command over the same communications media through which the request was received.

Although this project is ideal for EDI with reasonably good volumes and number of potential commercial trading partners, the current proprietary EC data exchange has already achieved most of the potential savings.

METS II Replacement (MTOP-O-05)

The exchange of ocean cargo booking information occurs today using the Transportation Data Coordinating Committee (TDCC) standard transaction sets through the MTMC automated carrier interface (ACI) mapped to MTMC's Mechanized Export Traffic System (METS II) proprietary cargo booking system. The METS II is being replaced by the Integrated Booking System (IBS), so this process does not present a new EDI opportunity.

As IBS is developed, MTMC may have opportunities to convert the TDCC standards to ASC X12 standards and to accommodate the receipt of commercial carrier vessel schedules using EDI. An alternative business process described in the *Defense Transportation System (DTS) 2010 Action Plan* would empower shippers (as transportation agents) to use EDI to book directly via EDI transactions with carriers, while providing an electronic copy of the booking confirmation or cancellation to MTMC. Figure A-8 shows the data flows in booking ocean cargo.



Note: ETR = export traffic release.

Figure A-8.
Ocean Cargo Booking Process

The number of these data flows, previous EDI experience, and ocean carrier environment will easily support implementation of the EDI vessel schedule using ASC X12 323 Transaction Set, Vessel Schedule and Itinerary (Ocean), and conversion to ASC X12 standards for the cargo offer (ASC X12 300 Transaction Set, Reservation (Booking Request) (Ocean), booking confirmation (ASC X12

301 Transaction Set, Confirmation (Ocean), and booking cancellation (ASC X12 303 Transaction Set, Booking Cancellation).

MSC-Controlled Fleet Booking (MTOP-O-06)

This project will extend the commercial booking, confirmation, and cancellation EDI transaction sets defined in MTOP-O-05. The data flows and transaction sets are anticipated to be the same as used with commercial carriers. This project may be longer term than the commercial implementation because MSC must develop an automated system to capture the EDI transactions that the IBS booking functions create.

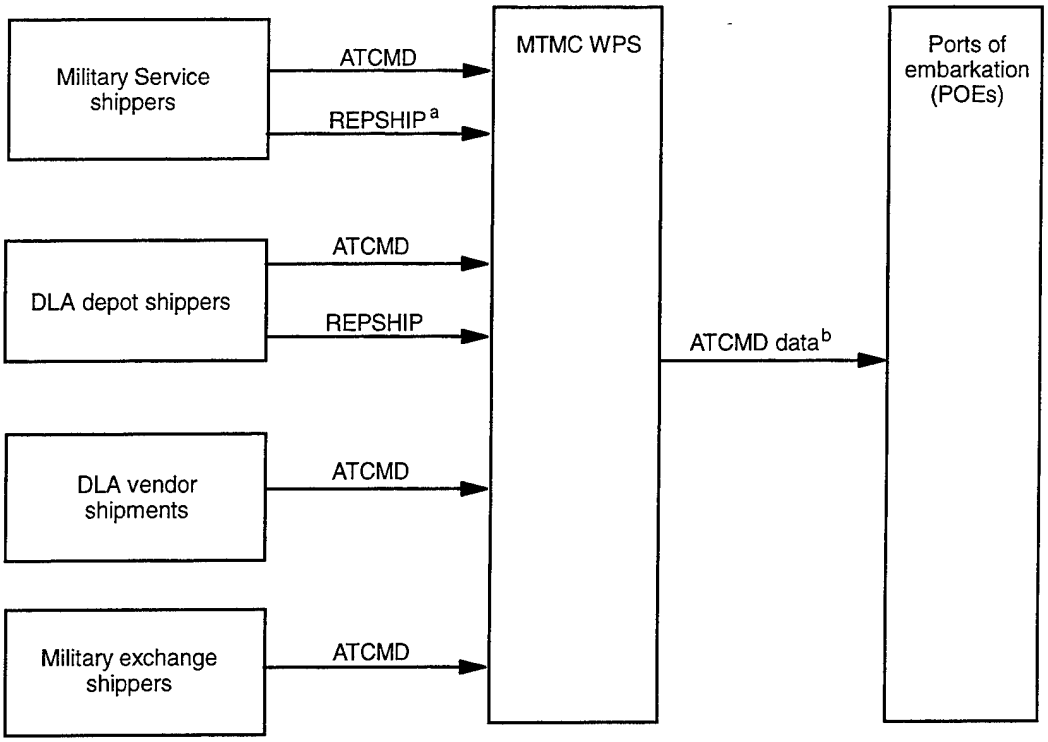
Advance Transportation Control and Movement Document Conversion (MTOP-O-07)

The Transportation Control and Movement Document (TCMD) is specified in the Military Standard Transportation and Movement Procedures (MILSTAMP) as the standard documentation required to describe a shipment unit moving through the DTS. When the document is sent to a water or aerial port in advance of the cargo, it is called the Advance TCMD, or ATCMD.

Shippers prepare more than 2 million TCMDs annually in the current 80-column format. Those TCMDs are used throughout MTMC water port processing systems. Most of the export shipment information data exchanged among internal DoD business partners is accomplished electronically via the proprietary MILSTAMP 80-column fixed format. In addition, the report of shipment (REPSHIP) is exchanged between DoD ammunition (ordnance) shippers and the MTMC and Navy water ports that load ammunition. Both of these data flows are potential EDI candidates. Additionally, a new data flow requirement related to the GTN presents MTMC with a third EDI candidate. These candidates are shown in Figure A-9 and discussed below.

The MILSTAMP system administrator, Defense Logistics Management Standards Office (DLMSO), has the lead for the ATCMD EDI conversion effort. Since MTMC has several key automated applications that depend on the data, it is imperative that MTMC help develop the EDI version of ocean cargo ATCMD.

Another potential EDI application is the REPSHIP. A copy of the REPSHIP is sent by the consignor to the consignee and, if it is an export shipment, to the water POE for every ammunition/explosive shipment. It alerts the transportation community and consignee that an ammunition or other explosive shipment has been released into DTS. We believe the ASC X12 858 Transaction Set, Shipment Information, that is used for the GBL and ATCMD can be modified to serve as the REPSHIP, which would eliminate at least 75,000 hard-copy reports. Although DLMSO has not been tasked to convert the REPSHIP to EDI, at MTMC's request, the project could be undertaken concurrently with the ATCMD conversion effort.



[a] REPSHIP is exchanged only if shipment consists of hazardous, sensitive, or ordnance material.

[b] When ATCMD data are exchanged between WPS sites, ORACLE tables are exchanged, usually through DDN FTP.

Figure A-9.
ATCMD Data Flows

In addition, the *ITV Integration Plan* mandates conversion of the ATCMD/TCMD to EDI standards. The ITV integration concept consists of funneling all ocean cargo ATCMD information, via EDI, through MTMC to GTN. Concurrent with the effort to convert the ATCMD to EDI, MTMC will need to develop a concept for receiving ocean cargo ATCMDs electronically, ensuring quality control, and making timely transmissions to GTN.

Intransit Visibility Shipment Status (MTOP-O-08 and 09)

Numerous DTS data exchanges indicate movement status. As an example, MTMC routinely receives receipt, lift, discharge, and port departure data for surface export shipments. In efforts to improve ITV, a number of movement status reports will need to be sent to GTN. MTOP-O-08 and 09 are mandated projects specified in the *ITV Integration Plan.* Several of the events that need to be reported to GTN are new to MTMC's export systems, such as when the cargo departs its origin (shipper location) and when it is delivered to the ultimate consignee.

On the domestic side, movement status reports will be relatively new to MTMC because tracking domestic cargo has not been a requirement. Commercial carriers and MTMC ports must provide the following movement status transactions (events):

- Depart origin (shipper location)
- Report ocean cargo transshipments
- Mode of transportation changes
- Carrier passes control of DoD cargo to another carrier
- Carrier delivers a shipment to designated consignee (or a MTMC POE).

The concept of operation for the *ITV Integration Plan* envisions commercial carriers reporting these events, using EDI transactions, to either WPS or the CFM system. MTMC would then report the events to GTN and also use the data for operational purposes. The key to this concept working is the carrier industry providing the needed data, which may require changes to the contract conditions of the MSC Master Container Contract (Rate Guide) or standard tender rules for domestic freight carriers. Commercial trading partners are already exchanging much of this information using the ASC X12 214, Transportation Carrier Shipment Status Message, and 315 Transaction Sets, Status Details (Ocean), respectively. The *ITV Integration Plan* envisions these transactions to be automatically "pushed" from carriers to primary DoD databases, which would provide the information to GTN. With MTMC operating two key databases (buffers), trading partner agreements will have to specify the events that would automatically generate status details.

This project requires MTMC to not only report to GTN, but also to determine whether the WPS and CFM application systems will receive, store, and report the movement status or use a central hub, such as a centralized carrier interface server/translator to accomplish these tasks and then pass flat files to the application systems. At the time of this writing, the CFM project management office planned to receive the EDI 213/214 transactions directly through a commercial van from domestic freight carriers. Final decisions had not been made for ocean freight; however, WPS appeared, at least initially, to be planning on a central carrier interface such as the replacement for the MTMC ACI to receive, translate, and exchange the EDI 314/315 movement status data between the carriers, WPS, and GTN. In view of the carrier industry and automated system differences, this EDI requirement has been split into a project for export surface shipments (MTOP-O-08) and another project for domestic freight shipments (MTOP-O-09).

Vessel Manifest Documentation Conversion (MTOP-O-10 and -11)

The ocean cargo manifest (OCM) consists of TCMD data representing cargo traveling on a single commercial or military-controlled vessel between a POE and a port of debarkation (POD). The current standard is a MILSTAMP-specified 80-character record format.

We examined five predominant OCM data flows for EDI applicability. Those flows are listed below:

- MTMC water ports exchange OCM data using EC proprietary formats (ORACLE table data) transmitted either using DDN FTP or mobile satellite units.
- OCM data are used to prepare a dangerous cargo manifest for ordnance and hazardous materials when applicable.
- MTMC receives paper copies of the carrier invoice from MSC and compares the invoice to the manifest on file.
- After it compares the invoice and manifest, MTMC sends MSC a response, which it uses to adjust the invoice or make payment as presented.
- OCM data are used to pre-position shipment information with port activities so POEs can complete export customs declarations and PODs can perform this import customs clearance duties.

In addition, the OCM may be exchanged between a WPS corporate database and GTN. It has not been determined whether GTN will require the OCM and what format would be used to transmit the data. The data flows for OCM data are shown in Figure A-10.

After examining these data flows, we conclude there is no economic advantage to convert the OCM data exchange among MTMC water ports to EDI, primarily because MTMC is already using EC techniques. Furthermore, the dangerous cargo manifest must be accurate and up to date, including any last-minute adjustments made during ship loading. It is a paper document that must be in the ship captain's possession during the voyage. This data exchange is also not applicable for EDI.

