SUPPORTABILITY STRATEGY (SS)

FOR THE

TRANSPORTATION COORDINATORS' AUTOMATED INFORMATION FOR MOVEMENT SYSTEM II (TC-AIMS II)

MARCH 2003

Prepared for:
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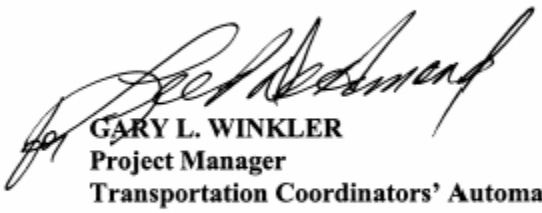
I have reviewed the enclosed Supportability Strategy and approve the document in accordance with the provisions of Army Regulation 700-127, Integrated Logistic Support, dated 10 November 1999.



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SUMMARY OF CHANGES

This page outlines the status of approvals and summarizes the changes that are incorporated into this iteration.

This is the initial iteration of the Army Supportability Strategy for TC-AIMS II. Army ILS requirements were previously included in the Joint Integrated Logistics Support Plan (ILSP) dated March 2001.

Version 2.0 updates the Supportability Strategy to incorporate Block 2 Enhanced Unit Move (Web) capability.

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Tables and Figures

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SECTION I - GENERAL

1.1 INTRODUCTION

1.1.1 Purpose

a. This Supportability Strategy (SS) provides, in one document, essential information for the successful accomplishment of Integrated Logistic Support (ILS) for Transportation Coordinators' Automated Information for Movement System II (TC-AIMS II). A part of the overall program management documentation, this plan is designed for use as a stand-alone document for ILS planning and action. It was prepared in the format prescribed by the Department of the Army (DA) Pamphlet (PAM) 700-55, Instructions for Preparing the Integrated Logistic Support Plan. It documents recent program activities, establishes further logistic guidance, and provides the continued planning necessary to ensure efficient, effective and sustained logistic support for the TC-AIMS II. ILS management and applicable documents are also discussed.

b. This Supportability Strategy is intended to serve primarily as a basic reference document for those activities directly responsible for the planning, management, and execution of the TC-AIMS II ILS program. It will be used for information purposes by all Major Army Commands (MACOM), subordinate commands, and defense agencies concerned with this acquisition. The following objectives are established for this Supportability Strategy:

(1) Identify and document logistics requirements or constraints.

(2) Describe required logistics actions, tasks, and milestones.

(3) Ensure all relevant ILS elements have been considered.

(4) Provide logistic information for milestone review decision-making.

(5) Establish responsibilities for ILS program participants.

(6) Integrate ILS planning for both the hardware and software aspects of the TC-AIMS II.

1.1.2 Background

a. The Transportation Coordinators' Automated Information for Movement System II (TC-AIMS II) is a top-down directed program that must address critical shortfalls in moving cargo and people in support of the Department of Defense (DOD) mission. This system must support the Fiscal Year (FY) 1987 Joint Chiefs of Staff (JCS) direction and the FY89 Defense guidance

that provided a requirement for an automated capability to provide timely and accurate passenger/cargo movement information during force deployments. Further, system development and implementation must be consistent with FY95-99 Defense guidance that calls for support systems to provide “rapid strategic mobility and sufficient support and sustainment capabilities". TC-AIMS II must provide an integrated information transportation system capability for routine deployment, sustainment, and redeployment/retrograde operations by employing the same DoD and Service shipment policies and procedures in peace and war and in both the active and reserve forces. This system must be integrated with installation, unit, and depot-level supply systems to manage inbound and outbound movement (less Household Goods (HHG)) document and requisition information. TC-AIMS II must be capable of supporting routine and surge requirements and automate origin shipping/receiving and deployment; sustainment and redeployment/retrograde processes; produce movement documentation, unit move data; and furnish timely information to major commands (MACOM), transportation component commands, United States Transportation Command (USTRANSCOM), and the joint deployment community. As a DoD source movement information system, TC-AIMS II must provide data for in-transit visibility (ITV) and control over cargo and passenger movement. TC-AIMS II requirements are documented in the Mission Need Statement (MNS), approved by the Director of the Joint Staff on 7 August 1997 and the Operational Requirements Document (ORD), which was signed 25 March 1999.

1.1.3 Application. This Supportability Strategy outlines TC-AIMS II logistics planning considerations and the goals to be met during development of TC-AIMS II. It contains the logistics concepts and requirements for the initial development of the TC-AIMS II capability as specified in Army Regulation (AR) 700-127 and DA PAM 700-55. This Supportability Strategy will be staffed with all appropriate agencies, commands, and activities, and will incorporate comments and recommendations received. PM TC-AIMS II will ensure that all system development decisions are evaluated for their logistics impact and life cycle cost (LCC).

1.1.4 Iteration. This is the second iteration, Version 2.0 of the Army Supportability Strategy. This version superseded the previous version. It will cover ILS specifically for Army users while the Joint Supportability Strategy (Integrated Logistics Support Plan (ILSP)) dated 30 March 2001 covers logistics support planning for all Services. Although all blocks of the TC-AIMS II are discussed to some degree in this Supportability Strategy, the primary focus of this iteration is on Blocks 1 and 2. As TC-AIMS II evolves to Blocks 3 through 5 capabilities, this Supportability Strategy will be updated to reflect changes in technology and increases in capability. Review will be at the discretion of the Supportability Integrated Product Team (SIPT).

1.1.5 Terms, Abbreviations, and Acronyms. A list of terms, abbreviations, and acronyms is found in Appendix A.

1.2 MATERIEL SYSTEM DESCRIPTION.

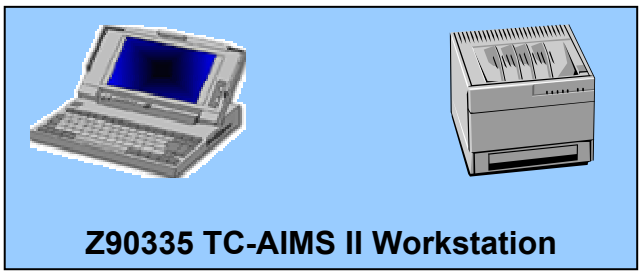
1.2.1 Overall Description. TC-AIMS II automates the processes of planning, organizing, coordinating, and controlling unit-related deployments, sustainment, day-to-day Installation Transportation Officer/Transportation Management Officer (ITO/TMO) operations, redeployment, and retrograde operations in support of the Defense Transportation System (DTS). It will interface with installation, unit and depot-level supply systems, the Global Transportation Network (GTN), Joint Operational Planning and Execution System (JOPES) through the use of the Joint Force Requirements Generator (JFRG) II; and will be capable of supporting both peacetime and wartime requirements. TC-AIMS II will produce movement documentation and unit move information. It will furnish timely information to MACOM, Transportation Component Commands (TCC), USTRANSCOM, and the joint deployment community. As a DoD source movement information system, TC-AIMS II will be a primary source of information for ITV and transportation management over cargo and passenger movement during peace, operations other than war, and war. TC-AIMS II will integrate the functionality of selected service-unique transportation legacy systems into a single Automated Information System (AIS) migration system. It will consist of a scaleable, deployable, distributed system environment, that when fully developed, will be compliant with the compliant with the Joint Technical Architecture (JTA) and Level 6 of the Defense Information Infrastructure (DII) Common Operating Environment (COE).

1.2.1.1 Implementation. TC-AIMS II will follow an evolutionary acquisition strategy. Block 1 provides the basic unit move capability and fields that capability to units designated as "early deployers" by their respective Service headquarters. Acquisition Strategy is further discussed in paragraph 2.3 – Acquisition Strategy.

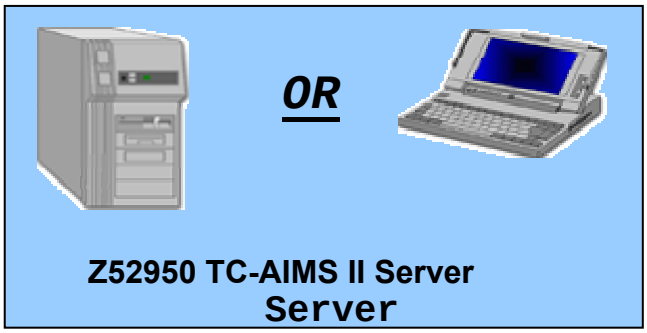
1.2.2. Hardware Configuration. The current Block 1 TC-AIMS II architecture consists of standalone workstations, garrison or deployed client/server, regionalized servers, or a hierarchy of "deployable" peer-to-peer connected servers networked throughout the operational chain of command, with the servers being connected to client workstations and laptop computers at staff and organizational unit levels. All hardware will be Commercial-off-the-Shelf (COTS)/Non-Developmental Items procured from existing Indefinite Delivery/Indefinite Quantity (ID/IQ) contracts and GSA Schedules. Automatic Identification Technology (AIT) equipment will be purchased from existing AIT contracts. AIT equipment will consist of interrogators, handheld and fixed, bar code printers and optical memory card, reader/writer. The equipment warranty period will be determined by the specific procurement contract.

Figure 1.2.2-1
TC-AIMS II Equipment

➢
➢
➢**Work Station**
•Intel CPU Based COTS Laptop
•16 ppm laser printer
•Windows 2000 Operating System



➢**Server**
•Intel CPU based COTS mini-serve



➢ **Interrogator Set (aka AIT)**
•Handheld Interrogator/Scanner
•RF Interrogator
•Bar Code Printers
•Portable Bar Code Printers

Table 1.2.2-1
Computer System, Digital
(TC-AIMS II Server)
AN/TYQ-129(V)1

LIN/NSN: Z90321/7010-01-504-2351		
	RACK MOUNTABLE SERVER	**TOWER SERVER**
Major Component	Pedestal footprint\Rack Mounted. Dual Hot swappable power supplies 110/220VAC, auto-sensing/switching	Pedestal footprint\Tower configuration. Dual Hot swappable power supplies 110/220VAC, auto-sensing/switching
Processor Speed	Dual Processor XEON 2Ghz/512 Cache	Dual Processor XEON 2Ghz/512 Cache
RAM	4GB RAM minimum with ECC DDR	4GB RAM minimum with ECC DDR
Monitor	15” SVGA monitor or 15" SVGA rack mountable monitor (based upon type that is specified by TC-AIMS)	15” SVGA monitor
Video Card	8Mb video with SVGA support integrated on motherboard or PCI/AGP card	8Mb video with SVGA support integrated on motherboard or PCI/AGP card
Hard Drive	Minimum ten 18.2 GB HD (configured as four RAID1 drives) Ultra160 SCSI disk drives on a dual channel RAID controller drives with 15k RPM formatted NTFS & configured as: Drive 1 C: (System) Drive 2 D: (Apps) Drive 3 E: (Logs) Drive 4 F: (Backup) Drive 5 G: (Data)	Minimum ten 18.2 GB HD (configured as four RAID1 drives) Ultra160 SCSI disk drives on a dual channel RAID controller drives with 15k RPM formatted NTFS & configured as: Drive 1 C: (System) Drive 2 D: (Apps) Drive 3 E: (Logs) Drive 4 F: (Backup) Drive 5 G: (Data)
Operating System	Microsoft Windows 2000 Advanced Server SP2 pre-installed with License and CD media	Microsoft Windows 2000 Advanced Server SP2 pre-installed with License and CD media
External Mouse	PS2 or USB style mouse with mouse pad	PS2 or USB style mouse with mouse pad
Keyboard	PS2 or USB style Windows keyboard	PS2 or USB style Windows keyboard

Network Connection	Dual Integrated with System Board 10/100 MHz Dual Port Adapter NIC (Teamable)	Dual Integrated with System Board 10/100 MHz Dual Port Adapter NIC (Teamable)
Modem	None	None
CD	CD-ROM (CD-RW) drive, EIDE	CD-ROM (CD-RW) drive, EIDE
Floppy Drive	3.5” Floppy disk drive	3.5” Floppy disk drive
Speakers	None	None
Storage/Backup	20/40GB DDS-4 DAT tape drive, SCSI with controller	20/40GB DDS-4 DAT tape drive, SCSI with controller
Backup Media	Four DDS-4 tape cartridges and one cleaning tape	Four DDS-4 tape cartridges and one cleaning tape
Backup Software	Veritas Backup Exec software, Single Server version with CD media must be issued with each server	Veritas Backup Exec software, Single Server version with CD media must be issued with each server
External Case	None	None
Printer	None	None
Hardware Protection	None	None
Data Protection (UPS)	1000VAC auto-sensing/switching uninterruptible power supply	1000VAC auto-sensing/switching uninterruptible power supply
Cables, Hubs	14 foot snag proof UTP Cat5 patch cable, pre-terminated RJ-45 connectors on both ends	14 foot snag proof UTP Cat5 patch cable, pre-terminated RJ-45 connectors on both ends
Productivity SW	None	None
Other	One 25 pin parallel port	One 25 pin parallel port
	One 9 pin serial port UART 16550 compatible	One 9 pin serial port UART 16550 compatible
	Electronic Documentation including all Windows 2000 Advanced Server Drivers. Must include software to restore server to original factory configuration.	Electronic Documentation including all Windows 2000 Advanced Server Drivers. Must include software to restore server to original factory configuration.
	4 USB ports	4 USB ports
System Board	Support 2 Intel Xeon processors, E7500 chipset and 400 mhz system buses, triple peir PCI buses, Integrated SCSI adapter, integrated video adapter, integrated dual NIC.	Support 2 Intel Xeon processors, E7500 chipset and 400 mhz system buses, triple peir PCI buses, Integrated SCSI adapter, integrated video adapter, integrated dual NIC.