However, MTMC could benefit from using EDI to transmit manifest data to MSC in support of validating carrier invoices and potentially for subsequent distribution to GTN. Conversion of the MILSTAMP OCM to EDI standards has been assigned project number MTOP-O-10.

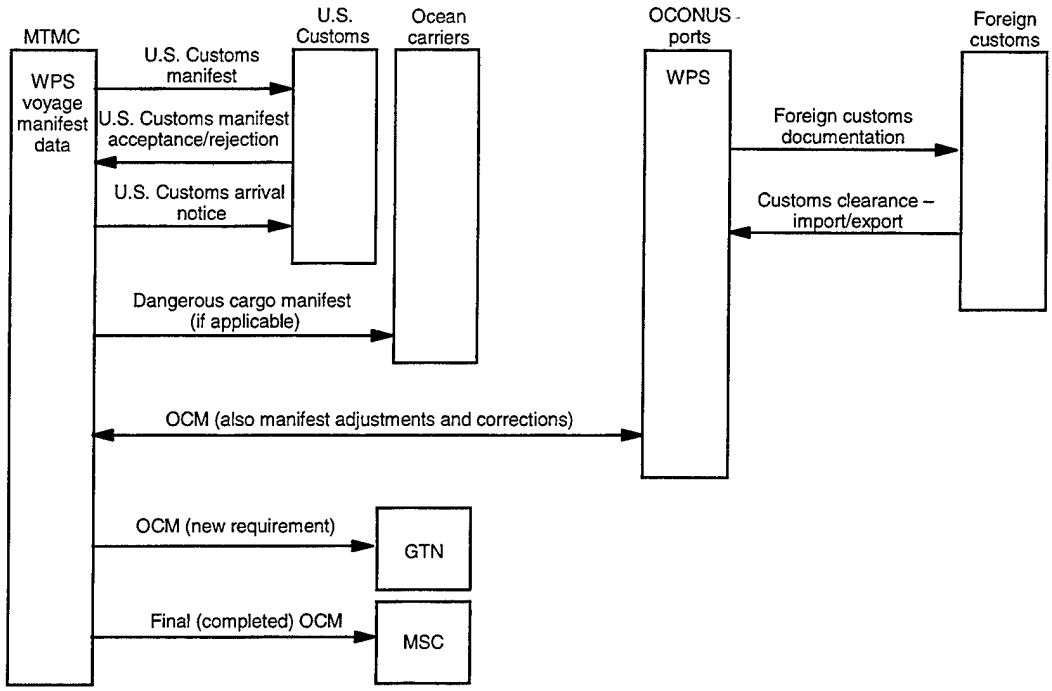


Figure A-10.
Vessel Manifest Documentation Process

Lastly, MTMC's opportunity to convert customs documentation to EDI is excellent. This effort would involve a cooperative program with U.S. Customs to convert paper customs documentation to EDI standards. U.S. Customs can support ASC X12 as well as the international standards [EDI for Administration, Commerce, and Transport (EDIFACT)] for customs documentation. The U.S. Customs goal is to require all import and export customs EDI partners to adopt the international standards for all customs documentation requirements by the year 2000. We recommend MTMC explore the options of converting to ASC X12 first and then migrating to EDIFACT, or moving directly to EDIFACT for customs documentation rather than going through two EDI conversions in five years. The latter option could also position MTMC to establish EDI partnerships with foreign customs offices, particularly since standard NATO customs documentation agreements are beginning to use EDIFACT standards. Creation of an EDI interface between U.S. Customs and MTMC has been assigned project number MTOP-O-10.

Waterport Cargo Operations Planning (MTOP-O-12)

Current MTMC port operations require reports of vessel estimated times of arrival (ETAs) from the carrier or carrier agent at least 24 hours before the time the ship is due in. This information assists in port planning, port diversions, clearing customs, and consignee notifications. The MSC rate guide requires ETA notices be sent to the military port activity whenever military cargo is on board

the arriving vessel. Ocean carriers currently transmit the information by telephone, telex, or on paper.

This project involves MTMC and ocean carriers formulating a concept of operation for electronic ETA forecasts, mapping the data required to a suitable transaction set, and developing an implementation plan and schedule. [Two ASC X12 transaction sets could be used: 312, Arrival Notice (Ocean); or 323, Vessel Schedule and Itinerary (Ocean).] It is assumed that the data would be received by the WPS Integrated Cargo Data Base (ICDB), either directly or through the automated carrier interface being built into IBS. The information would then be provided through WPS to the appropriate MTMC port activities.

Cargo Outturn Report (Not Selected as an EDI Candidate)

The cargo outturn report is a manifest reconciliation between the POE and POD. This requirement could be satisfied using the ASC X12 315 Transaction Set, Shipment Status Detail; 854 Transaction Set, Shipment Delivery Discrepancy; or other suitable transaction. However, since the use of this transaction appears to be limited to an electronic message currently passed internally among military waterports using DDN, we believe that MTMC would benefit very little from converting the cargo outturn report to an EDI format.

GBL Shipper Expansion (MTOP-O-13)

Domestic freight government bills of lading (GBL) data are collected only by the CFM host from the CFM field module and from some DLA depots. This project is aimed at capturing all GBLs created for cargo movement and transportation payment, including those generated by DLA for vendor shipments [Transportation Automated Management System (TRAMS)], Air Force users of the Cargo Movement Operations System (CMOS), Army users of the Standard Depot System (SDS), TC AIMS II shippers when the new system is fielded, and perhaps selected DLA legacy systems.

Originally, the new DLA standard system, which produces EDI GBLs, was expected to replace older depot systems such as the Stock Control and Distribution (SC&D) system and Navy Automated Documentation System (NAVADS) in a relatively short time, so DoD would not need to invest in "throwaway" EDI systems. Recently, the DoD Comptroller and Defense Finance and Accounting Service — Indianapolis Center (DFAS-IN) presented a case for making EDI investments in such legacy systems to allow the continued consolidation and improvement of financial payment operations. Since the CFM system provides all GBLs to GTN, this project is a mandated effort.

GBL Distribution (MTOP-O-14)

Currently, electronic GBLs are exchanged between the CFM system and DFAS-IN whenever a copy of the GBL is requested. A number of activities, systems, and users need GBLs provided to them in a timely manner, including the Defense Transportation Tracking System (DTTS) hazardous materials expansion program; consignees; carriers; and GTN. This project, specifically the capture of all GBL data and distribution to GTN, is mandated by the ITV Integration Plan. Distribution of GBLs to carriers is strongly supported by the DoD Comptroller. The project supports by DoD's efforts to eliminate all paper copies of the GBL.

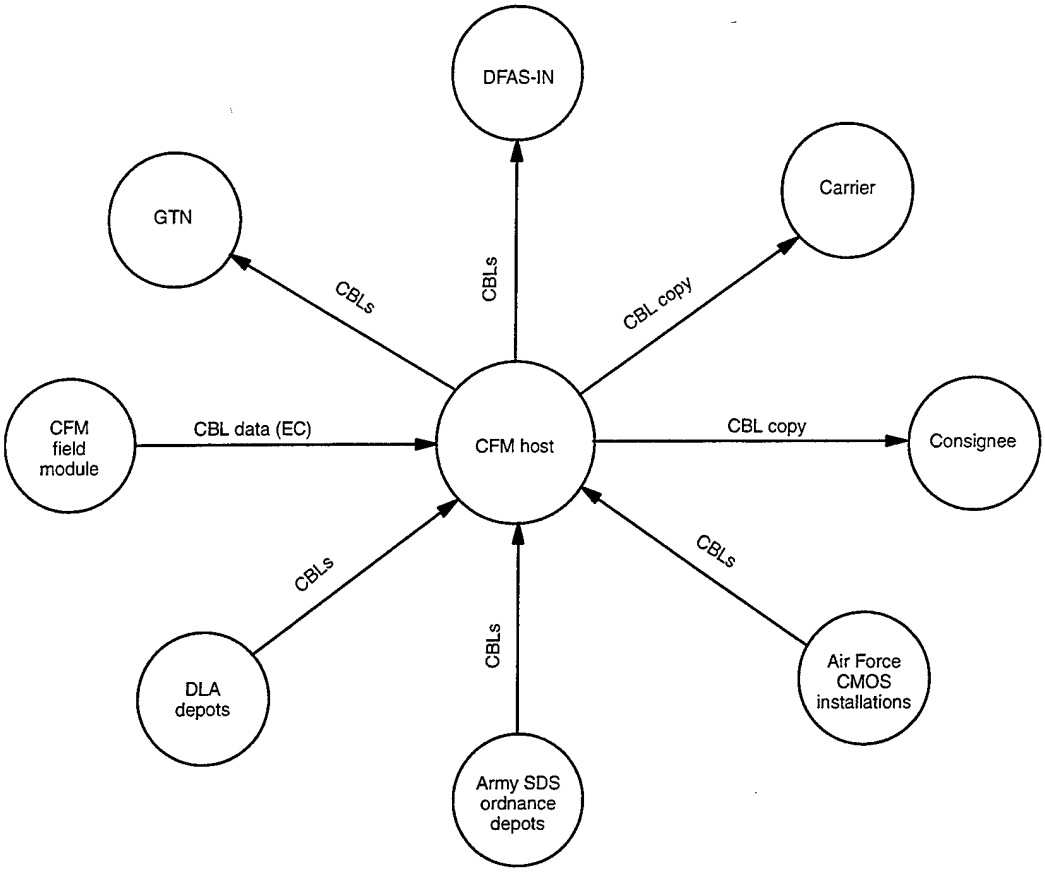
Commercial Bills of Lading/Small Parcel Manifest Conversion (MTOP-O-15)

DoD has not yet implemented any ASC X12 standard transaction set for commercial bills of lading (CBLs). The Air Force and DLA have informally tested a version of the ASC X12 Transaction Set 858, Shipment Information, for CBL traffic; and MTMC, through the CFM PMO, has participated in planning sessions. DFAS is interested in gaining access to CBL data to centralize the local payment of CBL transportation invoices.

This project involves formulating a concept of operation for processing CBL data, developing the necessary implementation conventions for an ASC X12 transaction set to accommodate CBL shipments, modifying the CFM system to capture and file CBLs, and establishing the necessary trading partnerships with shippers. This project is mandated by the DoD *ITV Integration Plan*. Figure A-11 shows the major interfaces for CBL shipment information that must be built between the CFM host and key trading partners.

Domestic Freight Initial Load Tender Conversion (MTOP-O-16)

The most common means of offering DoD shipments to domestic freight carriers is by telephone. Although it is difficult to quantify the number of hours spent on the phone for this purpose, more than 500 installations offer shipments to local carriers, which suggests that replacing those telephone conversations with electronic offers would yield substantial savings. Many freight companies now receive commercial freight offers from shippers and freight forwarders via EDI and respond with an EDI acceptance or rejection transaction. The American Trucking Association is advocating the use of EDI initial load tenders. The ASC X12 transaction sets that commercial enterprises use for this purpose are the 204, Motor Carrier Shipment Information, for highway offers and 404, Rail Carrier Shipment Information, for rail shipments. The ASC X12 858 Transaction Set, Shipment Information, could also be used for both load offer by DoD and acceptance or rejection by carriers.



Note: CBLs to DFAS-IN, carrier, and consignee from CFM host are from CFM field module only.

Figure A-11.
CBL/Small Parcel Manifest Conversion Process

This project involves identifying the transaction sets that are best suited for initial load tender notification and carrier acceptance, developing implementation software in the CFM field module and the CFM host, establishing trading partner agreements, and implementing the data exchanges.

Domestic Freight Rating and Routing Request Conversion (MTOP-O-17)

Low-volume shippers, such as military installations that do not have depots, use local resources to arrange shipments of unit and nonunit equipment in quantities of less than a truckload. For full truckloads and volume movements, these installations normally request MTMC to arrange the movement. These requests are usually made on paper copy DD Form 1085, Request for Rating and Routing, which are mailed or MTMC Headquarters. The data on those forms are fairly standard and MTMC receives approximately 13,000 requests monthly. The data flows are DD Form 1085 and a response.

Both of these data flows show good potential for EDI conversions. The CFM PMO has recently started testing the implementing conventions for replacing DD Form 1085 with the ASC X12 858 Transaction Set, Shipment Information, with an Air Force CMOS site, and it expects to be ready to implement other shipper system sites that are EDI-capable after November 1995. The DD Form 1085 process could also accommodate short-term shipment request requirements from shippers to the CFM host as described in project MTOP-O-01.

Personal Property GBL Conversion (MTOP-O-18)

Personal Property GBLs, which are initiated at personal property shipping offices (PPSOs) using TOPS, are sent to consignees using DDN FTP transfers of TOPS proprietary file formats. We see no reason to replace these proprietary formats with EDI.

However, when the GBL data are captured by the host (WHIST), we believe that MTMC has an excellent opportunity to replace the data flows from WHIST to DFAS and from WHIST to commercial carriers with EDI transaction sets. WHIST developers have already developed the EDI GBL capability, but they have not implemented it because the project was placed on hold pending the resolution of data quality issues related to personal property GBL data and further development at DFAS.

Personal Property Shipment Status Conversion (MTOP-O-19)

Personal property inquiries are exchanged with commercial carriers by letters, fax, and telephone. Although the TOPS automated system should initiate such inquiries using WHIST, an estimated 10 percent or more of the 650,000 personal property shipments have to be traced and researched manually each year.

This project requires the development of implementation conventions for use of two ASC X12 transaction sets (213, Motor Carrier Shipment Status Inquiry, and 214, Transportation Carrier Shipment Status Message) and a strategy for their implementation. The connectivity with commercial trading partners to distribute GBLs (MTOP-O-18) should enable MTMC to complete this project almost simultaneously.

Deputy Chief of Staff for Resource Management

Stevedore Invoice Conversion (DCSRM-01)

Before DFAS can pay for stevedore services, MTMC verifies invoices (DD Form 1034) by comparing paper invoices from contractors against manifest records. The new Stevedore Administration System (SAS) being developed will

allow MTMC to construct the invoice by on-line inquiry to WPS records and send a validated DD Form 1034 to DFAS without needing the carrier's paper invoice. MTMC currently processes approximately 400 invoices each year. This project involves replacing DD Form 1034 between MTMC and DFAS with information exchanged electronically.

Planning, Programming, and Budgeting System Data Submission (Not Selected as an EDI Candidate)

This project, which is intended to be a subset of the overall Transportation Financial Management System (TFMS), will enable MTMC to develop, coordinate, and submit all data required by the various Planning, Programming, and Budgeting System cycles during the year using electronic file transfers and on-line terminal sessions.

Although the Planning, Programming, and Budgeting System could eventually become an integrated DoD distributed system, it will most likely remain as a proprietary system employing EC but not EDI standards. As a result, we did not select this data exchange as an EDI candidate.

Transportation Financial and Accounting Data Conversion (Not Selected as an EDI Candidate)

USTRANSCOM and its component commands are striving to integrate their financial management, accounting, and transportation operating systems into a TFMS. While it is anticipated that many operational data exchanges related to financial systems could be accomplished using ASC X12 standards, the TFMS concept, requirements, and proposed implementation details are not mature enough at this time to make it an EDI candidate.

Principal Assistant Responsible for Contracting

Standard Army Acquisition and Contracting System EDI Implementation (MTAQ-PARC-01)

The Department of the Army is fielding its Standard Army Acquisition and Contracting System (SAACONS) including EDI capability to all its commands. The system is designed for acquisitions from $2,500 to $100,000, with projected development to include acquisition actions above $100,000. The software has been implemented at MTMC, and training was presented by the SAACONS Program Management Office during the first quarter of fiscal year 1996.

This project was selected for the MTMC strategic plan because MTMC can obtain the EDI benefits with no system development or hardware costs. The

system uses the Federal Acquisition Network (FACNET), which is the communications pathway through which the information is transmitted to a network entry point (NEP). Information is stored at the NEP in a bulletin board fashion and made available to trading partners through government-certified commercial value-added networks (VANs). The Defense Information Systems Agency (DISA) furnishes the technical infrastructure that supports the exchange of EDI transactions among government activities and commercial VANs. Figure A-12 shows the data flows that SAACONS EDI and FACNET currently support.

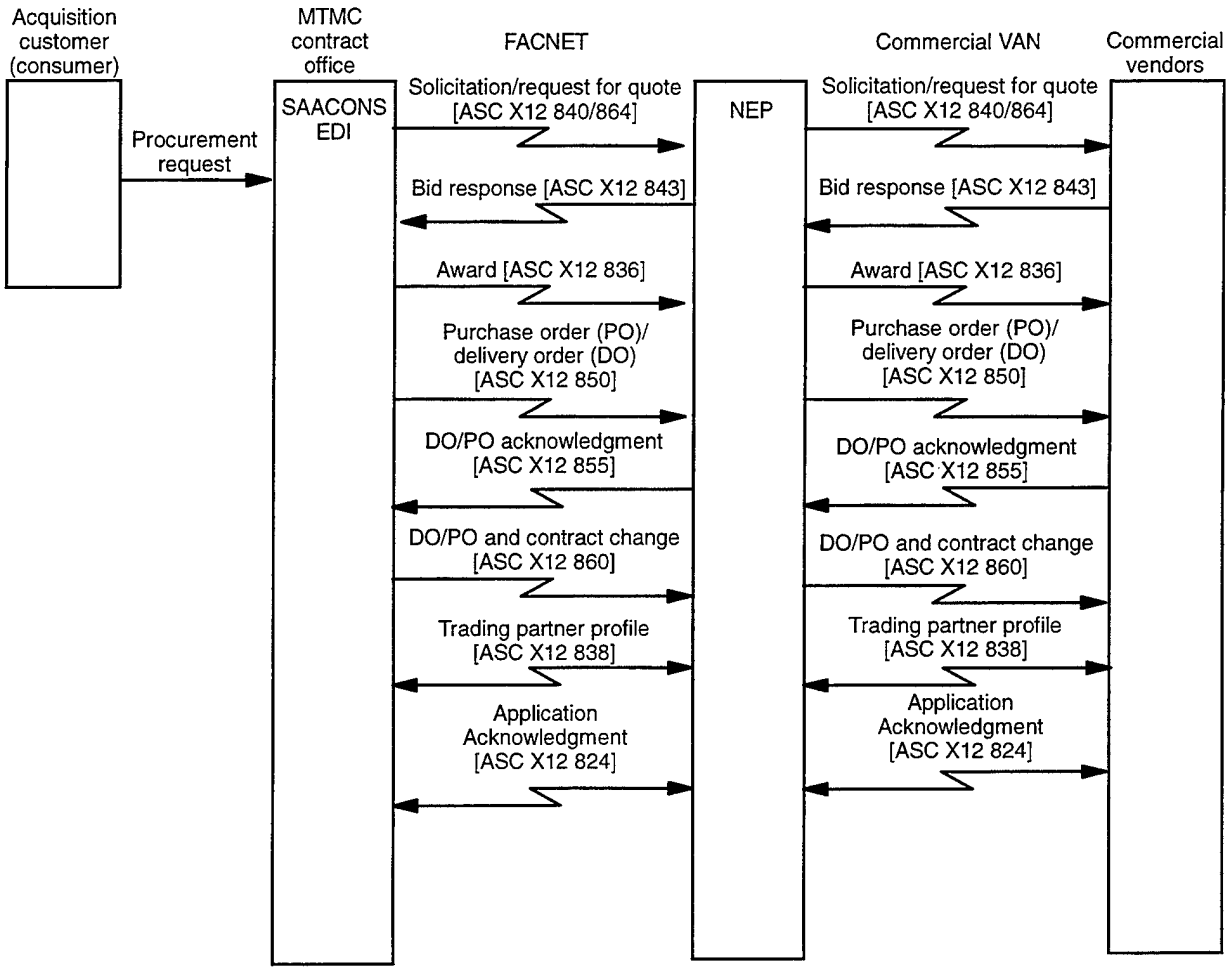


Figure A-12.
SAACONS EDI Implementation

SAACONS EDI can replace a considerable volume of paper in the MTAQ-PARC's Federal Information Processing Standards (FIPS) Branch, which procures automated data processing equipment for MTMC. That branch annually manages several solicitations; about 200 requests for quotations (RFQs) and purchase orders (POs); almost 600 delivery orders (DOs); and over 100 contract, PO, and DO modifications.

We recommend MTMC implement all of the transaction flows offered by SAACONS EDI. MTMC does not engage in procurement activities that would justify developing and implementing EDI transactions not supported by SAACONS EDI. Currently, six transaction sets are available and another four are planned by the SAACONS PMO for development. Available transactions include:

- 836 — Award notice
- 838 — Trading partner profile
- 840 — Request for quotation
- 843 — Response to RFQ
- 850 — Purchase/delivery order
- 997 — Functional acknowledgment

Planned transactions include:

- 824 — Application advice
- 855 — Purchase order acknowledgment
- 860 — Contract change
- 864 — Text message

SAACONS EDI may be replaced by a DoD standard system within three to five years. Such a replacement will affect MTMC only in the area of training. Existing transaction sets and the trading partner environment are not expected to change with the new DoD system implementation.