Warranty	Five-year on-site parts and labor warranty, Next Business Day response (CONUS), 72-hour response (OCONUS).	Five-year on-site parts and labor warranty, Next Business Day response (CONUS), 72-hour response (OCONUS).

Table 1.2.2-2
Computer System, Digital
AN/TYQ-129(V)2
(TC-AIMS II Workstation)

LIN/NSN: 7010-01-504-2352	**DEPLOYABLE LAPTOP/ SERVER**
Major Component	Three spindle design (hard drive, floppy and CD-ROM self contained in box)
Processor Speed	Pentium 4 Processor minimum 2GHz/512 Cache or higher
RAM	1GB
Monitor	15” Active Matrix TFT SVGA display, minimum
Video Card	16Mb video with SVGA support, minimum
Hard Drive	60 GB hard disk (minimum) partitioned: C: 8 GB Labeled "System" D: 12 GB Labeled "Apps" E: 40 GB Labeled "TC-AIMS"
Operating System	Microsoft Windows 2000 Professional and SP2 pre-installed with CD media
	Windows XP License and Media
External Mouse	PS2 or USB style mouse with mouse pad
Keyboard	Windows style keyboard, integrated
	Integrated pointing device
Network Connection	10/100TX Ethernet, integrated or PCMCIA vice integrated options available.
Modem	56K V.90 modem, integrated, configured to COM1 or PCMCIA vice integrated options available.
CD	6X/4X/24X CD-RW drive, minimum
Floppy Drive	
Speakers	Integrated speakers
Storage/Backup	3.5” 1.44MB Floppy disk drive

Backup Media	
Backup Software	
External Case	Soft sided carrying case w/shoulder strap, capable of holding all accessories
Printer	
Hardware Protection	Surge suppressor for notebook, APC Pnote Pro or equivalent
Data Protection (UPS)	
Cables, Hubs	14 foot snag proof UTP Cat5 patch cable, pre-terminated RJ-45 connectors on both ends
Productivity SW	Microsoft Office 2000 Professional and CD Media pre-installed, XP Professional License. CD-RW creation software.
Other	Two Type II or one Type III PCMCIA slots
	One 25 pin parallel port
	One 9 pin serial port UART 16550 compatible
	Two USB ports
	Electronic Documentation including Windows 2000 and Windows XP Drivers. Must include software to restore laptop to original factory specifications.
System Board	Power supply, 110-220VAC, auto-sensing, auto-switching
Warranty	Five-year on-site parts and labor warranty, Next Business Day response (CONUS), 72-hour response (OCONUS).

Table 1.2.2-3.
Printer

Platform Component	Description
	Army Printer Configuration 2003
Printer Type:	LaserJet - Monochrome
System Requirements:	MS Windows 2000/NT4 Compatible
Max Resolution B&W:	1200 X 1200 dpi
Min Printer Output:	16ppm B/WLetter A Size(8.5in X 11in)
Min Memory/RAM	8 MB

Installed:	
Min Memory Expandable:	16 MB
Min Processor Speed:	133 MHz
Min Connectivity:	Parallel, USB, and Ethernet Ports
Min Paper Input:	2
Std Paper Sizes:	Letter (8.5in X11in) & legal (8.5in X14in)
Min Paper Capacity Tray #1:	100 up to legal size
Min Paper Capacity Tray #2:	25 up to legal size
Weight:	Under 40 lbs.

Table 1.2.2-4
Optical Memory Card, Reader/Writer

LIN/NSN	DESCRIPTION
Z47955 5998-01-480-6392	Optical Memory Card, Reader/Writer AN/TYQ-117 Optical Memory Card Reader/Writer Interface Unit, Automatic Data Processing Transit Case

Table 1.2.2-5
Interrogator Set

LIN/NSN	DESCRIPTION
Z52950 5895-01-494-0898 5895-01-454-0219 5895-01-454-1339 5895-01-454-5356	Interrogator Set, AN/TYX-1 Interrogator Set, (Active, Handheld) AN/TYQ-95 Interrogator Set Transit Group Configuration AN/TYQ-97 Interrogator (Active, Transportable) CY-8848/TYQ

5895-01-454-5357	Solar Power Source CY-8849/TYQ
5895-01-454-5361	Mounting Structure CY-8850/TYQ

1.2.3 Software Configuration. The Joint Program Management Office (JPMO) will provide the application software with embedded commercial off-the-shelf software. TC-AIMS II application software will be developed incrementally with the initial increment to support basic capabilities necessary to plan, coordinate, and execute deployment or redeployment. The follow-on increment will optimize the basic unit move capabilities to provide a more robust and flexible technical architecture for rapidly adding the incremental development packages defined by the Joint Requirements Office and approved by the Configuration Management Board. The re-engineered product also provides the N-tier architecture to make TC-AIMS II web-capable and adaptable for future technology changes.

Table 1.2.3-1
System Software Configurations

Microsoft NT Server	Version 4.0
Microsoft Windows	2000
TC-AIMS II Application	Version 3.01

1.2.4. Logistics Requirements. A Materiel Fielding Plan (MFP) has been prepared to detail the level of support required for the TC-AIMS II installations as they are fielded. The MFP addresses the program support areas specific to the TC-AIMS II such as gaining command and fielding command responsibilities, maintenance planning, logistics support, computer hardware and software resources. Equipment warranty period will be determined by the specific procurement contract.

1.2.5 Security Requirements. TC-AIMS II will operate at the unclassified level and will contain multiple levels of access control to ensure sensitive but unclassified information is not compromised. TC-AIMS II will receive or process information according to guidelines set forth by DOD and Components, including the protection of data aggregation at a higher level as necessary. The TC-AIMS II System Security Accreditation Plan was signed by PEO EIS, the Designated Accreditation Authority (DAA), and fulfills C2 level security accreditation requirements. Accreditation will be addressed with each Block upgrade.

1.2.6 Performance Requirements. TC-AIMS II must provide units the capability to rapidly plan and deploy to meet Commander-in-Chief (CINC) required delivery dates. It must provide ITO/TMO's day-to-day traffic management functions, and transportation managers the capabilities to effectively utilize theater common lift assets. It must also allow combat service support organizations and supporting commands to sustain the force and perform effective movement control and coordination, distribution, and sustainment activities; both enroute and in theater. In a networked environment, TC-AIMS II must support preparation, processing, and documentation commensurate with the volume transportation movement information at the task organization level; that is, where detailed cargo and personnel data is aggregated into deployment and transportation plans, normally at the Major Subordinate Command levels. TC-AIMS II shall include the capability to support hand-held scanners for originating, trans-shipping and receiving locations. TC-AIMS II will be designed to minimize or eliminate the amount of typing (keystrokes) required once a shipment is entered into the system.

1.2.7 Threat/Technological Requirements. The battlefield threats to TC-AIMS II include physical damage and destruction, reconnaissance and surveillance, computer network attack, electronic warfare (EW), directed energy weapons, nuclear weapons and their electromagnetic pulse effects, chemical weapons, and biological weapons as well as environmental effects. It is possible that a threat force could detect, locate, and target TC-AIMS II from its radio frequency emissions. An electronic attack threat force could detect and locate TC-AIMS II communications, then launch a denial-of-service attack with ground-based and airborne EW assets. Radio frequency weapons could assist in degrading or damagin tical command, control, and communications systems, computers, and automated information systems. The greatest threat to the TC-AIMS II system will be from computer network attack which could take the form of malicious code insertion, remote insertion of false data, Internet Protocol spoofing, unauthorized computer access, interference or tampering with cable communications, direct signal attack, and indirect signal attack. "Threat information in greater detail can be obtained from the following references: NAIC-1574-0210-97, Information Warfare Threats to Automated Information Systems Threat Environment Description (TED) and ONI-TA-009-97, Naval Command, Control, Communications, Computers, Navigation, and IFF Systems Threat Assessment Report (STAR)." This is a DIA-validated Threat Assessment.

1.2.8 Replaced Systems. TC-AIMS II will replace Transportation Coordinator Automated Command and Control Information System (TC-ACCIS) and Department of the Army Movement Management System-Redesign (DAMMS-R). Displaced hardware can be either reutilized within the installation or disposed of in accordance with AR 710-2, paragraph 2-4. The JPMO will provide the installation with disposition instructions during site survey. If no disposition instructions are received, the installation may retain and reuse the hardware as desired, however, maintenance support becomes the user's responsibility. DAMMS-R system configurations to be replaced are shown below.

Table 1.2.8-1
DAMMS-R System Configurations

Item Name/Nomenclature	National Stock Number	LIN	End Item Code (EIC)	BOIP	Standard Study Number (SSN)
Computer System, Digital (DAMMS-R LAN), OL-610-TYQ	7010-01-420-4969	C27925	QTE	T067AA	H4960000L00
Computer System, Digital (DAMMS-R Workstation), OL-611/TYQ	7010-01-420-4968	C27993	QTG	T066AA	H4980000L00
Computer System, Digital (DAMMS-R Concentrator, OL-612/TYQ	7010-01-420-4970	C18616	QTH	T068AA	H4990000L00
Computer System, Digital (DAMMS-R Highway Operation Workstation, OL-588/TYQ	7010-01-420-4971	C18650	QTF	T062AA	H4970000L00

1.3 PROGRAM MANAGEMENT

1.3.1 Management Structure. The participating organizations will perform the tasks related to their roles and responsibilities as shown below. If tasks are delegated or coordinated with other participants, PM TC-AIMS II must be advised of the conditions of such delegation. PM TC-AIMS II will periodically publish schedules and precedence charts for these tasks separate from this plan.

1.3.1.1 Program Executive Officer. Program Executive Officer, Enterprise Information Systems (PEO EIS) is responsible for providing planning guidance, direction, control, and support necessary to field assigned systems within cost, schedule, and performance baselines. PEO EIS executes assigned programs, as approved by the DA, and ensures that all Army agencies involved in the acquisition of Army materiel are responsive to the needs of PM TC-AIMS II in achieving programmatic goals. PEO EIS is responsible for the planning, programming, budgeting, and execution necessary to guide these programs through all milestones. PEO EIS is responsible for the following:

a. Provides management guidance in accordance with life cycle management procedures for assigned Army systems.

b. Ensures that system acquisition and deployment are properly managed and that all life cycle management requirements are met.

c. Provides guidance to subordinate PMs.

d. Ensures that comprehensive test and evaluation and quality assurance programs are developed.

e. Provides program information to the Defense Acquisition Executive (DAE), HQDA, DOD, and Congress.

f. Participates in the development of data to support DAE programmatic decisions in the budget preparation and execution system and provide development and acquisition system resourcing data to TRADCOC for the Long-Range Army Materiel Requirements Plan (LRAMP).

1.3.1.2 Project Manager/Materiel Developer. PM TC-AIMS II serves as the ILS Manager for the TC-AIMS II and is responsible for preparing, coordinating, and ensuring that the Supportability Strategy for the TC-AIMS II is current.

a. PM TC-AIMS II fulfills responsibilities in accordance with Army Regulation (AR) 700-127 and supporting publications by performing the following:

(1) Plans and manages acquisition programs consistent with the policies and procedures issued by the AAE and appropriate regulations, policies, procedures, and standards.

(2) Develops and submits requirements for financial, manpower, matrix, and contractor support for the PM to the DAE and respective PEO.

(3) Develops, coordinates, and commits to an acquisition program baseline and immediately reports all imminent and actual breaches of approved baseline.

(4) Prepares and submits timely and accurate periodic program performance reports.

(5) Identifies critical intelligence parameters for inclusion in the System Threat Assessment Report.

(6) Implements and manages an effective ILS program as part of the assigned system acquisition. Ensure ILS deficiencies are identified ad corrected during testing prior to initial system fielding.

(7) Establishes and maintains control over funds received. Include sufficient funding for ILS requirements are included in budget submissions.

(8) Develops and coordinates the Test and Evaluation Master Plan (TEMP) for the TC-AIMS II.

(9) Executes the Human System Interface (HSI) Program, and shares equally with the Combat Developer in continuous planning of the HSI Program.

(10) Properly and accurately records and updates data required by Army management systems and databases for all assigned programs, projects, or products.