Customer Procurement Request (Not Selected as an EDI Candidate)

This potential EDI project would exchange information between MTMC requesting activities and the MTMC contracting activity. The transaction could also be extended to data exchanges between the MTMC contracting activity and a local consolidated contracting activity such as the Defense Supply Service — Washington, for procurements that MTMC does not handle. However, we did not select this project as an EDI candidate because this type of data exchange is not part of the SAACONS concept, and MTMC does not generate enough procurement activity to justify development of a stand-alone system.

Stevedore Services Acquisition (MTAQ-PARC-02)

This project involves automating the exchange of information associated with contract solicitation, bid, and award for stevedoring services. (These solicitations are greater than $100,000 in total contract value and not intended for SAACONS EDI at this time.)

MTMC Area Commands develop requirements for stevedoring and related terminal services. The requirements are submitted to the Stevedoring Branch of the MTAQ-PARC via paper. MTAQ-PARC reviews the changes requested and makes those changes or corrections to the existing contract document. A contract solicitation package is then developed and coordinated through the MTAQ-PARC Acquisition Policy Division before being released as a normal FAR-negotiated procurement action. MTMC performs three to five solicitations per year. The solicitation package is large (300 to 400 pages) and can go to 10 to 30 potential vendors. Most of the data can be standardized. Two to six proposals are received from the offerors. Proposals are also large (100 to 400 pages) and about half of the data is standard. Award notices are sent to each offeror along with an abstract of the best and final bids.

This project has EDI potential due to the moderate paper volume and standard data content of the solicitation package. Even though SAACONS EDI is intended for acquisitions of less than $100,000, this limit appears to be more of a function of FACNET operating authorities and the general belief that acquisitions beyond that value typically are too complex for SAACONS EDI software. We believe the acquisition of stevedore services can be standardized sufficiently to use the SAACONS EDI software and that FACNET can be replaced with one or more commercial EDI value-added networks or direct-dial access to exchange solicitation information with the companies involved. We recommend that MTMC gain more experience with SAACONS EDI before considering this effort.

Commercial Travel Office Services Solicitation (MTAQ-PARC-03)

MTMC's Commercial Travel Branch under MTAQ-PARC manages the acquisition of CTO services and serves as the legal contracting authority for the Department of the Army and some Air Force activities and DoD agencies. As a result of a DoD reengineering study, MTMC may become the central program manager and acquisition authority for all DoD travel office services.

This potential EDI project involves converting requests for proposal (RFPs), proposals, and awards (Standard Form 26) from hard copy to standard EDI transaction sets. Requirements are received from Military Service headquarters and installations through MTOP-T (see project number MTOP-T 08). Currently, contracts are awarded for each of six travel regions with a duration of two to five years. Typically, MTAQ-PARC performs one or two solicitations per year. The anticipated volume of movements to and from locations may change from year to year; however, the specifications in the RFP are fairly static and a large portion of the data consists of FAR clauses applicable to all CTO services

solicitations. The solicitation is released in hard copy, typically a binder of papers 2 to 3 inches thick, to approximately 100 companies.

MTAQ-PARC receives between 5 and 15 responses (proposals) to the RFP for each solicitation. Each proposal consists of several large binders of paper. Unlike RFPs, proposals contain very little standard data. They usually present company and employee credentials, evidence that the company can meet or exceed each contractual requirement, and the percentage of commissions that the company will pay the government.

The final data flow in this project involves converting contract awards (SF 26) from hard copy to EDI. The FAR requires all offerors to be notified of the award. Each award notice consists of one page of standard information. The solicitation process data flows are shown in Figure A-13.

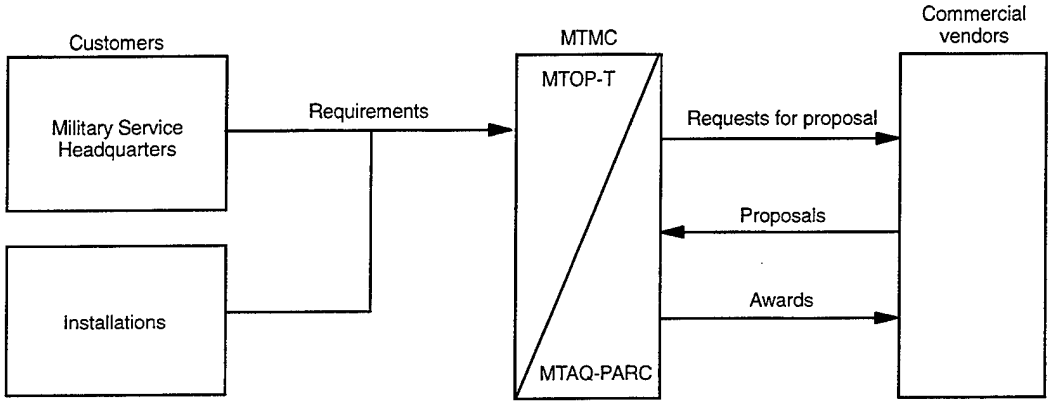


Figure A-13.
CTO Solicitation

The high volume of paper, fairly standard nature of the RFP data, the sophisticated nature of the companies that submit proposals, and the possibility that SAACONS EDI (project number MTAQ-PARC-01) software may be applicable to this solicitation suggest that this project has EDI potential. As discussed above, commercial VANs could replace FACNET, if necessary, to overcome dollar threshold limitations. We recommend this project be held in abeyance until MTMC contracting personnel gain experience with SAACONS EDI.

Nontemporary Storage Acquisition (MTAQ-PARC-04)

This project involves converting the current basic ordering agreement (BOA), rate changes, contract modifications, and delivery service order (DD Form 1164) from paper to EDI. Once a contractor submits a request to do business with the government, is determined to be eligible, submits rates to the Regional Storage Management Office (RSMO), and has its facilities approved, the RSMO issues a basic ordering agreement. After a BOA is in place,

Installation Transportation Offices (ITOs) issue orders against the BOA to the contractor with the lowest rates using a DD Form 1164. ITOs have access to all contractors and their BOA rates through the Transportation Operational Personal Property Standard System (TOPS). The rates for each contractor are also maintained on an MTMC bulletin board. MTMC-T is the functional sponsor.

There are approximately 300 storage company vendors in each of four RSMOs. New BOAs are issued every five years and about 150,000 delivery service orders are cut annually. The project has EDI potential because the data are reasonably standard, a large number of contractors are involved, and the paper volume is relatively high. The difficulty with EDI is that many small and disadvantaged businesses that participate in these bids are not expected to become EDI-capable in the foreseeable future.

Nevertheless, we believe that the SAACONS EDI software may accommodate this acquisition. MTMC should first gain experience in implementing SAACONS EDI (MTAQ-PARC-01) before considering this EDI effort. The data process information exchanges are shown in Figure A-14.

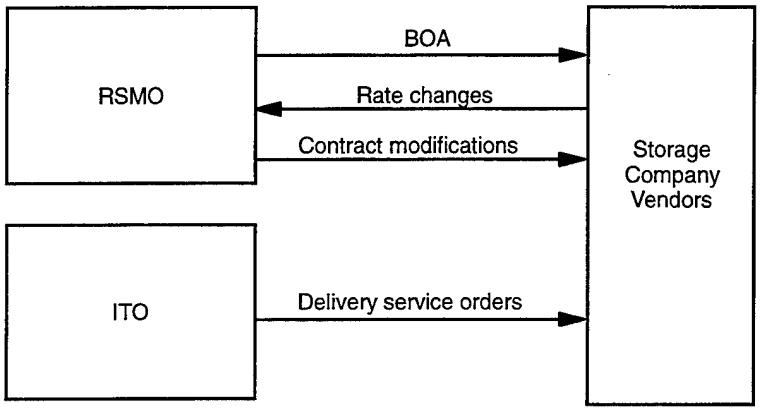


Figure A-14.
Nontemporary Storage Process

APPENDIX B

Explanation of Basis of Estimates

Table B-1 documents the basis for our estimates of trading partners and volumes presented in Chapter 3, Table 3-1. Acronyms that start with the letters "MT" will most often be the Military Traffic Management Command (MTMC) office symbol designations.

Table B-1.
Assumptions and Computations for Potential EDI Projects

Project number	Bases of estimates
MTOP-Q-01	The figure of 450 trading partners annually reflects new carriers that apply for qualification each year. Document volumes are based on carrier file review. Submission volume is estimated at an average of 300 pages per paper carrier file. A one-page response is returned to the carrier.
MTOP-Q-02	Although BRAC/reorganization will affect total trading partner figures, this estimate assumes no more than 25 waterports, and other MTMC owned activities will create TDRs. Based on interviews with MTOP-Q, MTMC creates no more than 200 TDRs each year. Assumption made is one hard copy TDR equals one EDI transaction.
MTOP-Q-03	An estimate of 75,000 pages is based on a 1992 GAO report and interviews with MTOP-Q indicating that the current 25,000 TDRs accounted for per year represents only a third of the discrepancies that should be documented.
MTOP-Q-04	Estimate of approximately 1,000 trading partners is based on data provided in LMI Report AR308LN1[a], which represents all industry carriers becoming EDI-capable. Volume cannot be estimated because there are no historical data available that provide the number of changes to EDI trading partner profiles made over a specified period of time.
MTOP-T-01	Estimate of TPs includes requirements input from DLA depots, Military Service Headquarters, and large-volume shippers. Volume assumes 75 percent of the current paper solicitation package (average 200 pages) would be provided by DoD shippers. One hundred solicitation cycles are conducted each year. (.75 x 200 x 100 = 15,000 pages)
MTOP-T-02	While there are currently approximately 900 carriers, this figure is expected to become approximately 300 EDI trading partners by the end of 1996.

Note: MTOP-Q = MTMC Assistant Deputy Chief of Staff for Operations — Quality; BRAC = base realignment and closure; TDRs = Transportation Discrepancy Reports; EDI = electronic data interchange; GAO = General Accounting Office; MTOP-T = MTMC Assistant Deputy Chief of Staff for Operations — Transportation Services; TPs = trading partners; DLA = Defense Logistics Agency.

[a] AR301LN1, *Creating an Organizational Infrastructure to Manage EDI for the Military Traffic Management Command*, W. Michael Bridges and Ralph Notto, August 1994.

Table B-1.
Assumptions and Computations for Potential EDI Projects (Continued)

Project number	Bases of estimates
MTOP-T-02 (Continued)	Volume of solicitation is based on an estimated 100 solicitation packages mailed to approximately 62 carriers per solicitation. Each package is estimated to have approximately 200 pages; thus, 62 × 100 × 200 = 1.2 million pages. Volume of bid responses is estimated on the basis of historical trend of 8,800 tenders submitted annually. Each tender represents approximately three hard copy pages; thus, a total replacement volume of 8,800 × 3 = 26,400 pages (rounded to 26,000). Volume of acknowledgments that will be replaced by EDI is based on an average of 62 carriers submitting bids per solicitation, or 6,200 acknowledgments for 100 solicitations. Estimate of awards volume is based on carriers winning multiple awards (multiple traffic lanes); thus a planning factor of 300 award letters per year was used. Tender distribution volumes reflect internal and external distribution because each category will be handled differently after converting the process to EDI. Today, the 3 to 5 low-cost carriers 2-page tender for each of the 39 traffic lanes awarded from the 100 solicitations are copied and mailed to 12 locations. The annual volume of pages is computed as follows: 3 × 2 × 39 × 100 × 12 = 280,800.
MTOP-T-03	Volume estimates for performance notification (letters of warning-suspension and removal) and assume that the performance module of the CFM system would be used to capture performance notices. An estimate was provided by MTOP-TN of approximately 50 letters of removal and 250 letters of suspension issued by MTMC annually.
MTOP-T-04	Volume estimate for voluntary tenders is based on the historical experience of approximately 14,000 tenders processed by MTMC each year. Each tender consists of approximately two pages.
MTOP-T-05	Personal property intrastate trading partner estimates were obtained from interviews with MTOP-T. Transaction volume for pages of solicitation transaction to be replaced by EDI is estimated by multiplying 500 trading partners times 50 pages in solicitation package times 2 solicitations per year (500 x 50 x 2 = 50,000 pages). PP solicitation response volumes are based on an estimate of 1,800 hard copy bids (3 pages per bid) x 2 types of submissions (united and me-too bids) x 2 solicitations each year (1,800 x 3 x 2 x 2 = 21,600). Acknowledgment volumes are based on MTMC sending a confirmation of receipt for each bid received and keyed into the system for evaluation or filing. In the absence of specific figures, it was assumed that there would be one acknowledgment per tender (bid) submitted, or 21,600.

Note: CFM = CONUS Freight Management; MTOP-TN = MTMC Assistant Deputy Chief of Staff for Operations — Transportation Services, Negotiations Division, PP = personal property.

Table B-1.
Assumptions and Computations for Potential EDI Projects (Continued)

Project number	Bases of estimates
MTOP-T-05 (Continued)	The estimate of paper copy award notifications for intrastate solicitations assumed that each of the 500 carriers qualified would submit a bid, therefore, each of the 500 carriers would be provided results in order to start the me-too process. The computation would be: 2 solicitations per year x 500 carriers notified x 15,000 domestic lanes service/50 lanes per printout page = 300,000 pages of award data to intrastate carriers per year. This estimate assumes the winners for all 15,000 domestic channels serviced are provided to each carrier, rather than customizing 50 reports to show only the 15 to 20 channels that each of them may have bid. Historic volumes for intrastate rate cancellations were not identified. PP rate distribution volume addresses final distribution of rates back to carriers when the entire MIRF, evaluation, and me-too processes are completed. The estimate is computed as 1,800 x 2 solicitations x 2 hard copy pages for each rate = 7,200 pages. This information is data entered and distributed along with the interstate rates.
MTOP-T-06	Estimates for transaction volumes are based on recent volume data provided by MTOP-TN. These data are as follows: ◆ 150 international carriers service 5,000 traffic channels. ◆ 570 domestic carriers service 15,000 traffic channels. ◆ 2 domestic and 2 international solicitations per year. ◆ Printed data reflecting traffic channels are provided on computer printout forms, each form containing 50 line items and each line item represents one traffic channel. ◆ Printed solicitation for ITGBL is approximately 150 pages, domestic is 50 pages. ◆ Each ITGBL solicitation results in 900,000 bid responses, each domestic solicitation results in 1.1 million bid responses. Total trading partners include 570 domestic and 150 international, or 720. Solicitation volumes are calculated as follows: ITGBL — 150 pages x 150 carriers x 2 per year = 45,000. Domestic — 50 pages x 510 carriers x 2 per year = 57,000, for a total of 102,000. Bid submission volumes are calculated as follows: ITGBL — 900,000 magnetic tape records (rates), including initials, MIRF, and me-too. Domestic — 1,110,000 magnetic tape records (rates), including initials, MIRF, and me-too. Total bids — 2.0 million per solicitation x 2 annual solicitations = 4.0 million magnetic tape records.

Note: MIRF = mistake in rate filing; ITGBL = international through government bill of lading.

Table B-1.
Assumptions and Computations for Potential EDI Projects (Continued)

Project number	Bases of estimates
MTOP-T-06 (Continued)	Acknowledgment volumes are based on: ITGBL — 1,800,000 bid responses per year divided by 150 carriers = 12,000 average bids per carrier divided by 50 lines (rates) per printed page = 240 pages per carrier. 240 page print out x 150 carriers = 36,000 pages total. Domestic — 2,200,000 bid responses per year divided by 570 carriers = 3,860 average bids per carrier, which when divided by 50 lines per page = 78 page print out per carrier. 78 pages x 570 carriers = 44,460 pages. Total acknowledgments are 44,460 + 36,000 = 80,460 pages annually. Rate distribution volumes are calculated as follows: MTMC to carriers — 5,000 ITGBL channels x 150 carriers = 750,000 plus 15,000 domestic channels x 510 carriers = 8,550,000 for a total of 9,300,000 x 2 solicitations = 18,600,000. Total number of rates distributed via magnetic and electronic media per year. MTMC to GSA — 5,000 ITGBL channels (rates) + 15,000 domestic channels (rates) = 20,000 channels x 2 solicitation cycles each = 40,000. Total number of rates (records) distributed via four DDN FTP transmissions per year. MTMC to DFAS — Approximately 40,000 records will be mailed out per year via ether magnetic tape or electronic media.
MTOP-T-07	Solicitation page volume is based on 2 solicitations made to approximately 60 carriers each year x 20 pages of information in each solicitation, which yields 2,400 pages of paper to be replaced annually (if all solicitations are sent using EDI). Bid responses are based on 63 MEP stations with approximately 14 bids submitted for each MEP, which totals 882, rounded to 900 bids received in response to solicitations annually. One page of paper replacement is assumed per response, so 900 pages are replaced annually. Award volumes assume 20 awards (1 award = 1 SRO) per MEP station, for a total of 20 x 63 = 1,260.
MTOP-T-08	The volume of pages of requirements for CTO services (*not* the whole solicitation package) is estimated on the basis of 2 SOW pages for each of 150 installations (2 x 150 = 300). Thus, approximately 300 pages of data could be replaced per year at 150 installations.
MTOP-T-09	Distribution of rental car rates to the OAG assume all standard rates as well as all high cost city rates could be covered in 10 or less type-written pages mailed to the OAG. It was further assumed that at least quarterly mailings are sent to the OAG; thus 10 x 4 = 40 pages of data are sent to the OAG per year.

Note: GSA = General Services Administration; DDN = Defense Data Network; FTP = file transfer protocol; DFAS = Defense Finance and Accounting Service; MEP = military entrance point; CTO = commercial travel office; SOW = statement of work; OAG = *Official Airline Guide.*

Table B-1.
Assumptions and Computations for Potential EDI Projects (Continued)

Project number	Bases of estimates
MTOP-O-01	The 500 TP figure is based upon 200 Army, 190 Air Force, and 120 Navy installations that may request special short-term movement rates. The volume of shippers requesting short-term movement rates was obtained from MTOP-OMC as the average number of 180 days or less movement requests processed annually (2,000 pages).
MTOP-O-02	The volume of 500 TPs for the solicitation was obtained from interviews with MTOP-OMC, which represents the number of carriers that typically are qualified to do business with MTMC. About 2,000 solicitations are made available to the carriers via the AT&T EasyLink bulletin board. The bid response is based on each being a one-page bid and an MTOP-OMC estimated maximum of 60 carriers typically responding to a given solicitation (60 x 1 x 2,000 = 120,000). The majority (about 75 percent) of the bid responses are faxed into MTMC (90,000 pages) while the remainder (30,000 transactions) are transmitted via EasyLink.
MTOP-O-03	Awards are based on the MTOP-OMC estimate. The TP environment reflects estimates of 200 Army, 190 Air Force, 120 Navy, and 50 embassy partners that potentially could generate a customer request. Shipper request and response volume estimates are provided by MTOP-OS. The requests and responses are usually DDN messages but they can also be phone calls, E-mail, and occasional letters.
MTOP-O-04	TP estimates for solicitation reflect MTOP-OS estimate of the number of carriers that normally participate in the OTO negotiated tender system. Solicitation volume is based on one per request. Bid volume is based on one per request and on an assumption that 25 percent of all carrier participants will respond to each solicitation, so 12 – 13 carriers could be expected to submit bids on each of the 5,000 shipment solicitations for a total of 60,000 – 65,000 bid responses. Awards are based on one per solicitation.
MTOP-O-05	TP estimate assumes TPs will include Sealand, Matson, APL, Lykes, Crowley, Puerto Rican lines, and about the same number of less used carriers. No attempt was made to add foreign flag and break-bulk carriers. Each carrier is estimated to provide at least 1,000 POE-POD schedules per year (12 x 1,000 = 12,000). Container bookings and confirmations are based on 1 booking request (offer) per container. There were approximately 110,000 export containers shipped in 1994. Container cancellations reflect an estimate of 1 percent of the annual container bookings based on historical experience.

Note: MTOP-O = MTMC Assistant Deputy Chief of Staff for Operations - Operations Division; MTOP-OMC = MTMC Assistant Deputy Chief of Staff for Operations - Movements Division, Cargo Branch; MTOP-OS = MTMC Assistant Deputy Chief of Staff for Operations - Delivery Systems Division; OTO = one-time only; APL = American President Lines; POE = port of embarkation; POD = port of debarkation.

Table B-1.
Assumptions and Computations for Potential EDI Projects (Continued)

Project number	Bases of estimates
MTOP-O-06	Vessel schedules are expected to be obtained from MSC-C^3 operations. MSC estimates are based on 13 vessels making 6 voyages per year with 4 POD-POE combinations for each (13 x 6 x 4 = 312). This estimate does not include RO/RO and foreign flag historical data; it also does not reflect booking to commercial break-bulk ships special contract lifts, and opportune lift of fleet resupply ships. Volume figures for cargo bookings to the 13 MSC-controlled fleet vessels were not available. Those bookings are normally break-bulk cargo, usually to hard-to-lift areas where arrangements are made through manual communication processes.
MTOP-O-07	Volume estimates for ATCMDs to WPS and GTN are based on 110,000 container shipments with each container shipment consisting of approximately 20 content prime TCMDs. The container prime document involved is followed by the 20 prime documents. This estimate is understated by the number of break-bulk and miscellaneous trailer documents (T-9) for which figures were unavailable (110,000 x 21 = 2,310,000). The estimate of TCMD data to DTTS is based on an estimated additional 15,000 Army ordnance shipments that should be added to the current 60,000 shipment being reported to DTTS. (This estimate does not include OCONUS movements.)
MTOP-O-08	Volumes for export cargo shipment inquiries are unknown. Most of these inquiries are handled by telephone and DDN message today. Estimates of inquiries from GTN to WPS are not available. The volume of export cargo status transactions assumes that GTN will require the data to be pushed to and from the MTMC system (WPS) for at least four legs of the journey: ◆ Depart origin ◆ Transship to vessel at POE ◆ Transship to surface transit at POD ◆ Arrive consignee. With a volume of approximately 110,000 containers, each with four reportable events (depart origin, change mode to ship, change mode back to truck or rail, and arrive consignee), the total number of reports for export shipments is 440,000. Since this figure does not include break bulk and unit movements, the estimate was rounded up to 500,000.