(11) Responsible for configuration management.

b. As the Hardware Integrator and Fielding Agent, PM TC-AIMS II will:

(1) Ensure objective hardware for TC-AIMS II applications meets reliability standards and is properly accounted for on Installation property books.

(2) Publish a Supportability Strategy and Materiel Fielding Plan. Update as required to ensure the program's logistic objectives are met.

(3) Provide clear instructions to the training facility manager to ensure all preventive maintenance is accomplished and maintains a ready for training status.

(4) Maintain failure data and ensure all contractors meet their contractual obligations for reliability and response times.

(5) Verify user manuals are validated/verified and meet necessary standards.

(6) Provide training and training support package in accordance with System Training Plan (STRAP).

(7) Support HQ DA G4 ILS reviews, as appropriate.

1.3.1.3 Functional Proponent (FP). The DA G4 is the FP and is responsible for the DA ILS program. DA G4 fulfills responsibilities in accordance with AR 700-127 and its supporting publications, and performs the assigned role of the TC-AIMS II FP. Specifically, the FP:

a. Provides Army staff executive oversight and proponency for TC-AIMS II.

b. Reviews and approves the Critical Operational Issues and Criteria (COIC).

c. Provides Test and Evaluation (T&E) coordination and signs the test and evaluation master plan (TEMP) and other documents as the Army logistician.

d. Ensures adequate dedicated funding is programmed for TC-AIMS II implementation and sustainment, to include interactive multimedia instruction development, equipment acquisition, activation, and sustainment.

e. Coordinates equipment/system acquisition requirements with the DOD Executive Agent (DEA) and PEO EIS.

f. Supports the ILS management structure in the budget and program objective memorandum (POM).

g. Serves as the Army logistician for new, modified, upgraded and displaced systems and serves as the voting logistician at in-progress review (IPR) and MDR.

h. Monitors the Army ILS and Manpower and Personnel Integration (MANPRINT) effort, in coordination with OCAR, NGB, and other Army Staff agencies, to ensure effective implementation in accordance with DA and DOD requirements.

i. Serves as the proponent for ILS career development and training program for military and civilian personnel.

j. Convene and chair HQDA ILS reviews (ILSR) for systems approaching milestone decision review (MDR).

1.3.1.4 Gaining Major Army Commands. Commanders of gaining MACOM participate in the ILS and environmental processes by planning for receipt of new, modified/upgraded, and displaced systems. The commanders will:

a. Provide advice to logistician, MATDEV and CBTDEV on matters pertaining to the expected system operational employment and support.

b. Performs the necessary advance planning and programming for receipt of new, modified/upgraded or displaced systems, Manages and coordinates TC-AIMS II implementing actions within the United States Army Reserve (USAR).

b. Plans, programs, and budget resources to equip, support, and sustain TC-AIMS II equipment assigned to USAR organizations and installations.

1.3.1.5 PEO EIS, Operations & Mission Support Directorate, Logistics Division. OMSD Logistics Division will provide logistic support, as required. This will include but is not limited to:

a. Prepare the Supportability Strategy (formerly Integrated Logistic Support Plan (ILSP)).

b. Prepare Materiel Fielding Plan.

c. Obtain Safety Releases in support of testing and milestone decision reviews.

d. Participate in Working Integrated Product Teams (WIPT), as required.

e. Participate in other ILS activities, as required.

1.3.1.6 Combat Developer (CBTDEV). US Army Training and Doctrine Command is the Army's principal combat developer. TRADOC has designated US Army Combined Arms Command (CASCOM) as the CBTDEV and doctrinal proponent for TC-AIMS II. As the combat developer, CASCOM is responsible for concepts, doctrine, organization, and materiel objectives and requirements relating to the employment of the TC-AIMS II in a Theater of Operations. As the CBTDEV, CASCOM:

a. Develops the Reliability, Availability, and Maintainability Objectives.

c. Chairs the Configuration Management Board (CMB) during post deployment software support.

d. Define transportability and mobility requirements and assess the unit mobility impact during the development process.

e. Serve as the ILS program planner for emerging acquisition programs.

f. Ensure that ILS and MANPRINT considerations are incorporated into all materiel system requirement documents and summarized in the Supportability Strategy.

h. As an SIPT member, plan and implement ILS and develops supportability testing issues in coordination with PM TC-AIMS II, tester, evaluator, and other program participants.

i. Use experience data from fielded systems when developing requirement documents and ILS program objectives.

j. Participate in decision and program reviews, DA ILS reviews and post fielding ILS assessments.

k. Inform PM TC-AIMS II and other program participants of changes affecting the ILS program plans. Fully consider emerging logistics policies.

l. Establish and implement training programs to develop the skills needed for the operation and support of newly fielded systems and for sustained support.

m. Provide a representative to support the Army ILS Executive Committee.

1.3.1.7 Trainer/Training Evaluator. US Army TRADOC serves as the principal Army trainer/training developer and evaluator. In this role, TRADOC:

a. Participates in the Supportability IPT (SIPT).

b. Determines training and training device requirements.

c. Conducts training evaluations to assess compatibility between field operations and training, doctrine, organizations, and fielded systems.

d. Provide evaluation, feedback and lessons learned to doctrine, training and combat developers and other appropriate action elements.

e. Prepare training test support package, new equipment training plan (NETP) for planning and conducting initial operation and maintaining new and modified systems.

f. Provides a Training Operational Test Readiness Statement (OTRS) on the training support package in accordance with AR 73-1.

1.3.1.8 Independent Operational Evaluator. US Army Test and Evaluation Command (USATEC) is the Independent Operational Evaluator and is responsible for the following:

a. Manages the Army's continuous evaluation and user testing programs and provides independent assessments to the Army leadership regarding the operational effectiveness and suitability of emerging systems.

b. Prepares Part 4 of the TEMP.

c. Ensures all applicable support requirements and concepts are included in test and evaluation programs and plans.

d. Provides ATEC position at milestone decision reviews and in-process reviews.

e. Ensures that user tests conducted by other designated Army activities are efficiently planned, performed, and reported.

f. Include in evaluation programs and plans all support requirements and concepts, including MANPRINT, that apply to the materiel system being evaluated.

g. Participate in Supportability IPT activities.

h. Provide a copy of test and evaluation plans and reports to HQDA, G4 (DALO-SMR) and other supportability IPT members.

1.3.1.9 Independent Logistician. The HQDA, SAALT is the Army independent logistician for new, modified, upgraded, and displaced systems. The Independent Logistician will:

a. Participate in decision and program reviews.

b. In coordination with ATEC, provide logistics input at Milestone Decision Reviews.

c. Establish internal procedures and techniques to assess ILS and environmental program management and execution for all assigned acquisition programs.

d. Participate in developing requirements documents, acquisition plans, supportability strategies, test plans, materiel fielding documents, contract and solicitation documents.

e. Provide available experience or data to the combat developer and materiel developer to influence the system design and ILS program development.

f. Participate in Army ILS Executive Committee, overarching integrated product team (OIPT), PM integrated product team (IPT)/working integrated product team (WIPT), supportability IPT, Test IPT and DA ILS review activities for all assigned materiel systems.

g. Monitor supportability and environmental testing on an exception basis.

1.3.1.10 Users. Users include the Army Active Component, Reserve Component, Department of the Army Civilians, and Army National Guard. The users:

a. Provide advice to PM TC-AIMS II, and the CBTDEV on matters pertaining to the expected system operational employment and support.

b. Provide testing support, to include participants, facilities, equipment, and evaluators.

c. Perform the necessary planning and programming for receipt of new or displaced systems to include programming at the gaining installations for new or modified facilities, if needed, to meet the facility requirements identified by PM TC-AIMS II.

d. Provide a central focal point for coordination and approval of materiel fielding documentation.

e. Participate in post-fielding ILS assessments and readiness reviews.

f. Assess the support impact and acceptability of systems proposed for training or conditional release.

g. Provide input to the DA ILS reviews, decision reviews.

1.3.2 Supportability Integrated Product Team (SIPT). The SIPT serves as the logistic support planning and coordination body for the TC-AIMS II program. The team meets to review program status, report on significant events, identify and solve problems, and coordinate plans for future activities. Ad hoc working groups can be formed at the direction of the SIPT. The SIPT member points of contact and addresses are listed as follows:

1.3.2.1 Army Service Representative

ADDRESS: Headquarters, Department of the Army, G4
ATTN: DALO-FMP (Mr. Robert Osborn)
Washington, DC 20310
DSN: 222-5930
COMM: (703) 692-5930
E-MAIL: robert.osborn@hqda.army.mil

1.3.2.2 Program Executive Office

ADDRESS: Program Executive Office
Enterprise Information Systems
ATTN: SFAE-PS-P (Mr. Mark Fornaro)
Fort Belvoir, Virginia 22060-5526
DSN: 656-0690
COMM: (703) 806-0690
E-MAIL: mark.fornaro@eis.army.mil

1.3.2.3 Project Manager/Materiel Developer

ADDRESS: Project Manager,
Transportation Coordinators' Automated Information for Movement System II
ATTN: SFAE-PS-TC (Mr. Doug Garrell)
8000 Corporate Court
Springfield, VA 22153

COMM: (703) 752-0752
E-MAIL: garrelld@eis.army.mil

1.3.2.4 Combat Developer

ADDRESS: Headquarters
US Army Combined Arms Command
ATTN: ATCL-SAL (CPT James Smith)
3901 A Avenue, Suite 120
Fort Lee, VA 23801
DSN: 687-1352
COMM: (804) 734-1352
E-MAIL: smithjl@lee.army.mil

1.3.2.5 Independent Logistician

ADDRESS: ASAALT
ATTN: SAAL-LSS (Michael Wolozyn)
103 Army Pentagon
Washington, DC 20310-0103
COMM: (703) 604-7553
E-MAIL: michael.wolozyn@saalt.army.mil

1.3.2.6 Operational Independent Evaluator

ADDRESS: US Army Test and Evaluation Command
ATTN: CSTE-EIM (Dr. Ann Maddux)
Park Center IV
4501 Ford Avenue
Alexandria, VA 22302-1458
DSN: 761-9002
COMM: (703) 681-9002
E-MAIL: madduxann@hq.optec.army.mil

1.3.2.7 Training Evaluator

ADDRESS: Commander
US Army Combined Arms Command
ATTN: ATCL-DOT (Charles Johnson)
Bldg 1409, B Avenue & 3rd Street
Fort Lee, VA 23801
DSN: 539-1195

COMM: 804-765-1195
E-MAIL: johnsoncl@lee.army.mil

1.3.3 SIPT Responsibilities. The responsibilities of the SIPT members are listed in paragraph 1.3.1.

1.3.4 Working Relations.

1.3.4.1 Informal. Informal direct coordination is authorized on an as-needed basis among all participants providing ILS for the TC-AIMS II project.

1.3.4.2 Formal. Formal coordination will be accomplished by staffing documents through official channels or by IPRs at varying levels. Any major participant also may call an IPR. All IPRs will be arranged by or through PM TC-AIMS II who will notify all appropriate participants. Funding for travel and temporary duty in conjunction with the IPR will normally be provided by each participating organization.

1.4 APPLICABLE DOCUMENTS. The following documents provide guidance, instructions and criteria for the elements described in this Supportability Strategy:

a. Transportation Coordinators' Automated Information for Movement System II Operational Requirements Document (ORD), July 1999.

b. Transportation Coordinators' Automated Information for Movement System II Test and Evaluation Master Plan (TEMP), October 2001.

c. Transportation Coordinators' Automated Information for Movement System II Mission Element Needs Statement, August 1997.

d. Army Regulation 700-127, Integrated Logistic Support, 10 November 1999

e. Department of the Army (DA) Pamphlet (PAM) 700-55, Instructions for Preparing the Integrated Logistic Support Plan, 29 December 1989.

f. Transportation Coordinators' Automated Information for Movement System II Acquisition Strategy, January 2002.

g. Transportation Coordinators' Automated Information for Movement System II Human System Integration Plan (HSIP), October 1999.

h. Transportation Coordinators' Automated Information for Movement System II Army Systems Training Plan (STRAP), March 2001.

i. Transportation Coordinators' Automated Information for Movement System II Joint Integrated Logistics Support Plan, March 2001.

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SECTION II - PLANS, GOALS, AND STRATEGY

2.1 OPERATIONAL & ORGANIZATIONAL PLAN

2.1.1 Concept of Employment.

a. Mission Profiles.

(1) TC-AIMS II receives input files from other systems, helps transportation coordinators process data, and produces outputs in the form of reports, labels, Automatic Identification Technology (AIT) tags and cards (linear and two dimensional bar-codes, OMCs, and RF tags), screen displays, and electronic outputs to interfacing systems. TC-AIMS II will be employed during day-to-day traffic management and unit movement activities typically 12 hours a day, seven days a week. During deployment exercises and real-world contingencies, TC-AIMS II will be employed for 24 hours a day, seven days a week, with surges of activity occurring at the beginning of deployments, and again during redeployment or onward movement of forces. The system design will support database and system maintenance activities that can be scheduled around deployment operations and exercises. Additionally, database and systems maintenance activities, specifically backups, will at no time preclude user access to the system.

(2) CINC or JTF deployment plans and schedules drive the volume of processing activity, generally heaviest in the first 45 days. The level of output products, such as reports and electronic interface traffic, can be derived from the number of strategic lift assets supporting a movement, together with local bus, truck, MHE support, convoy movement schedules, rail movement schedules and the volume of shipments in a given period.

(3) The architecture of TC-AIMS II consists of standalone workstations, regionalized servers, or a hierarchy of "deployable" peer-to-peer connected servers networked throughout the operational chain of command, with the servers being connected to client workstations and laptop computers at staff and organizational unit levels.

b. Mission Essential Functions.

(1) The system must allow units, deployment support activities, movement control & coordination organizations, and traffic management organizations, to maintain equipment and personnel databases; and to manage, control, and direct organic and common user transportation assets.

(2) The system must automate movement planning processes as defined by information flows for matching TPFDD cargo & personnel detail with actual unit deployment lists, convoy movement data, organic equipment availability reports, and DTS cargo movement procedures.

(3) The system must provide an automated ability to organize unit and organizational deployment list data into aircraft, ship, rail (including CINC-specific rail car data), truck, and container load planning data, such as air cargo chalks, or ship team assignments. For rail and truck movements, it will be the automated tool to assist load planners in developing actual load plans.

(4) The system must automate movement coordination and control activities as defined by joint tactics, techniques, and procedures for movement control and convoy operations. The activities that TC-AIMS II automates will be based on standard movement forms, reports, requests, and tasking procedures from the legacy migration systems or the manual forms and information flows currently used to accomplish movement coordination.

(5) The system must automate traffic management functions or theater distribution as defined by DTS procedures for cargo and personnel movement. The activities that TC-AIMS II automates will be based on DOD standard and theater specific movement forms, freight bills, processes, information flows, electronic interfaces, and documentation used to tender tactical, organic, or commercial transportation support.

(6) The system must read and write AIT media.

(7) TC-AIMS II should possess the capability to notify the origin terminal if information sent to it is not readable.

c. Employment Tactics. TC-AIMS II will be employed at the Unit Logistics (Embarkation and UMO sections), through each level of command to Major Subordinate Command or task force, which deals with detailed unit transportation and deployment data. It is used in all garrison/installation and forward deployed locations where deployment planning and execution is accomplished, including aboard ship and at remote ports, beaches, airfields and traffic nodes. It is also used with traffic management and theater movement control. It will operate on existing information infrastructure networks, or in a standalone mode, for occasions where robust communications are not available.

d. Environmental Conditions. TC-AIMS II must be operable and maintainable under all conditions of climate and terrain where Joint Task Forces deploy. It will be used under hot, basic and cold conditions (inclement temperatures of –25 to 140 degrees Fahrenheit). TC-AIMS II will be operated and maintained by users while wearing appropriate clothing to include MOPP and cold weather gear. It may be assumed that computer workstations, servers, and peripherals will require some degree of shelter from the elements, such as the inside of a truck, container, or tent while in expeditionary environments.

2.1.2 Mission Performance Objective. TC-AIMS II must allow movement coordinators to plan and execute unit level activities in support of force deployments, sustainment functions, and redeployment; as well as traffic management activities across the full spectrum of operations.

a. TC-AIMS II must receive electronic data input from external materiel management, personnel, advance shipment, and time-phased force and deployment data (TPFDD) feeder systems; and from AIT devices.

(1) The system must accept data, in time frames that support operational mission or task completion. See Note 1 below, for speed of service. The threshold is that the system must accept properly formatted data in accordance with the Systems Interface Agreements (SIAs) from those systems identified with an "X" in the threshold column. The Objective is to properly interface with the remaining systems identified below. System interfaces identified as threshold requirements are critical key performance parameters (KPP).

(2) The system must have a capability to receive input from peripheral Automatic Identification Technology devices capable of reading from the AIT media listed:

Table 2.1.2-1 AIT Device Input Parameters

Type	Description	Threshold	Objective
Linear Bar Codes	Code 3 of 9 MSL's, LOGMARS, TCN labels	Completeness: .90 Accuracy: .95 Speed: NA	Completeness: .95 Accuracy: .98 Speed: NA
2D Bar Codes	MH10.8, PDF 417 Labels	Completeness: .90 Accuracy: .95 Speed: NA	Completeness: .95 Accuracy: .98 Speed: NA
Radio Frequency ID tags	Equipment ID tags	Completeness: .85 Accuracy: .90 Speed: Ability to completely read a tag fixed to a vehicle traveling <= 25mph	Completeness: .90 Accuracy: .98 Speed: Ability to completely read a tag fixed to a vehicle traveling <= 45mph
Optical Memory (OMC) Cards	Defense Logistics Agency (DLA) AMS Cards	Completeness: N/A Accuracy: N/A Speed: N/A *Threshold parameter cannot be identified*	Completeness: .95 Accuracy: .98 Speed: <= 1 second per card

		because there is no existing standard.	
SMART Cards		Completeness: .90 Accuracy: .95 Speed: N/A *Threshold parameter cannot be identified because there is no existing standard.*	Completeness: .95 Accuracy: .98 Speed: <= 1 second per card

Notes: 1. Completeness measures the thoroughness of sought information. The database must be designed such that all required information elements necessary to produce specified outputs or read defined inputs are included. This is not a measure of data quality.

2. Accuracy describes the format, content, compatibility, and validity (size, class or type) consistent with the TC-AIMS II data dictionary. The DOD Data Model (DDM) should be used as a guideline to facilitate data compatibility and interoperability with other systems. Beyond these definitions, TC-AIMS II will not be responsible for editing faulty information.

3. Speed: Some items are "Not-Applicable" since laser scans reads occur at light-speed.

4. Speed for OMC cards implies both read and write times.

5. TC AIMS II will facilitate the administrative processing and manifesting of passengers through the ability to read DOD standard manifest data elements from DOD standard SMART Cards.

b. TC-AIMS II must provide an automated ability for users to process data and information into decisions and execution actions to accomplish appropriate transportation and deployment tasks.

(1) The system must be able to import, store, process, update, and export operational data volume in support of Major Theater War deployment scenarios and traffic management operations. The threshold is that TC-AIMS II provides the ability for users to accomplish job related tasks efficiently or as well as the best of breed of existing systems. The objective is for functional activities defined in this ORD to be automated in such a way as to reduce time required to perform those functions by at least 20 percent. This parameter assumes that competent and trained users, who understand how to prepare required documents, are using the system as part of their normal duties.

(2) The system must meet the Processing Data Parameters listed:

Table 2.1.2-2. Processing Data Parameters

Activity Description	Threshold	Objective
Maintain unit level deployment database for unit level equipment, container & pallet, and personnel lists associated with any Battalion or Squadron Level unit.	Standalone: 75,000 cargo detail records. Single Server: 1,000,000 cargo detail records.	Standalone: 500,000 cargo detail records. Single Server: 3,000,000 cargo detail records.
Create, receive, maintain, and transmit Parent-Child deployment relationships to include use of deployment echelons. (Example: Box on a truck, pallet in container)	Standalone: 98,901 parent-child relationships. Single Server: 1,483,515 parent-child relationships.	Standalone: 197,802 parent-child relationships. Single Server: 1,978,020 parent-child relationships.
Activity Description	Threshold	Objective
Movement Planning of cargo & personnel detail - aggregate Unit Level Databases. (Capability to merge or "rollup" unit level databases up the chain of command, assuming an average of 300 cargo line items per ULN, and 250 personnel billet line items per ULN).	Standalone: 2,500 Unit Line Numbers (ULN)s containing sourced cargo or personnel detail records matched to UTC Cargo or personnel force requirement details. Single Server: 10,000 ULNs.	Standalone: 5,000 ULN records. Single Server: 50,000 ULNs
Movement Planning: Ability to pass cargo and personnel detail data to JOPES feeder systems and GTN to report, load plan, manifest, and source ULNs of a force requirement.	Sealift ULNs: 10 C-Days worth of data Airlift ULNs: 3 C-Days worth of data. Local or CULT Ground transportation: 30 days	Sealift ULNs: 30 C-Days Airlift ULNs: 7 C-Days Local or CULT ground transportation: 60 days
Ship Load Planning and Manifesting. Ability to store and process cargo data details for export to ship load planning systems in support of port operations	Cargo detail data for 5 ships at a single terminal or water port during a 72-hour period.	Cargo detail data for 10 ships at a single terminal or water port during a 72-hour period.

and embarkation. (Based on a typical LHA or FSS ship load plan):		
Aircraft Load Planning and Manifesting. (Based on a typical C-141 aircraft load plan)	Cargo & Personnel detail data for 50 aircraft sorties processed at a single air terminal during a 24-hour day.	Cargo & Personnel detail data for 100 aircraft sorties processed through a single air terminal during a 24- hour day.
Rail Load Planning (Based on a 100 car train)	Cargo detail data for 25,000 shipment units.	Cargo detail data for 60,000 shipment units.
Surface & Ground transportation Modes. Receive or Prepare, generate, and transmit Bills of Lading (GBLs/CBLs), Tonnage Distribution Rosters (TDRs), or Transportation Control Movement Documents (TCMDs) per 24-hour day:	GBLs & CBLs: 500 TCMDs: 1,000 TDRs: 25	GBLs & CBLs: 1,000 TCMDs: 5,000 TDRs: 100
Convoy Movement Requests (based on a 25-vehicle convoy).	25 per day	50 per day
Ad-Hoc Queries. A trained user can extract a simple query, such as; determining equipment density for a given unit, or preparing a list of GBLs moving equipment to a given port.	45 minutes to formulate the query and obtain correct results.	25 minutes to formulate the query and obtain correct results.
Standard Reports.	20 minutes	10 minutes

c. TC-AIMS II must produce outputs in the form of electronic interfaces (to external mode clearance, cargo booking, load planning, transportation C2, TPFDD Feeder, and common use transportation systems), as well as produce standard labels, tags, forms, and reports used to accomplish transportation and deployment functions.

(1) TC-AIMS II must interface with the systems identified as outputs.

(2) TC-AIMS II must properly generate reports, forms, labels, tag data, OMC or SMART card data as listed in Table 4 below. By "properly" this means that correct data is placed in the appropriate fields, that text is readable by humans, or that bar codes, cards, or tags are readable by appropriate TC-AIMS II AIT devices. The parameters below assume that a printer, RFID tag read/write device, and OMC/SMART Card read/write devices are directly connected to a workstation hosting its own TC-AIMS II database.

Table 2.1.2-3. Output Descriptions

Output Type	Description	Threshold	Objective
Reports	Ad Hoc or Standard (pre-formatted)	Completeness: .95 Accuracy: .95 Speed: <= 1 min per page	Completeness: .98 Accuracy: .98 Speed: <= 30 sec per page
Standard Forms	DD, SF, NAVMC, AF, AE and other paper outputs	Completeness: .95 Accuracy: .95 Speed: <= 1 min per page	Completeness: .98 Accuracy: .98 Speed: <= 30 sec per page
Labels	LOGMARS, Military Shipping Labels, Equipment ID labels	Completeness: .95 Accuracy: .95 Speed: <= 30 seconds per label Durability:	Completeness: .98 Accuracy: .98 Speed: <= 10 seconds per label Durability:
Radio Frequency Tags (write data)	256 Kb or larger capacity	Completeness: .875 Accuracy: .875 Speed: <= 1 min per tag	Completeness: .90 Accuracy: .90 Speed: <= 30 seconds per tag
OMC Cards		Completeness: .95 Accuracy: .95 Speed: <= 30 seconds per card	Completeness: .98 Accuracy: .98 Speed: <= 10 seconds per card
SMART Cards (write data)		Completeness: .95 Accuracy: .95 Speed: NA	Completeness: .98 Accuracy: .98 Speed: <= 30 seconds per card

2.1.2.1 Logistics Supportability Objective. TC-AIMS II must be logistically supportable.

a. TC-AIMS II will be fielded on commercial off the shelf (COTS) computers that meet JTA compliance standards, and Service specific computer hardware acquisition requirements.

b. TC-AIMS II will be supported using standard Service systems support programs in place for Automated Information Systems at the time of fielding.

2.2 System Readiness Objective (SRO).

2.2.1 Reliability, Availability, and Maintainability Objective.

a. TC-AIMS II must be reliable with a Mean Time Between Operational Mission Failure (MTBOMF) of 300 hours (threshold), 500 hours (objective). Mission duration for one crew is 12 hours. MTBOMF is the anticipated length of time a system will be operational between operational mission failures. An operational mission failure is defined as that condition in which the system cannot perform or accomplish the stated mission. Failure can be due to software, hardware, or operator error.

b. TC-AIMS II must be available.

(1) TC-AIMS II availability will be 0.95 (threshold); 0.975 (objective).