Note: MSC-C^3 = Military Sealift Command — Command, Control and Communication; RO/RO = roll on/roll off; ATCMDs = Advanced Transportation Control Movement Documents; WPS = Worldwide Port System; GTN = Global Transportation Network; TCMDs = Transportation Control Movement Documents; T-9 = Military Standard Transportation and Movement Procedures document identifier code for miscellaneous information; DTTS = Defense Transportation Tracking System.

Table B-1.
Assumptions and Computations for Potential EDI (Continued)

Project number	Bases of estimates
MTOP-O-09	TP estimate is based on the 450 – 500 domestic freight carriers qualified by MTOP-Q. Transaction volume for shipment status inquiry is not available because most are telephone and DDN message inquiries/tracers. Transaction volume for shipment status of domestic shipments is based on the estimate of 1.4 million GBLs and 4 million CBLs having at least two events (depart origin and arrive destination) reported on each shipment. Volume estimate computation is (1.4 million + 4 million) x 2 = 10.8 million transactions. Without CBLs shipment events being captured, this figure could be reduced to approximately 3 million transactions.
MTOP-O-10	Document volume estimates for the manifest are based on 110,000 export containers per year, 20 content level lines of print per container = 2.2 million lines of print, divided by 50 lines per page, or 44,000 pages of data per year. Break-bulk cargo is not included, nor are retrograde (import) shipments. The volume of OCMs to GTN could be the same as the total of manifest pages provided to MSC, or, if GTN designs a method of linking individual shipments to vessel sailings with the OCM, this data requirement could be eliminated.
MTOP-O-11	The number of trading partners is estimated to be less than 20, based on 17 MTMC port activities having one local customs office; the actual number of trading partners could be reduced significantly if the process is converted to EDI and the EDI customs documentation are forwarded through a single hub per country. Document volume estimates for the manifest are based on 110,000 export containers per year, 20 content-level lines of print per container = 2.2 million lines of print, divided by 50 lines per page, or 44,000 pages of data per year. Break-bulk cargo is not included, nor are retrograde (import) shipments. Volume estimates for acceptance/rejection notices assume one is returned to the sender per manifest (1,000). Arrival notices are assumed to be the same volume as advance manifest (1,000).
MTOP-O-12	Vessel ETA trading partners are normally the carriers' port agents in MTMC's 17 worldwide port operation locations. For planning purposes, a maximum of 5 agents per port is used. The estimated volume of 1,000 is based on 1 per voyage (POE-POD), for 1,000 manifested POE-POD combinations shipped per year.
MTOP-O-13	TP numbers reflect one each for TRAMS/DLA legacy systems/Army (SDS) and Air Force (CMOS). Volumes are estimated using DFAS historical data on GBL payments processed annually.

Note: GBLs = Government bills of lading; CBLs = commercial bills of lading; OCM = Ocean Cargo Manifest; ETA = estimated time of arrival; TRAMS = Transportation Automated Management System; SDS = Standard Depot System; CMOS = Cargo Movement Operations System.

Table B-1.
Assumptions and Computations for Potential EDI Projects (Continued)

Project number	Bases of estimates
MTOP-O-14	TP estimates assume consignees will receive GBLs through single EDI gateways for each Military Service, *not* direct to an EDI translator at the consignee location, thus 4 are assumed. Carrier GBLs are estimated to be routed to no more than 12 commercial VANs. DFAS, DTTS, and GTN are each counted to be one TP (4 + 12 + 3 = 19).
MTOP-O-15	Carrier and consignee volume estimates assume CFM system workload only. Other shipper systems are assumed to be responsible for sending their GBLs directly to the consignee and carrier. DTTS volume includes only the estimated 25 percent increase in DTTS traffic expected when export tracking is implemented (25 percent of current 60,000 GBL volume = 15,000). GTN estimates are based on 1.2 million GBLs, which encompass all DoD GBL shipments as mandated in the *ITV Integration Plan.* The 21 trading partners are based upon the following: DLA (DSS) 1, Air Force (CMOS) 1, DFAS 1, Army (SDS) 1, GTN 1, commercial carriers 12, Air Force consignees 1, Army consignees 1, Navy consignees 1, and Marine Corps consignees 1. Volume estimates for GTN obtained from Defense transportation's *ITV Integration Plan.* Remaining CBL data figures are not available.
MTOP-O-16	TP volume includes only domestic freight carriers qualified to do business with DoD shippers. With third-party EDI VANs, this number could be reduced to 12 or less. Volume includes CFM field module shippers only.
MTOP-O-17	TP estimates assume 200 Army installations will communicate EDI transactions through 1 gateway, 190 Air Force installations through 1 gateway, 120 Navy installations through 1 gateway, and Marine Corps through 1 gateway, for a total of 4. The volume of 156,000 is based on PMO, CFM-provided estimates provided by the PMO, CFM of approximately 13,000 DD Form 1085 requests and responses anticipated per month, 13,000 x 12 = 156,000.
MTOP-O-18	TP estimates include all PP shippers qualified by MTOP-Q. Volume of GBLs to be electronically moved from WHIST to DFAS as well as WHIST to carriers includes all PP GBLs. Estimate of 650,000 was derived from current BPR study data.
MTOP-O-19	TPs include all carriers qualified for DoD PP business. Volume estimates are taken from survey of JPPSOs with an estimate that "at least" 10 percent of all PP shipments must be traced, inquired against, or researched with shippers and/or carriers (shipper to WHIST data flow is not included because TOPS/WHIST interface is an EC transaction rather than EDI). Ten percent of 650,000 is 65,000. A one-for-one (213/214) ratio was assumed.

Note: ITV = intransit visibility; DSS = Distribution Standard System; VAN = value added networks; PMO = Program Management Office; DD = Defense Document; BPR = business process redesign; JPPSO = Joint Personal Property Shipping Office; WHIST = Worldwide Househould Goods Information System for Traffic Management; TOPS = Transportation Operational Personal Property Standard System; EC = electronic commerce.

Table B-1.
Assumptions and Computations for Potential EDI Projects (Continued)

Project number	Bases of estimates
DCSRM-O-01	The TP estimate assumes no more than two DFAS payment offices, and possibly only one, will be involved as a trading partner. (The MTMC contract office could be another TP, but not necessarily via EDI.) Volume estimates include only the MTMC-operated waterports where MTMC contract stevedores load ships. The estimate assumes one DD Form 1034 public voucher produced for each ship loaded. It is assumed that at least two ships are loaded each month at each of MTMC's 17 waterport activities (2 ships x 12 months x 17 ports = 408).
MTAQ-PARC-01	Trading partner and paper volume estimates are based on interviews with PARC Federal Information Processing Branch. The total number of small procurement trading partners was unavailable; however, a single RFQ can be distributed to as many as 50 potential offerors. Many trading partners participate in multiple RFQs. The 55,000 annual page count for RFQs and solicitations is based on two solicitations, each with 100 to 200 pages of information, and 200 RFQs, each with four pages of information, multiplied by 50 trading partners. The 10,000 annual pages of bid response information is based on two solicitation proposals, each with 100 pages of information, and 200 RFQ bid responses, each with one page of information, multiplied by 25 trading partners. One PO, each with one page of information, is executed for every RFQ. The 2,400 annual pages of DOs is based on 600 DOs annually, each with four pages of information. The 100 to 150 annual pages of contract, PO, and DO modifications is based on 138 modification actions per year.
MTAQ-PARC-02	Volume estimates are based on interviews with the stevedoring branch of PARC. The TP estimate of 30 vendors (nationwide) capable of providing stevedore services is considered the maximum. The number of potential vendors ranges from 10 to 30 depending on the port. We used 20 as an average. An average of four solicitations per year is derived from the fact that three to five stevedoring contracts are awarded each year. The solicitation page count is 300 to 400 pages with about 85 percent standard data. Approximately 28,000 pages could be replaced with EDI annually (20 x 4 x 350). Two to six proposals are received for each solicitation. Each proposal has a page count of 100 to 400 pages with 50 percent of the data considered standard. The annual page count is 4,000 (4 x 4 x 250). Award notices are sent to all offerers along with a best-and-final abstract. The page count is about 15 pages per notice with an annual count of about 240 pages (15 x 4 x 4).

Note: DCSRM = Deputy Chief of Staff for Resources Management; MTAQ = Principal Assistant Responsible for Contracting; PARC = Principal Assistant Responsible for Contracting; RFQ = request for quotation; POs = purchase orders; DOs = delivery orders.

Table B-1.
Assumptions and Computations for Potential EDI Projects (Continued)

Project number	Bases of estimates
MTAQ-PARC-03	Approximately 100 TPs are estimated for CTO services vendors based on interviews with MTOP-T. Volume for requests for proposals for CTO service is based on 100 vendors receiving a 250-page solicitation package for an average of 2 solicitations each year. Total pages of hard copy data mailed out are computed at 100 x 250 x 2 = 50,000. Proposal response volumes are estimated at 1,000 pages for each of 10 vendors, two times per year. Award notifications equate to 1 page notices sent to approximately 10 bidding vendors two times a year (18 pages annually).
MTAQ-PARC-04	Trading partner volume is based on interviews that indicated an average of 300 storage company vendors competing for business at each of the four RSMOs. While some of the same companies may be competing at more than one RSMO, we use a figure of 4 x 300 = 1,200 for planning purposes. New BOAs are issued every five years. The average number of BOAs issued each year is 240 (1,200/5). The BOA is estimated to be about 50 pages, mostly filled with FAR-required boilerplate data. Annual BOA pages are estimated at 12,000 pages (240 x 50). There are approximately 150,000 delivery service orders (DD Form 1164s) issued each year by ITOs. Each DD Form 1164 is a one-page form.

Note: RSMO = regional storage management office; BOA = basic ordering agreement; FAR = Federal Acquisition Regulation; ITOs = Installation Transportation Office.