(2) TC-AIMS II non-availability will be correctable 90% of the time by simply rebooting the computer and the reboot will take less than 3 minutes.

(3) When TC-AIMS II non-availability is not correctable by a reboot, the TC-AIMS Help Desk must be able to respond to and correct the problem within 2 hours 80% of the time.

(4) For Help Desk calls that cannot be successfully corrected within 2 hours, the problem will be corrected within 24 hours 99% of the time.

c. TC-AIMS II must be maintainable.

(1) Maintenance will be conducted in accordance with the maintenance concept, the Integrated Logistics Support Plan (ILSP) and the service annexes to the ILSP.

(2) Mean Time to Repair (MTTR) at the organizational level (system operation) will be 1 hour (threshold); 30 minutes (objective).

(3) Mean Time to Repair (MTTR) at the organizational level (lost information) is 8 hours (threshold); 1 hour (objective).

2.2.1.1 Mobility, Deployability, and Transportability Objective.

a. TC-AIMS II must be capable of movement to, from and within the Joint or Service Component Area of Operations.

(1) All TC-AIMS II equipment must be capable of movement by DOD personnel as a 2-person lift with a weight maximum of 70 pounds (threshold); as light as technically feasible (objective).

(2) Any deployable TC-AIMS II equipment as designated by the Service must be equipped to provide protection from shock, vibration, and weather in accordance with Service specific concepts of operation.

(3) All TC-AIMS II equipment must be capable of movement by all standard modes of transport to include U.S. Navy shipping, commercial or military aircraft, and military tactical vehicles.

(4) The system shall be transportable in tactical military/amphibious vehicles both on and off paved roads and through the surf with no detrimental effects on the TC-AIMS II equipment or degradation of operational effectiveness to the equipment.

(5) The system will require no unusual loading/handling equipment.

(6) TC-AIMS II containers shall be ruggedized, waterproofed and designed for ease of handling and embarkation.

2.2.1.2 Organizational Impact Objective. TC-AIMS II should have no impact on the structure of the unit to which assigned. Fielding of TC-AIMS II to any unit should not require the assignment of additional occupational specialties to the organization.

2.2.1.3. Personnel Selection and Training Objective. TC-AIMS II in some cases replaces standalone systems that were not built to operate in a network environment. TC-AIMS II should be able to be operated and maintained with minimal additional training for users having the appropriate MOS, beyond that currently taught for the legacy systems being replaced.

a. TC-AIMS II system operators should require no more than two weeks (threshold); one week (objective) system training to become proficient operators of the system.

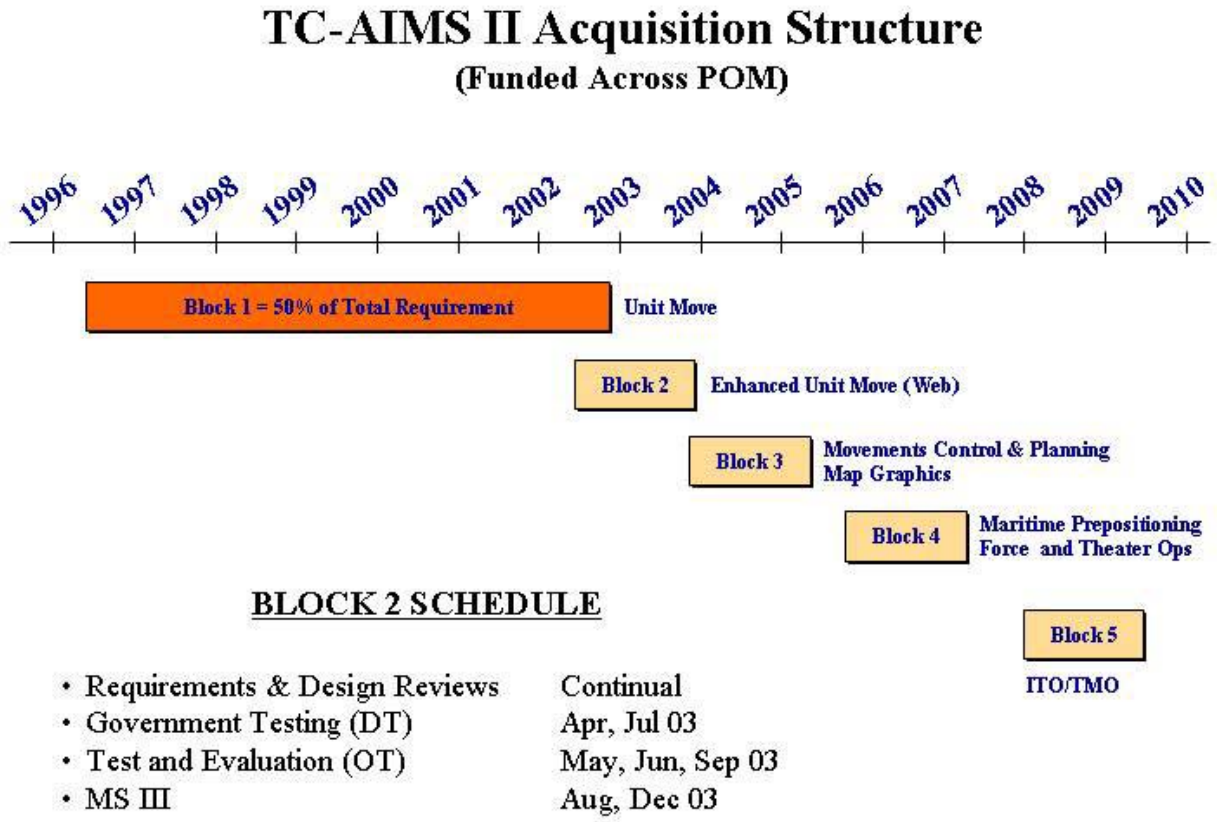
b. TC-AIMS II system administrators should require no more than two weeks (threshold); one week (objective) training to allow them to become proficient system administrators of the system.

c. TC-AIMS II database administrators should require no more than two weeks (threshold); one week (objective) training to allow them to become proficient database administrators of the system.

2.3 ACQUISITION STRATEGY

2.3.1 Acquisition Strategy Approach. The program office is executing an evolutionary acquisition strategy. TC-AIMS II will be developed and fielded incrementally. Initial Operational Capability (IOC) will be achieved upon the completion of fielding of Block I, Basic Unit Move capability and fields that capability to units designated as "early deployers" by their respective service headquarters. Block I also provides the technical architecture and functional foundation for the objective system. The subsequent six (6) Blocks will add capability via software upgrades and will culminate in Full Operational Capability (FOC) upon completion of fielding of Block 7. Figure 2.3.1-1 illustrates this block approach along a seven-year timeline highlighting key capabilities to be included with each upgrade.

Figure 2.3.1-1



2.3.1.1 Hardware Strategy. The current Block 1 TC-AIMS II architecture consists of standalone workstations, garrison or deployed client/server, regionalized servers, or a hierarchy of "deployable" peer-to-peer connected servers networked throughout the operational chain of command, with the servers being connected to client workstations and laptop computers at staff and organizational unit levels. TC-AIMS II is web-enabled in Block 2 and beyond. The Transportation Information Systems (TIS) Program Office (formerly TC-AIMS II Program Office) will provide minimum and optimum hardware configurations for operating TC-AIMS II. Web-enablement and Enterprise Management System (EMS) will result in server consolidation and an overall reduction in the initial hardware estimate. Each Component will be responsible for procuring and installing TC-AIMS II hardware in accordance with Component distribution plans.

2.3.1.2 Software Development Strategy. TC-AIMS II software will be developed incrementally. Block 1, the initial increment, will support basic capabilities necessary to plan, coordinate, and

execute deployment or re-deployment. Follow on software development consists of four block upgrades. Each block is scheduled for an 18-month development period, from contract award to a full-fielding decision. Blocks 3-5 require MS B approval prior to development. Following are summaries of the major software capabilities to be developed, tested, and fielded.

a. Block 1-- Basic Unit Move capabilities provide the ability to plan, coordinate, and execute unit movements. This includes maintaining equipment and personnel databases; organizing unit equipment and personnel list for air, rail, ship, truck, or container load planning; determining transportation requirements; and interfaces with designated supply, personnel, transportation, and C2 systems. This capability also supports the CJCS requirement for a 72-hour TPFDD standard. This capability will replace the following Component unit move legacy systems:

- Transportation Coordinator – Automated Command and Control Information System (TC-ACCIS). This is the Army unit move planning and movement system.

b. Block 2--Enhanced Unit Move (2nd Qtr, FY02 through 4th Qtr, FY03) provides overall system enhancements to the basic unit movement functionality. These enhancements include Web-enablement, Text Sensitive Help, interactive calendar in date fields, additional reference data source options, and initiating print products from remote Hand Held Terminals. Block 2 provides the capability to read Common Access Cards into the system. Included are requirements deferred from the 3.01 release. This capability replaces the following Service component legacy systems:

- Transportation Coordinators'- Automated Information for Movement System (TC-AIMS). This is a Marine Corps unit move planning system.

- MAGTF Deployment Support System II (MDSSII). This is the Marine Corps deployment system.

c. Block 3--Movements Control and Planning (1st Qtr, FY04 through 3rd Qtr, FY05) provides movements control, plan sourcing, port operations visibility, Theater Reception, staging, onward movement and integration (RSO&I) and multiple convoy tracking. Provides the Map Graphics capabilities previously planned in Block 7.

d. Block 4--Maritime Prepositioning Force (1st Qtr, FY06 through 3rd Qtr, FY07) provides Maritime Prepositioning Force Management, unit dispatch, additional reports, vehicle driver ability, and prepositioning stock management. Provides Theater Mode Operations and Theater Distribution and replaces the Department of the Army Movement Management System-Redesign (DAMMS-R).

e. Block 5-ITO/TMO (1st Qtr, FY08 through 3rdQtr, FY09) provides ITO interfaces, CONUS/OCONUS, ITO/TMO Enhancements, and TMO Interfaces. This block will replace the

Air Force legacy system – Cargo Movement Operations System (CMOS) that supports Installation Transportation Office/Traffic Management Office functions.

2.3.1.3 Logistics Support. Repair or replacement of the COTS NDI components will be provided by vendor support.

2.3.2 Contractual Approach.

2.3.2.1 Use of Competition. The TIS JPMO manages the TC-AIMS II acquisition efforts and its' JPMO operations using competitively awarded contracts. Separate contracts are in place for TC-AIMS II system development, training, hardware procurement, and JPMO support. The JPMO utilizes competition to lower costs in all procurements, regardless of whether the procurement is for hardware, software, or technical services. Awards for technical services are based on "best value" criteria, whereas awards for hardware are based on "technical compliance, lowest price" to include warranty services and standard terms and conditions.

2.3.2.2 System Development and Maintenance. TC-AIMS II is an Evolutionary Development Program structured in block upgrades, in accordance with the Federal Acquisition Regulation (FAR) Part 39, using competition to select the developer for each upgrade. Block 1 was developed under a Task Order awarded to DynCorp, Inc., using an IDIQ type contract, sponsored by the Department of Transportation (DoT). The contract was a *Cost plus Award Fee* type contract. For the procurement of COTS software licenses, in support of this development, the program office utilized a *Firm Fixed Price* Integrated Contract Software Engineering contract.

The TC-AIMS II system development effort for Block 2 and maintenance effort for Block 1 are contracted through a Task Order against a GSA Schedule 70 contract with DynCorp, Inc. The PM chose to use the GSA schedules because they afforded greater opportunities for competition than that afforded through ITOP. This Task Order was competitively awarded in February 2002 and the period of performance extends until the award of the Block 3 development contract, which is planned for FY04. Even though various contract types were considered, based on lessons learned from the development of Block 1, it was determined that a time and materials contract type would be more appropriate for this software development effort than the cost plus award fee employed for Block 1 development. The complexities involved in the Block 1 development, including but not limited to the actual software development, the reengineering of business processes, and the joint data standardization task, required numerous modifications to the task order's statement of work and pricing structure, which resulted in a less than effective incentive approach, normally experienced with a cost plus award fee contract arrangement. In fact, the contractor never received an award fee during the Block 1 development. Similar complexities are always involved in software development and given that it was not possible to accurately estimate the extent or duration of the work required under the Block 2 software development, a time and materials contract type was chosen.

Since a time and materials contract provides no positive cost control of labor efficiency or costs being expended, the PM instituted measures that would provide oversight. The developer is on site, subject to daily managerial and technical checks by the PM staff to ensure the Government is receiving value for the level of effort being provided. The oversight process includes a shared management approach and a common view into all development processes and an integrated technical approach. This oversight has resulted in contractor personnel changes including changes in the labor/skill mix required for Block 2 as well as a change in the contractor's program manager. Further, the contractor is provided incentive to success to ensure its competitiveness for future Block development and maintenance efforts.

The current contract is being managed with an Earned Value Management System, tracking cost and schedule performance based on the developer's work breakdown structure and program project plan.

Block 3, and future Block requirements, will be procured using performance-based task orders issued against an IDIQ type contract, which will have been chosen after due consideration to Section 803 dictates.

2.3.2.3 Training. The TC-AIMS II New Equipment Training (NET), associated with system fielding, is contracted through SRA, Inc. This contract was competitively awarded in Aug 2000. This training contract provides NET for all Services during TC-AIMS II fielding. This is an *Indefinite Delivery Definite Quantity, Firm Fixed Price* contract based on a fixed price per training course. Currently, this contract has been extended until 30 Sep 03.

2.3.2.4 Hardware Procurement. Each Service procures its own hardware for TC-AIMS II fielding. The JPMO is only responsible for procuring hardware for Army fielding. In June 2002, the JPMO competitively awarded a firm fixed price hardware procurement contract to The Portable Warehouse, Inc., for laptops, servers and associated operating system software licenses for its' first Army fielding efforts. Additional fielding hardware requirements will be competitively awarded using firm fixed price task orders issued against an IDIQ, which will have been chosen after due consideration to Section 803 dictates.

2.3.2.5 JPMO Program Support. The JPMO Program Support contract, with Titan Systems Corp., provides the TIS Program Manager with non-personal program management, technical, logistical, and business management services. These services are contracted through a competitively awarded task order administered by the US Army Information Technology E-Commerce and Commercial Contracting Center (ITEC4). This task order began 29 Sep 01 and continues until 28 Sep 08 with annual options. The contract is currently a *Time and Materials* contract that is in the process of transitioning to Performance Based Service Contracting.

2.4 LOGISTIC SUPPORT ANALYSIS (LSA) STRATEGY. TC-AIMS II hardware is commercial off-the-shelf/non-developmental. The LSA strategy has been tailored to the system acquisition, operation, and maintenance concept for a NDI acquisition program. LSA documentation will not be developed.

2.5 SUPPORTABILITY TEST AND EVALUATION (T&E) CONCEPTS

2.5.1 Test Strategy. Developer (contractor) testing, government development testing, and operational testing are included in the TC-AIMS II test program. Qualification and operational testing will be combined to the maximum extent to reduce test redundancy, schedules, and costs. The Government will monitor developer testing to ensure adequacy of testing and reduce the lag time between developer and qualification testing. Testing will be accomplished IAW the approved Test and Evaluation Master Plan (TEMP).

2.5.2 Levels of Testing. TC-AIMS II employs the following levels of testing and evaluation:

2.5.2.1 Developmental Test (DT).

2.5.2.1.1 Developmental Test & Evaluation Overview. The primary goal of DT&E is to ensure that when TC-AIMS II exists Software Qualification Testing (SQT), there will be maximum assurance that the system is ready to proceed into an operational test. DT&E will be closely integrated with the OT&E effort. This integration will be achieved by testing and evaluating system effectiveness, suitability, and survivability during DT events. System achievement of key performance parameters (KPPs) will be tested and evaluated during the SQT. However, the primary emphasis will be on system capability to adequately address operational issues and criteria based on system functional requirements.

2.5.2.1.2 Developmental Test (DT). Developmental test (DT) addresses system performance, technical and functional characteristics (hardware, software, interfaces, and communications) and is accomplished through developer and government testing to ensure that all capabilities and requirements of the system are exercised and analyzed. Continuous Evaluation (CE) serves to evaluate and document the effectiveness of development process(es) for the system, terminating in an evaluation of the TC-AIMS II system. The CE process includes, but is not limited to: evaluation of developer quality assurance (QA) and configuration management (CM) activities; implementation of defined system requirements; developmental tests conducted by the Government, developer, and other parties based on test results and other data collection methodologies. Process evaluations determine the effectiveness of developer QA and CM activities as they relate to system development. Testing gathers data relative to the performance of the software, hardware, interfaces, and communications capabilities of the system. Final evaluation addresses the effectiveness of the development process and the ability of the system to support the user in performing mission-essential activities.

2.5.2.1.3 Developmental Test Activities

a. Developer Test(s). The developer will conduct three levels of testing and ensure that each build performs as specified without degradation to previously delivered software increments.

(1) Component Integration Testing. The developer will conduct unit integration and testing of two or more software components to ensure that the resulting software components work together as intended and continues until all software in each Computer Software Configuration Item (CSCI) is integrated and tested. The final stage of this process is CSCI integration test. The JPMO IV&V team will verify test results.

(2) CSCI Qualification Testing. The developer will demonstrate to the JPMO that the software meets the requirements of the specifications. The JPMO Independent Verification and Validation team will verified test results.

(3) CSCI/(Hardware Configuration Item). The Government will witness the developer internal system test. HWCI integration and testing demonstrates to the JPMO that each CSCI and related HWCI work together as intended. This process continues until all CSCI and HWCI are integrated and tested. The JPMO IV&V team will verify test results. The last stage of this process is developer-internal system testing.

b. Developmental Testing. The JPMO will conduct developmental testing to demonstrate that the system meets the specifications and provides the data required by the ATEC independent developmental evaluator. Test results will be the basis for the Independent Evaluation Report presented to the Director, Test, System Engineering and Evaluation (DTSE&E) prior to a milestone decision.

c. Demonstration and Evaluation (D&E). The D&E is a joint effort, government managed, incremental build level evaluation, executed on target hardware using real, supplemental, and user prepared data. This process evaluates:

(1) Functional design by exercising and evaluating the system's ability to perform Critical Mission Functions for the deployment mission area.

(2) Performance and technical design and the system's ability to perform in a simulated operational environment. The JPMO has oversight and responsibility for this area. The SDF test lab will be used for this validation.

c. Software Qualification Test (SQT). The SQT is a system test conducted by the JPMO in direct support of the ATEC evaluation team. Realistic data files supplemented with user prepared data will be executed on target hardware. Conversion procedures and special training requirements will be introduced as additional elements for verification and validation. The

objectives of the SQT are to obtain Government confirmation that the design will meet performance and operational requirements and to determine the adequacy and timeliness of any corrective action indicated by previous testing. System users will participate in the technical and functional aspects of the SQT. Hardware, software, communications, conversion processes, interfaces, and interoperability requirements comprising the total system will be validated.

d. Continuous Evaluation Activities (CE). The CE concept addresses viability of established processes, adherence to these processes, requirements traceability and developmental tests performed by the software developer and the Government.

e. Developmental Test Readiness Review (DTRR). ATEC requires a DTRR prior to the SQT. During the DTRR, all activities and requirements that might impact the successful execution of the test are reviewed. Without DTRR certification, the next level of testing cannot begin.

a. Exit Criteria. The Test and Evaluation regulations provide specific guidance for successfully exiting SQT. These exit criteria require that:

(1). No known Category 1 or 2 (Critical) problem reports are open. As defined by DA PAM 73-7, Table 2.6, IEEE12207.2-1997, Annex J, Figure J.2, and IEEE 1044.1-1995, A-16).

(2) Category 3 (Medium) problems must be documented (and have a work around) with appropriate impact analyses completed and reviewed by functional proponent, the DT&E community, and the operational evaluation community. As defined by DA PAM 73-7, Table 2.6, IEEE 12207.2-1997, Annex J, Figure J.2, and IEEE 1044.1-1995, A-16).

(3) A successful independent government test documented to certified performance and functional requirements.

(4) Certification of Software Stability, Depth and Breadth of Testing (functional and performance requirements) to include an impact analysis on software shortfalls.

(5) The SQT delivers a frozen baseline to the operational test community. The operational test community ensures that it is the version loaded at the operational test site.

(6) Verification of successful data conversion and load.

f. Future Developmental Test and Evaluation. DT&E of TC-AIMS II will be linked to the TC-AIMS II incremental acquisition strategy. Each developmental increment of TC-AIMS II, Version 3.01, will undergo a Software Developmental Test, a Government Software Qualification Test (SQT), and a Government Operational Test of some type as specified in Part 4 of this TEMP. The specific scope of Developmental Testing during contractor SDT and Government SQT shall be based on the DA PAM 73-7, “Software Test and Evaluation Guidelines”, July 1997. The functional, hardware, and communication configurations; test scenarios and events; evaluation scope; test limitations; and DT&CE objectives for

developmental test for Version 3.01 of the TC-AIMS II system are described in Table 3-1 below.

2.5.2.3 Operational Test and Evaluation ((IOT) Overview. The United States Army Test and Evaluation Command (ATEC), as the lead Operational Test Agency (OTA), is responsible for the conduct of operational testing (OT) of TC-AIMS II and to perform an integrated evaluation of the system. OT will be based on observing live day-to-day operations or command post exercises (CPXs) in which representative users will perform the transportation tasks required to move personnel, cargo, and equipment using TC-AIMS II and Service legacy or manual systems. The Service Components (USN, USA, USMC, and USAF) will move battalion/squadron-sized unit(s) in conjunction with a brigade/wing-sized command post or actual exercise. All required interfaces would be tested including feeder systems and other linkages to JFRG-II, JOPES, and GTN. Scripting will be used as necessary. All evaluations will focus on the timeliness and accuracy of critical mission functions, reports, and outputs required to accomplish the transportation planning, coordination, and execution mission

2.5.2.3.1 Pre-Test Reporting Requirements. Before the start of all operational testing events, OTC will conduct a final Operational Test Readiness Review (OTRR) to determine if the system and all test participants are ready for operational testing. At the final OTRR prior to the operational test, the following reports or certifications are required:

a. The JPMO certifies TC-AIMS II is ready to enter OT.

b. The JPMO certifies that no Software Priority 1 and Priority 2 problems exist and that workarounds are in-place with appropriate impact analyses for Priority 3 problems.

c. Approved operational and/or system view architectures are available.

d. PEO EIS certifies security requirements based on JPMO security and IA test results have been addressed in accordance with the DoD Information Technology Security Certification and Accreditation Process (DITSCAP).

e. The JPMO provides the safety release.

f. The JPMO provides final versions of all test support packages.

g. The JPMO provides the certification that users in all Services have been trained.

h. Site representatives certify test sites are ready for OT and test unit personnel are trained and committed for the duration of the test, as applicable.

i. The test units, with JPMO assistance, will certify that the database(s) supporting the test are current at the time the test program begins.

j. The JPMO ensures that all military and civilian support personnel involved in the OT have been committed for the duration of the test.

k. The JPMO certifies that TC-AIMS II meets the appropriate level of DII/COE compliance.

l. JITC attests that TC-AIMS II appears to conform to applicable standards preparatory to interoperability test certification in accordance with CJCSI 6212.01B.

2.5.2.3.1 Future Operational Test and Evaluation. Future operational test of TC-AIMS II to support system evaluation will consist of an IOT on Version 3.01 (Unit Move) to determine if the core system that supports unit moves is operationally effective, suitable, and survivable. The level of operational testing for future IDPs will be determined by applying the risk assessment methodology contained in DOT&E memo, *Guidelines for Conducting Operational Test and Evaluation for Software-intensive System Increments,* dated 10 October 1996. DoD 5000.2-R requires that the system configuration, operational test and evaluation objectives, events, scope of testing, scenarios, and test limitations for all future phases of operational testing of a system be described. For ease of readability and to facilitate communication and coordination among all members of the acquisition team, these required subjects are presented in a tabular format as shown in Table 4-4 on the following page and discussed the following sub-paragraphs. The separate operational test events for Version 3.01 and future IDPs are the column headings for the table. Then, each of the areas required by DoD 5000.2-R can be found in its own row. This enables the reader to quickly assess the similarities and differences between the OT events.

2.5.3 T&E Organizations. T&E Organizations are:

2.5.3.1 US Army Training and Doctrine Command (USATRADOC)

a. Serves as the Combat Developer

b. Prepares the Critical Operational Issues and Criteria (COIC).

c. Provides test and evaluation support, as required.

d. Prepares OP/MODE Mission Summary and Failure Definition/Scoring Criteria

e. Chairs the Configuration Control Board (CCB) post Milestone III.

f. Provides DOTSP, if required.

2.5.3.2 Project Manager, Transportation Coordinators' Automated Information for Movement System II (PM TC-AIMS II) is the Program Manager and is responsible for the following functions:

a. Develops the Test and Evaluation Master Plan (TEMP).

b. Chairs the CCB prior to Milestone III.

c. Reviews Development Test Plans (DTP) and System Assessment Plans (SAP).

d. Certifies that the system is ready to proceed to an operational assessment.

e. Schedules Developmental Test Readiness Reviews (TRR).

f. Develops the Systems Training Test Support Package (TTSP).

g. Provides training and training packages (lesson plans, programs of instruction, etc.) for OTRE.

h. Reviews and compiles Reliability and Maintainability (RM) data, as available.

i. Provides Safety Release.

j. Prepares User Manuals.

k. Provides DT training and training packages.