APPENDIX C

System Descriptions

This appendix provides a brief description of DoD automated systems involved in processing electronic data interchange (EDI) transactions. The developing DoD Component is in brackets.

ACI = Automated Carrier Interface [MTMC]

An interface designed by MTMC that accepts and transmits EDI-formatted messages between the MTMC area command METS II system and commercial carrier booking systems. This interface currently produces Transportation Data Coordinating Council (TDCC)-formatted messages using an EDI translator that DoD built. This system interface is being replaced as part of the Integrated Booking System (IBS) development project. When implemented, the new system will employ a commercial EDI translator and ASC X12 standards.

ASPUR = Automated System for Processing Unit Requirements [MTMC]

Used in the sea deployment process, ASPUR receives unit movement requirements from Transportation Coordinator's Automated Command and Control Information System (TCACCIS), processes those requirements, sends the movement release to the installation transportation office, and creates advance transportation control and movement documents (TCMDs) for the Terminal Management System (TERMS). It is a legacy system that will eventually be replaced by the IBS.

CFM = CONUS Freight Management [MTMC]

An automated system that provides support to DoD transportation processing and planning through interfaces with Defense and commercial transportation systems. It automates shipment planning and document preparation. Through the use of EDI techniques, it exchanges shipment information with users from transportation offices, carriers, and Defense Finance and Accounting Service (DFAS).

CFM-FM = CONUS Freight Management System — Field Module [MTMC]

A personal computer-based system that remote (field) users use to access the CFM host through a terminal session.

CMOS = Cargo Movement Operations System [USAF]

The Air Force Transportation Coordinator's Automated Information for Movement System (TC AIMS) that automates base-level cargo movement processes and provides transportation movement officers with current unit movement information.

DDN = Defense Data Network [DISA]

This network is DoD's primary communications network.

DRS = Deficiency Reporting System [JLSC]

Joint system being developed to automate and manage discrepancies incurred by DoD either in contract production or transportation process. The Program Management Office is assigned to Joint Logistics Systems Center, Wright Patterson Air Force Base, Ohio.

DSS = Distribution Standard System [DLA]

The corporate information management (CIM) migration system that will replace many existing distribution legacy systems. Those legacy systems include Defense Logistics Agency's Defense Warehousing and Shipping Procedures (DWASP) and the Army's Supply Depot System (SDS). It is currently being developed and fielded.

DTRS = Defense Transportation Payment System [DFAS]

An automated system developed by DFAS to centrally manage the payment process for transportation Government bills of lading (GBLs). Later phases of the system development plan will include commercial bills of lading (CBL) payments.

DTTS = Defense Transportation Tracking System [DoD/USN/MTMC]

Monitors all intra-CONUS arms, ammunition, and explosives shipments moving by truck. It performs this task using a commercial satellite tracking surveillance service, which provides hourly truck location reports, in-transit truck status changes, and emergency situation notifications.

DWASP = Defense Warehousing and Shipping Procedures [DLA]

Provides automated processing and documenting capability for line items from receipt of material at depots through packing and shipping. It will be replaced by DSS.

FACNET = Federal Acquisition Network [DISA]

A DoD network hosting an electronic bulletin board for soliciting and awarding DoD contracts under $100,000. It accepts and transmits standard ASC X12 EDI transaction sets between DoD contract offices and a nationwide list of vendor trading partners. Plans exist to expand Federal acquisition network (FACNET) or a similar architecture to other functional areas of DoD that exchange EDI messages.

GOPAX = Groups Operational Passenger System [MTMC]

An automated system designed and operated by MTMC that allows field and headquarters activities to submit requirements and arrange transportation for group movements involving 21 or more passengers.

GT*STEP = Guaranteed Traffic Standard Tender Electronic Processing [MTMC]

A prototype software system developed as a proof of concept for converting the tender solicitation process for domestic freight guaranteed traffic to EDI. The system is currently being converted from a prototype to a production system for integration under the CFM system configuration.

GTN = Global Transportation Network [USTRANSCOM]

Provides United States Transportation Command (USTRANSCOM) with the integrated transportation data necessary to accomplish transportation planning, command and control, patient movement, and in-transit visibility of units, passengers, and cargo during peace and war.

IBS = Integrated Booking System [MTMC]

A new traffic management system at MTMC area commands that will register cargo for sealift, provide schedules for unit arrival at ports, and issue port calls to units. It will include the functionality of the Military Export Traffic System II (METS II) and ASPUR, and have a direct interface with the CFM system.

ICODES = Integrated Computerized Deployment System [MTMC]

An automated stow planning system under development; it is intended to replace CODES.

METS II = Mechanized Export Traffic System II [MTMC]

Provides schedules for units arriving at ports and issues port calls to the units. It supports the booking of all surface cargo and is the current traffic management system at MTMC area commands. It will be replaced by IBS.

NAVADS = Navy Automated Documentation System [DLA]

A Navy-developed system designed to automate the documentation process within Navy depots. This system has been transferred to DLA and will eventually be replaced by DLA's Distribution Standard System (DSS).

OTO = One Time Only [MTMC]

A MTMC-unique automated system developed for electronic solicitation of personal property transportation services. The system is used primarily for outsized, heavy lift requirements, such as those associated with the movement of house trailers, privately owned boats, and household goods moving to or from areas not covered by standard carrier tenders.

PSRO = Passenger Standing Route Order

A MTMC unique automated system that is being developed for soliciting, processing and publishing standing route orders used by Military Entrance Point Station to move new recruits to their first assignment (usually basic training stations).

SAACONS = Standard Army Acquisition Contracting System [USA]

Automated system that produces and processes most of the common contract actions required for procurements under $100,000. The system also has an option that provides a standard EDI transaction output capability.

SAS = Stevedore Administration System [MTMC]

An automated system that MTMC is developing to validate stevedore contract charges and create a public voucher for payment without a carrier invoice. The system is currently in the concept development stage.

SC&D = Stock Control and Distribution [USAF]

Controls storage, allocation, and movement of Air Force logistics center inventories by processing requisitions and reporting on the status of items. It provides asset visibility, item status information to customers, and on-time issue and shipment actions. It will be replaced by DSS.

SDS = Standard Depot System [USA]

Receives data from depot supply and maintenance packaging preservation centers, warehouse workers, managers, inventory clerks, shippers, planners, transportation personnel, item managers, and finance officers on all material stored, maintained, processed, shipped, or handled at an Army depot. It supports day-to-day depot operations and management. It will be replaced by DSS.

TC-ACCIS = Transportation Coordinator Automated Command and Control Information System [USA]

The Army's version of TC AIMS that is used to plan and execute unit deployments and redeployments worldwide, communicate data to the U.S. Army Forces Command for updating the Joint Operating and Execution System, and communicate data to MTMC for port operations and load planning. It generates air load plans, air cargo manifests, unit movement data, convoy march tables and clearance requests, rail-load plans, bills of lading, and bar-code labels.

TC AIMS = Transportation Coordinator's Automated Information Management System [USA/USMC/USAF]

A family of systems that automates the planning, organizing, coordinating, and controlling of unit-related deployment activities supporting the overall deployment process. It permits transportation offices to maintain an automated database of current unit movement data. TC AIMS is a generic term for TC-ACCIS, LOGAIS/TC AIMS, and CMOS.

TFMS = Transportation Financial Management System [USTRANSCOM]

A finance and accounting system currently under development by USTRANSCOM. The system is in the concept development phase.

TOPS = Transportation Operational Personal Property Standard System [MTMC]

A DoD standard automated system that helps transportation officers ship household goods. The system, which interfaces with the Worldwide Household Goods Information System for Traffic (WHIST) Management, and is deployed to installations and Joint Personal Property Shipping Offices.

TRAMS = Transportation Automated Management System [DLA]

An automated system for use by contract management and administration offices. This system assists contract managers in the creation of GBLs and TCMDs based on purchase order and material release order information.

WPS = Worldwide Port System [MTMC]

A new system that will function as the port operating system for military ocean terminals, Navy port activities, Army transportation terminal units, and automated cargo documentation detachments. The standard automated system of hardware and software developed to document cargo through a port, account for and track its movement, provide management information to terminal and regional commanders, and to feed in-transit visibility information to other DoD systems. It will replace Terminal Management System (TERMS) and Department of Army Standard Port Systems Enhanced (DASPS-E).

WHIST = Worldwide Household Goods Information System for Traffic Management [MTMC]

An automated information system used to assist headquarters personnel in centrally managing the personal property shipping program. The WHIST data base contains all DoD personal property rates in addition to copies of all personal property GBLs. WHIST interfaces with the TOPS system for the exchange of rate information, GBL data, and personal property-related E-mail.

APPENDIX D

Glossary

This appendix defines some of the acronyms and terms used in this report.

DEFINITION OF ACRONYMS

ACI	=	Automated Carrier Interface
ADCSOPS	=	Assistant Deputy Chief of Staff for Operations
AF	=	Air Force
AMC	=	Air Mobility Command
ANSI	=	American National Standards Institute
APL	=	American President Lines
ATCMD	=	Advance Transportation Control and Movement Document
BAFO	=	best and final offer
BOA	=	basic ordering agreement
BRAC	=	base realignment and closure
CONUS	=	continental United States (excludes Alaska and Hawaii)
CONOP	=	concept of operation
C^3	=	command, control, communications
DBOF	=	Defense Business and Accounting Service
DCSIM	=	Deputy Chief of Staff for Information Management
DCSRM	=	Deputy Chief of Staff for Resource Management
DCSOPS	=	Deputy Chief of Staff for Operations

DFAS	=	Defense Finance and Accounting Service
DFAS-IN	=	Defense Finance and Accounting Service — Indianapolis Center
DISA	=	Defense Information Systems Agency
DLA	=	Defense Logistics Agency
DLMSO	=	Defense Logistics Management Standards Office
DM	=	data maintenance
DoD	=	Department of Defense
DSS-W	=	Defense Supply Service — Washington
DTEDI	=	Defense Transportation Electronic Data Iinterchange
DTS	=	Defense Transportation System
DUSD (AR-EC)	=	Deputy Under Secretary of Defense (Acquisition Reform – Electronic Commerce)
DUSD (TP)	=	Deputy Under Secretary of Defense (Transportation Policy)
ETA	=	estimated time of arrival
FAR	=	Federal Acquisition Regulation
FTP	=	file transfer protocol
GAO	=	General Accounting Office
GSA	=	General Services Administration
GTN	=	Global Transportation Network
HAZMAT	=	hazardous material
ICDB	=	Integrated Cargo Data Base
ITGBL	=	international through government bill of lading
ITO	=	Installation Transportation Office
JLSC	=	Joint Logistics Systems Center