2.5.3.3 Major Army Commands/System Users (MACOM/Users) are responsible for providing the following:

a. Test participants and equipment.

b. Facilities and site support.

c. Functional and technical evaluator assistance as required.

d. Support for the OT&E based on the Test Schedule and Review Committee (TSARC) process.

e. Provide representatives to Test IPT.

2.5.3.4 US Army Test and Evaluation Command (USATEC). USATEC manages the Army's Operational Test and Evaluation Program.

a. Manages the Army's continuous evaluation and user testing programs and provides independent assessments to the Army leadership regarding the operational effectiveness, suitability, and survivability of emerging AIS.

b. Prepares the System Evaluation Plan (SEP), the System Assessment Report, and the System Evaluation Report (SER).

c. Develops and staffs the USATEC Outline Test Plan (OTP) for Test Schedule and Resource Council (TSARC) review and approval of resources, test sites, and player units.

d. Plans, performs, and reports the Initial Operational Test (IOT) and system assessments.

e. Plans, conducts and chairs the Operational Test Readiness Reviews.

2.5.3.5 PEO EIS, Operations and Missions Support Directorate, Logistics Division will provide logistic support as required. This will include but is not limited to:

a. Prepare the Supportability Strategy (formerly Integrated Logistics Support Plan (ILSP)).

b. Prepare Materiel Fielding Plan

c. Obtain Safety Releases in support of testing and milestone decision reviews.

2.5.4 Logistics Demonstration (LD). Decision will be made on the need for a limited logistics demonstration. The requirements of the LD that must be satisfied are:

a. System maintainability

b. Supply support

c. Documentation (Facility manager and Digital training facility Standing Operating Procedures) validation and verification

d. Adequacy of training

2.6 ILS ELEMENT PLANS

2.6.1 Design Influence.

2.6.1.1 Source Selection and Life Cycle Cost (LCC). Identified life cycle costs are used to plan the resources needed for system design, development, implementation, fielding, and post-deployment operational support TC-AIMS II will employ an Earned Value approach to measure program cost and schedule and has devised and currently employees detailed metrics to track the following other variables: requirements growth and stability, design maturity, quality, and product size and complexity.

2.6.1.2 Design Constraints.

2.6.1.2.1 Climatic, Environmental and Energy Constraints. TC-AIMS II must be operable and maintainable under all conditions and climate and terrain where Joint Task Forces deploy. It will be used in all garrison /installation and forward deployed locations where deployment planning and execution is accomplished. It is anticipated that TC-AIMS II will be require some degree of shelter from the elements and consideration to appropriate facilities will be coordinated with installations during site surveys.

2.6.1.2.2 MANPRINT Constraints. TC-AIMS II will not increase the number of personnel or change the end strengths of the DOD military components. The system will not require new military occupational specialties (MOS) or Additional Skill Identifiers (ASI) for operation and maintenance of the system. Other MANPRINT constraints are outlined in the TC-AIMS II Human Systems Integration Plan (HSIP).

2.6.1.2.3 Durability and Survivability Constraints. TC-AIMS II does not require Nuclear, Biological, Chemical survivability. Any long-term storage of components prior to installation in the digital training facility requires a general-purpose warehouse.

2.6.1.3 ILS Personnel Participation in Design. The MATDEV will coordinate ILS planning for hardware. The Supportability IPT will ensure hardware ILS elements are continually addressed in the system design process. ILS participation in Design Reviews and Tradeoff Studies is limited. Since TC-AIMS II is using COTS/NDI hardware, no hardware design is required. PM TC-AIMS II is responsible for configuring hardware and software based upon recommendations contained in the design plan and operational requirements.

2.6.1.4 Reliability, Availability, and Maintainability (RAM). Operational and Maintenance Parameters affecting system design are identified in Section 2.2 of this Supportability Strategy and the TC-AIMS II Operational Requirements Document (ORD).

2.6.1.5 Contract Incentives. There are no contract incentives applicable to hardware acquisition. Existing ID/IQ contracts, GSA Schedules or Blanket Purchase Agreements (BPA) are used to procure the TC-AIMS II hardware and executive software.

2.6.1.6 Planned Deployment/Employment. Planned deployment and employment requirements have been considered by the PM TC-AIMS II in the hardware and software procurement and support processes. Specific details concerning fielding schedule and responsibilities for fielding of TC-AIMS II is found in the TC-AIMS II Materiel Fielding Plan (MFP).

2.6.1.7. Human Factors Engineering (HFE) and System Safety. HFE issues related to the integration of human characteristics into system definition, design, development and evaluation

to optimize human-machine performance under operational conditions are discussed in the TC-AIMS II Human Systems Integration Plan (HSIP). The HFE program will ensure that TC-AIMS II contains the fewest possible HFE problems in the areas of installation, operation, maintenance, etc., and that the human performance requirements do not exceed the physical and cognitive capabilities of the target audience. The CECOM Directorate of Safety Risk Management approved a Safety Release in support of the Operational Assessment 27 March 2001. Safety Suitability for Release Statement in support of Type Classification and Materiel Release was approved July 2002.

2.6.1.8 Standardization and Interoperability Constraints

2.6.1.8.1 Standardization. TC-AIMS II will be fielded on commercial off-the-shelf (COTS) hardware that meet Joint Technical Architecture (JTA) compliance standards, and service specific computer hardware acquisition requirements.

2.6.1.8.2 Interface Requirements. TC-AIMS II will interfaces with other TC-AIMS II systems and with external interface systems. The detailed information regarding each external interface will be documented in individual System Interface Agreements (SIA). Most of the interfaces are legacy systems with limited capabilities in terms of communications and security. Communications protocols and the level of security enforced will be dictated by the current capabilities of each system.

2.6.1.9 Army Oil Analysis Program Needs. The Army Oil Analysis Program is not applicable to TC-AIMS II.

2.6.1.10 Other Design Considerations. TC-AIMS II will be designed to minimize or eliminate the amount of typing (keystrokes) required once a shipment is entered into the system.

2.6.2 Maintenance Plan.

2.6.2.1 Hardware Maintenance Concept. DA DCSLOG approved the post warranty maintenance support concept for centrally procured PEO EIS ADP hardware. This support concept was implemented 1 October 1994, and is formally documented in AR 750-1 dated 1 July 1996, paragraph 5.52, Maintenance of Automatic Data Processing Equipment.

a. All TC-AIMS II hardware is procured with an established warranty period in accordance with the appropriate procurement contract. Warranty periods may be extended through coordination with the Government and the contractor. Specific warranty information and procedures are contained in paragraph 2.6.2.7, Warranties.

b. At expiration of the warranty period, maintenance support will be provided in accordance with the above policy. The information in paragraph 2.6.2.3 outlines procedures to be followed for post warranty maintenance support.

2.6.2.2 TC-ACCIS Hardware. Hardware at TC-ACCIS sites will be maintained through vendor warranty and contracted or organic depot maintenance support. Major Army Commands and installations will assume responsibility for maintenance after expiration of the warranty period. Miscellaneous hardware, such as printers (all models), controllers, modems and multiplexers are not covered under warranty provided by TC-ACCIS Project Office. MACOM and installations may want to consider securing additional hardware maintenance support for items of equipment not previously covered.

2.6.2.3 Maintenance Organizations.

2.6.2.3.1 Organizational Level Maintenance

a. Upon recognizing that the system is not functioning properly, the unit operator will call the supporting Combat Service Support Automation Management Officer (CSSAMO) or other designated person, for assistance in troubleshooting to the LRU level.

(1) If the CSSAMO or other designated person, determines that a software problem exists, the unit operator will be referred to the TC-AIMS II Help Desk.

(2) If the supporting CSSAMO, or other designated person, determines that a hardware problem exists, the unit operator will be referred to the supporting DSU/IMMA.

(a) The unit operator will complete DA Form 2404/DA Form 5988-E, Equipment Inspection and Maintenance Worksheet, in accordance with DA PAM 738-750, The Army Maintenance Management System (TAMMS), identifying the faulty condition and the status provided by the operator diagnostics or the failure symptom at the time of failure.

(b) In addition to the information outlined in DA PAM 738-750, the following information must be annotated on the DA Form 2404/DA Form 5988-E.

1 The STAMIS.
2 The type of operating system.
3 The part number and type of LRU (e.g., desktop computer, printer, or monitor).
4 Manufacturer of the failed item.
5 Symptoms of the failure and results of the diagnostics or troubleshooting procedures.
6 Serial number of the failed LRU.

b. The unit operator shall determine during telephonic contact with DSU/IMMA maintenance facility personnel whether the unserviceable LRU is covered under on-site warranty that satisfies the operational mission requirements.

(1) If the LRU is covered the DSU/IMMA maintenance facility personnel shall process the repair action in accordance with the on-site warranty provisions of the applicable vendor/original equipment manufacturer (OEM).

(2) If the LRU is not covered, the unit operator prepares the LRU for evacuation to the class VII SSA/ISSA.

(a) The organizational supply personnel will prepare, in accordance with DA PAM 710-2-2, Supply Support Activity System: Manual Procedures, a DA Form 2765-1, Request for Turn-in, and another DA Form 2765-1, Request for Issue.

(b) The unit operator will pack the failed LRU in its transit case or appropriate vendor packing and take the failed LRU to the class VII SSA/ISSA for exchange.

Note: When a failed CPU is involved, backup the system (if possible) and download the files (if possible). If the system is totally inoperable, the unit will have to resort to its last backup of the files and data.

c. After exchanging the LRU at the class VII SSA/ISSA, the unit operator will repack the transit cases or appropriate vendor packing and return to the unit. The unit operator will connect the exchanged LRU and attempt to operate the system. The unit operator will follow procedures outlined in the appropriate End User Manuals to either reload backup files or download the information.

2.6.2.3.2 System Support Representative (CSSAMO).

a. When the CSSAMO is contacted by the unit operator who is experiencing a problem, the CSSAMO will:

(1) Record the symptoms/problems that the user is experiencing and actions that lead to the problems. Also record any visible damage that the unit operator has noted.

(2) Apply common solutions for common problems that have occurred, if applicable.

(3) If a problem still exists, call the TC-AIMS II Help Desk.

(4) Provide the help desk information on the system configuration, communications configuration, hardware, etc.

(5) Describe the problem. If possible, walk through (duplicate) the problem at both ends of the telephone.

b. If the help desk determines that a software problem exists, the help desk will advise the CSSAMO on how the unit operator can continue operations until the software development center can send out a software fix. The CSSAMO will then advise the unit operator of the software fixes.

2.6.2.3.3 TC-AIMS II Help Desk.

a. Problem Resolution. Customers who encounter software, hardware, or functional problems will be able to contact the TC-AIMS II Help Desk for problem resolution. A three-tier approach will provide customers with the most efficient and timely responses.

(1) Tier I (Electronic Help Desk). This tier consists of a diagnostic database and will provide resolution to known problems. Customers with problems will first contact the Electronic Help Desk via E-mail or the TC-AIMS II Website. The Electronic Help Desk will use a Case-Based Reasoning System to provide an automated interface with the customers. This first tier will resolve the most basic problems or identified systemic problems.

(2) Tier II (Direct Assistance). Tier II will be used after the customer has determined that the efforts from Tier I was unsuccessful in resolving the problem. The customer may either contact the Help Desk directly via telephone or send in a Problem Report (PR) via e-mail or FAX. The Help Desk personnel will attempt to provide direct resolution as soon as possible. It is anticipated that this tier will resolve the majority of software, hardware, and functional problems.

(3) Tier III (Developer Support). This tier will be used when the Help Desk personnel are unable to provide problem resolution. Help Desk personnel will document and log in the Problem Report and then submit the Problem Report to the appropriate subject matter experts or proponent located with the developer, contractor or supplier.

b. The Help Desk can be reached through

E-mail: **TCAIMSIIHELP@EIS.ARMY.MIL**
Telephone: Commercial: 703-752-0806 or 866-TC-AIMS 2 (866-822-4672)
After hours by Cellular Phone: 571-237-0858, 571-237-0860 or 571-237-0862

Web Site: http://www.tis.army.mil/inform.
Hours of Operation: 24 Hours.

2.6.2.3.4 Class VII SSA/ISSA Procedures.

a. The class VII SSA/ISSA will accept the LRU from the unit with a properly completed DA Form 2765-1, Request for Turn-in and another DA Form 2765-1, Request for Issue, and provide the unit a replacement LRU from the STAMIS Computer Exchange (SCX) stockage.

b. The class VII SSA/ISSA will process the turn-in, record the demand, and process the item in accordance with the SCX (reparable exchange) procedures.

c. The class VII SSA/ISSA personnel will prepare a DA Form 2407/DA Form 5990-E, Maintenance Request, in accordance with DA PAM 738-750, The Army Maintenance Management System (TAMMS), for the failed LRU, describing the failure. In addition to the information outlined in DA PAM 738-750 the following information must be annotated on the DA Form 2407/DA Form 5990-E:

(1) The STAMIS, e.g., TC-AIMS II.
(2) The type of operating system.
(3) The part number and type of LRU (e.g., desktop computer, printer, or monitor).
(4) Manufacturer of the failed item.
(5) Symptoms of the failure and results of the diagnostics or troubleshooting procedures.
(6) Serial number of the failed LRU.

d. The class VII SSA/ISSA personnel will forward the failed LRU to the DSI/IMMA.