JPPSO	=	Joint Personal Property Shipping Office
JTCC	=	Joint Transportation Coordinating Committee
LMI	=	Logistics Management Institute
MEP	=	military entrance point
MSC	=	Military Sealift Command
MTMC	=	Military Traffic Management Command
MTAQ	=	MTMC Principal Assistant for Acquisition
MTIM	=	MTMC Deputy Chief of Staff for Information Management
MTIM-I	=	MTIM — Integration Division
MTIM-P	=	MTIM — Plans, Requirements, and Technical Division
MTOP	=	MTMC Deputy Chief of Staff for Operations
MTOP-O	=	MTMC ADCSOPS for Operations
MTOP-OMC	=	MTOP-O Cargo Branch assigned to the Movements Division
MTOP-OS	=	MTOP-O Personal Property Branch
MTOP-Q	=	MTMC ADCSOPS for Quality
MTOP-T	=	MTMC ADCSOPS for Transportation Services
MTOP-TN	=	MTMC ADCSOPS for Transportation Services
MTOP-TSP	=	MTMC ADCSOPS for Transportation Service — Passenger Branch
MTRM	=	MTMC Resource Management Office
NEP	=	network entry point
OCONUS	=	outside the Continental United States
OPR	=	Office of Primary Responsibility
OSD	=	Office of the Secretary of Defense

PARC	=	MTMC Principal Assistant Responsible for Contracting
PC	=	personal computer
PMO	=	Program Management Office
PO	=	purchase order
POD	=	port of debarkation
POE	=	port of embarkation
POV	=	privately owned vehicle
PP	=	personal property
PPCIG	=	Personal Property Consignment Installation Guide
PPSO	=	Personal Property Shipping Office
RFP	=	request for proposal
RFQ	=	request for quote
ROI	=	return on investment
SCAC	=	standard carrier alpha code
SF	=	Standard Form
SOW	=	statement of work
SRO	=	standing route order
TDR	=	Transportation Discrepancy Report (Standard Form 361)
TMO	=	Transportation Management Office
TQAP	=	Total Quality Assurance Program
USD (A&T)	=	Under Secretary of Defense for Acquisition and Technology
USTRANSCOM	=	U.S. Transportation Command

DEFINITION OF TERMS

Accredited Standards Committee (ASC X12): The Accredited Standards Committee (ASC) with an assigned committee number designated as X12

Automated information system (AIS): The configuration of hardware, software, and communications acting as a single entity for collecting, storing, and processing data.

Automatic identification technology (AIT): The process control hardware, application software, and hybrids that provide industry-standard real-time data acquisition to enhance productivity. It includes bar codes, radio frequency identification devices, magnetic stripes, smart cards, and optical laser cards. In DoD, these technologies facilitate the capture of supply, maintenance, and transportation information for inventory and movement management, shipment diversion and reconstitution, and personnel or patient identification.

Business process reengineering (BRP): A term used interchangeably in this report with business process redesign.

Cargo booking: The process of reserving space on a specific vessel for delivery to a particular destination.

Commercial bill of lading (CBL): A commercial company's shipping document that contains information describing a shipment.

Container content-level detail: Line items within a seavan container described down toindividual MILSTRIP requisition, individual DoD stock item number, and lowest-level MILSTAMP shipment unit number. Full line-item detail refers to providing a complete description, in accordance with MILSTAMP, MILSTRIP, and supply catalog descriptions.

Commercial travel office (CTO): A type of service routinely required by government activities. Normally, travel agency companies bid for the operating rights on one or more installations and pay DoD a percentage of the profits made from arranging travel services.

Customs clearance: The actions that officials of a sovereign nation take to allow cargo to enter a country.

DD Form 1085: Data required by the *Defense Traffic Management Regulation* to request CONUS transportation for unit movements. These data contain such information as the number of railcars and passenger buses needed, date and place the movement is to begin, and latest acceptable arrival date at the CONUS destination.

Delivery order (DO): A document issued by a buyer to a contract administrator representing a commitment to purchase goods and services offered in the contract at the price it specifies.

Electronic data interchange (EDI): The computer-to-computer exchange of data from common business documents using standard data formats.

Electronic commerce (EC): A term that refers to all types of data exchanges that are conducted electronically (EDI, image transfers, proprietary flat-file transfers, and facsimile).

Export traffic release (ETR): A transactional process included in the MILSTAMP regulation that, when issued by air or water clearance authorities, signifies that the cargo booking arrangements have been confirmed and all shipment documentation is complete and accurate. Receipt of the ETR by a shipper signifies approval to start transporting the items overseas.

Federal Information Processing Standards (FIPS): A term used in this report to indicate the MTMC procurement office branch that procures automation goods and services).

Government bill of lading (GBL): A government-issued documentation that describes a transportation shipment and is used by the commercial carrier for reimbursement.

Guaranteed traffic (GT): A category of domestic freight that implies high volume (guaranteed levels) of traffic to be moved over a specific route.

Intransit visibility (ITV): The ability to track the identity, status, and location of DoD unit and nonunit cargo (excluding bulk petroleum, oils, and lubricants), passengers, medical patients, and personal property, from origin to the consignee or destination during peace, contingencies, and war.

Lift transaction: A document that signifies a particular piece of equipment, material, or container has been loaded aboard a vessel.

Me-too: A type of rate submission in the MTMC personal property rate solicitation process where commercial carriers are allowed to submit a rate equal to the lowest rate submitted for a particular traffic route.

Mistake in rate filing (MIRF): A type of rate submission in the MTMC personal property rate solicitation process where commercial carriers are allowed to resubmit bids that contained errors without being disqualified.

MSC Container Rate Guide: A contractual agreement that MSC negotiates with all interested commercial carriers, it specifies the services to be provided and the carrier's rates submitted for each type of service or route. The

negotiations are conducted and rates published semiannually (also referred to as the MSC Master Container Tariff Agreement).

Military Standard Transportation and Movement Procedures (MILSTAMP): Standard data elements, codes, formats, documents, forms, rules, methods, and procedures that DoD Components and other Federal agencies use in the transportation and movement of materiel to, within, and beyond the Defense Transportation System.

Official Airline Guide (OAG): A publication containing airline schedules of all the major U.S. airlines. The guide also includes government rental car rates and other travel-related information.

Ocean cargo manifest (OCM): A detailed listing of a ship's cargo.

Report of Shipment (REPSHIP): A disciplined, formatted transaction contained in MILSTAMP that may be used to notify consignees, ports of embarkation, and ports of debarkation of impending shipments. It may be used for any type of shipment, but is mandatory for ammunition shipments.

Roll on/roll off (RO/RO): A type of cargo ship commonly used to transport vehicles.

Regional Storage Management Office (RSMO): MTMC activities that contract for and manage the business of long-term storage of household goods for all DoD employees and the uniformed services.

Shipment unit identification number: A unique number that identifies a shipment.

Stevedoring operations: A operations directly associated with vessel loading or discharge. The DoD *Federal Acquisition Regulation Supplement* defines stevedoring as "the loading of cargo from an agreed point of rest or a pier or lighter and its storage aboard a vessel, or breaking out and discharging of cargo from any space in the vessel to an agreed point of rest dockside or in a lighter."

Stevedoring and related terminal services: Services that support the terminal and terminal operations. In addition to stevedoring, they include ordering, receiving, loading, unloading, releasing, and dispatching railcars, containers, and trucks. They also include container freight station operations, privately owned vehicle processing, and terminal management.

Trading partner (TP): Organizations that exchange electronic data.

Trading partner agreement (TPA): A written agreement between two organizations involved in electronic data interchange. Among DoD activities this agreement is often called an EDI Memorandum of Understanding or Interservice Support Agreement.

Trading partner profile (TPP): A transaction that provides the technical EDI details of each trading partner, such as the type and version of EDI software, points of contact, and other details.

Transportation Control and Movement Document (TCMD): A MIL-STAMP shipment information document (DD Form 1384). It provides advance notice of shipments and the information necessary to process the shipments through the Defense Transportation System. It is the basis for preparation of air and surface manifests and compilation of logistics reports.

Transportation control number (TCN): A unique 17-character identification number that can be used to identify individual shipment units and consolidate shipment units. Content and rules for constructing TCNs are contained in DoD Regulation 4500.32R (Military Standard Transportation and Movement Procedures).

Transportation Systems Review Committee (TSRC): A MTMC organization that reviews resource requirements and progress of major MTMC automated systems initiatives.

Value-added network (VAN): A commercial communications network that EDI trading partners use to exchange information.

United Nations/EDI for Administration, Commerce, and Transport (UN/EDIFACT): The international standard for EDI.

APPENDIX E

ASC X12 Transaction Sets

Table E-1 provides the number and title of all electronic data interchange transaction sets. For a more detailed understanding of these transactions sets, see Volume 1, Accredited Standards Committee (ASC) X12, Version Release 003050.

Table E-1.
ASC X12 Transaction Sets

Transaction set	Title
213	Motor Carrier Shipment Status Inquiry
214	Transportation Carrier Shipment Status Message
300	Reservation (Booking Request) (Ocean)
301	Confirmation (Ocean)
303	Booking Cancellation (Ocean)
309	U.S. Customs Manifest (Ocean)
312	Arrival Notice (Ocean)
313	Shipment Status Inquiry (Ocean)
315	Status Details (Ocean)
323	Vessel Schedule and Itinerary (Ocean)
355	U.S. Customs Manifest Rejection
602	Transportation Services Tender
810	Invoice
824	Application Advice
832	Price of Sales Catalog
836	Contract Award
838	Trading Partner Profile
840	Request for Quotation
841	Specifications/Technical Information
842	Nonconformance Report
843	Response to Request for Quotation
850	Purchase Order
854	Shipment Delivery Discrepancy Information
855	Purchase Order Acknowledgement

Table E-1.
ASC X12 Transaction Sets (Continued)

Transaction set	Title
856	Ship Notice/Manifest
858	Shipment Information
859	Freight Invoice
860	Purchase Order Change Request — Buyer Initiated
861	Receiving Advice/Acceptance Certificate
864	Text Message
869	Order Status Inquiry
870	Order Status Report
994[a]	File Transfer (used for Transportation Services Tender Acceptance/Rejection)
997	Functional Acknowledgement

[a] Not approved by ASC X12; currently a Transportation Data Coordination Committee Standard.

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The Military Traffic Management Command (MTMC) has a major role in leading Department of Defense efforts to automate the exchange of transportation paperwork through EDI. This report identifies 37 potential EDI applications at MTMC involving more than 100 information flows. MTMC should focus on EDI projects that have the most effect on meeting its mission requirements and provide the greatest economic impact over the next three to five years. Fifteen projects, accounting for approximately 98 percent of MTMC's EDI-potential transactions, satisfy those requirements. MTMC should be able to implement all high-priority projects by the first quarter of 1998. By focusing on those high-priority projects and reevaluating the need for lower-priority projects as resources become available, MTMC will have a well-balanced and effective EDI program.

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