2.6.2.3.5 DSU/IMMA Procedures.

a. DSU/IMMA maintenance personnel will perform the authorized troubleshooting and system diagnostics checks.

(1) If the LRU is operational, it will be returned to the class VII SSA/ISSA SCX stockage.

(2) If the LRU is not operational and cannot be made operable by the DSU/IMMA maintenance personnel, the DSU/IMMA maintenance personnel will contact the designated forward repair activity (FRA) for disposition instructions as to warranty guidance or repair.

(a) If the LRU is covered under warranty, the DSU/IMMA maintenance facility personnel shall process the repair action in accordance with the warranty provisions. The DSU/IMMA maintenance personnel will forward the equipment with the DA Form 2407/DA Form 5990-E to the vendor/OEM using a mailing label or shipping service provided by the vendor/OEM. The DSU/IMMA maintenance personnel will maintain a log of equipment returned for warranty actions.

(b) If the LRU is not covered under warranty, the FRA will provide shipping instructions for the LRU. The DSU/IMMA maintenance personnel will forward the equipment with the DA Form 2407/DA Form 5990-E to the FRA, using a mailing label or shipping service provided by the FRA. The DSU/IMMA maintenance personnel will maintain a log of equipment returned to the FRA.

b. When the LRU is replaced or returned by the vendor, OEM, or FRA, the DSU/IMMA maintenance personnel will return the LRU to the class VII SSA/ISSA SCX stockage.

Note: To ensure serial number tracking, the disposition of the DA Form 2407/DA Form 5990-E will be in accordance with DA PAM 738-750.

2.6.2.3.6 Depot Level Maintenance.

a. The Depot/Forward Repair Activities (FRA) performs all maintenance actions above the DS level. LRUs are repaired, rebuilt, refurbished, or replaced.

Note: Replacement items may have greater capability (e.g., more RAM, greater speed, etc.) than the returned items, but will always be of the same form, fit and function.

b. Each FRA is staffed with a point of contact (POC) during the Principal Period for Maintenance (PPM) hours.

(1) The continental United States (CONUS) FRAs operate

(2) from 0800 to 1600 hours, local time, Monday through Friday (the PPM), excluding federal holidays.

(3) Outside continental United States (OCONUS), the Help-Line operates from 0800 to 1700, local time, Monday through Friday, excluding federal and host nation holidays.

(4) Hours other than PPM are defined as Outside Principal Period for Maintenance (OPPM). FRA's will, at a minimum, provide an answering service to record calls and provide a pager number of an on-call technician during OPPM.

c. FRAs may be staffed 24 hours per day, 7 days a week, during contingencies, exercises or in wartime.

d. A Depot/FRA facility is located at Tobyhanna, PA, Fort Hood, TX, Fort Bragg, NC, the Republic of Germany, Korea, Panama, and Hawaii.

e. The Depot/FRA Help-Line operator talks the DSU/IMMA maintenance personnel through a series of questions or diagnostics for the system described. The objective of the telephonic Help-Line is to preclude costly No Evidence Of Failure (NEOF) incidents.

f. The Depot/FRA help-line operator determines, during telephonic contact with the DSU/IMMA maintenance personnel, the warranty status of the unserviceable LRU.

(1) If the LRU is covered under warranty, the Depot/FRA Help-Line operator provides the DSU/IMMA maintenance personnel with the telephone number of the appropriate vendor or OEM for repair action.

(2) If the LRU is not covered under warranty, the Depot/FRA Help-Line operator provides the DSU/IMMA maintenance personnel shipping instructions for the item to be returned.

g. The Depot/FRA Help-Line operator will obtain the following information from the DA Form 2407/DA Form 5990-E, Maintenance Request:

(1) The owning unit's Unit Identification Code (UIC).
(2) The owning unit's Department of Defense Activity Address Code (DODAAC).
(3) The owning unit's DSU/IMMA designation.
(4) The STAMIS type and version.
(5) The type of operating system.
(6) The part number and type of LRU (e.g., desktop computer, printer, or monitor).
(7) Manufacturer of the failed LRU.
(8) Symptoms of the failure and results of the diagnostics or troubleshooting procedures.
(9) Serial number of the failed LRU.

h. If the LRU is not a class VII SSA/ISSA SCX stocked item, the FRA prepares and ships a replacement item using a 24-hour shipping service.

i. If the item is class VII SSA/ISSA SCX stocked, the FRA prepares and ships a replacement item with 72 hours (3 working days) after receipt of the failed item. The FRA attaches a label to the replacement item, which reflects the intended UIC, the type software, the OS, and the date loaded.

j. Upon receipt of the faulty item from the DSU/IMMA, the FRA will log the system into the FRA database by part number, UIC of the losing unit, and reported fault. The FRA will screen the LRUs for NEOF.

k. No items covered under a warranty are to be sent to the Depot/FRA without prior coordination. Items that are inadvertently forwarded to the FRA will be returned to the unit for processing under the warranty provisions.

l. The address and telephone numbers of the FRAs are shown in Table 2.6.2.3.6.

Table 2.6.2.3.6
Forward Repair Activities

Location	Address	POC's	E-Mail	Voice (DSN & Comm)
Tobyhanna Pennsylvania	STAMIS Repair Activity Tobyhanna Army Depot WHS 5, Bay 2, MAINT 11 Hap Arnold Blvd Tobyhanna, PA 18466 Address Info Below for STAMIS Special Project Stock Account Only Mark For: Special Project "BUY" DODAAC: W25JNE	Leo Yesvetz	Leo.yesvetz@tobyhanna.army.mil	DSN 795-6747 Comm 570-895-6747 888-278-8281 Fax DSN 795-6049 Comm 570-895-6049
Production Management Tobyhanna Pennsylvania	Cdr, Tobyhanna Army Depot ATTN: AMSEL-TY-MM-P 11 Hap Arnold Blvd Tobyhanna, PA 18466	Luddy Manganiello	Ludwig.manganiello@tobyhanna.army.mil	DSN 795-7605 Comm 570-895-7605 Fax DSN 795-7796 Comm 570-895-7796
Chief of Forward Repair Activities Tobyhanna Pennsylvania	Tobyhanna Army Depot Alexander Radkiewicz ATTN: AMSEL-TY-MX-D Bldg 5 Bay 1 11 Hap Arnold Blvd Tobyhanna, PA 18466-5028	Alex Radkiewicz	Alex.radkiewicz@tobyhanna.army.mil	DSN 795-6479 Comm 570-895-6479 Fax DSN 795-6947 Comm 570-895-6947
Fort Hood Texas	Location & FEDEX/UPS Address: Tobyhanna FRA Bldg # 4417 (Corner 68th & Santa Fe Ave) Fort Hood, TX 76544 Official Mail Address: Tobyhanna FRA P. O. Box 5430 Fort Hood, TX 76544	Gary Leofsky Scott Jones	Gary.leofsky@hood.army.mil	DSN 738-5079 Comm 254-288-5079 Fax DSN 738-0905 Comm 254-288-0905
Fort Bragg North Carolina	Tobyhanna FRA Bldg J-2144 Knox Street Complex Fort Bragg, NC 28310	Charley Marsala Ted Pearil	Charles.marsala@tobyhanna.army.mil Theodore.pearil@tobyhanna.army.mil	DSN 236-3080 Comm 910-396-3080 Fax DSN 236-5033 Comm 910-396-5033

Seoul Korea	Tobyhanna FRA Bldg S606 Songnam, Seoul AB Korea KS DODAAC WT4KDX	Mike Lucas	Lucasmi@usfk.korea.army.mil	DSN 315-741-6348 Coml 82-31720-6348 Fax DSN 315-741-6356 Coml 82-317206356
Friedrichsfeld Germany	HQ, AMC Europe Tobyhanna FRA Unit 29331 APO AE 09266 DODAAC W80YW6 Fedex: USAMC Europe Tobyhanna FRA Bldg 1041 Steineugstrasse 19 Friedrichsfeld STG ACT 68229 Manheim	Rich Pryor Dallas Jamison Laura Tigert	Pryorr@hq.hqusareur.army.mil	DSN 314-375-7199 Comm 011-49-6214877199 Fax No DSN Coml 011-49-621-472854
Schofield Barracks Oahu, Hawaii	Actual Location & FEDEX/UPS Tobyhanna FRA Hawaii Bldg 847 (J-QUAD) Schofield Barracks, HI 96857 Ship Large Items to: DOL, HQ USA SCH Storage Branch Bldg 6037 East Range HI 96857-5006 ATTN: Official Mail To: Army Logistics Assistance Office 25th ID ATTN: AMXLS-P-SB Tobyhanna Stop # 236 Schofield Barracks, HI 96857-5400			Comm 808-655-0902 Hawaii no longer has a DSN Line Fax Comm 808-655-0906
Colonial Heights Virginia	Tobyhanna FRA Colonial Heights 840C West Roslyn Rd. Colonial Heights, VA 23834	William Lofton	William.lofton@tobyhanna.army.mil	Commercial only 804-526-6046/6047 Fax Commercial Only 804-526-6048

Comanche Base Bosnia	OJF Eagle Base Tuzla, Bosnia Computer Repair Facility APO AE 09789 Phone 762-7544	Rotates		DSN 314-762-7544 BDI DSN 314-762-7538/7537 Fax DSN 314-762-7541 BDI DSN 314-762-7543
Camp Bondsteel Kosovo	Computer Repair Facility TF Falcon Bondsteel, Kosovo FSB (AMC) TACMIS/TIER III APO AE 09340 Phone 781-3100	Rotates		DSN 314-781-3100 Fax DSN 314-781-3045
Ft. Lewis, Washington	ESSC ATTN: Anthony Losito (TYAD FRA) Bldg 3096 MS60 Box 339500 Stryker Ave at S. 20th St Fort Lewis, WA 98433-9500	Tony Losito	lositoa@lewis.army.mil	Comm 253-966-7086 DSN 347-7086 Fax DSN 357-2565 Call Tony before faxing as this is some one else's fax
Camp AS-Sayliyah Qatar	FedEx: Tobyhanna FRA Brian Kelly/ATTN: 511 Armed Forces Stores Depot AS-Sayliyah United States Armed Forces Doha, Qatar Freight: WODA AMC SWA/CEB-Qatar Tobyhanna FRA, Brian Kelly APS 5 511 Bldg CR Warehouse Armed Forces Stores Depot AS-Sayliyah Doha, Qatar			DSN 318-432-2499 Fax DSN 318-432-2406

2.6.2.3.7 Maintenance Contingency Operations.

a. PEO EIS provides a rapidly deployable FRA to provide maintenance essential materials, and increased flexible combat service support of COTS NDI ADPE in support of deployed U.S. Forces.

b. The FRA is established as an In-Theater Computer Repair Activity (ITCRA) to meet deployment requirements. The objective of the ITCRA is to reduce the logistics delay time by

minimizing the evacuation of PEO EIS systems from the theater for repair. This reduces the time and distance between point of failure and point of repair. The ITCRA interfaces with the theater command structure to resolve COTS NDI ADPE issues and problems. This capability is offered to assist the theater in repair of all other COTS systems on a reimbursable basis.

c. PEO EIS has three 36-foot vans and three S-280 shelters pre-positioned at Tobyhanna Army Depot, Tobyhanna, PA. The combination of vans and shelters gives PEO EIS the capability to provide maintenance in four theaters of operation simultaneously. The ITCRA can be deployed as a standalone configuration, or as part of a Logistic Support Element (LSE). The ITCRA is configured in one of the configurations as follows:

(1) A 36-foot van configured with workstations, small parts storage, and large parts storage.

(2) Three S-280 shelters: a small parts storage shelter, a large parts storage shelter, and a repair/workshop shelter.

d. Operations include repair of PEO EIS COTS NDI ADPE systems, repair of LRUs and SRUs, modules, and components, in addition to providing a capability to determine source of repair and disposition of returns (in-theater or retrograde out of theater). Operations so include repair of all other COTS systems on a reimbursable basis.

2.6.2.4 Floats. Receiving units will receive four (4) percent STAMIS Computer Exchange (SCX) for laptop computers only.

2.6.2.5 Design for Discard. PM TC-AIMS II will determine on a case-by-case basis if an LRU, to include cables, has exceeded the economically repairable threshold during the warranty period.

2.6.2.6 Software Maintenance. TC-AIMS II software maintenance will be contractor supported for life of the system. Decision to transition to a government software design facility has not yet been made. Software problems can be addressed to TC-AIMS II JPMO by use of DA Form 5005-R, Engineering Change Proposal-Software. The TC-AIMS II helpdesk will serve as the receiving point of contact for all software change requests. Contact the Help Desk at 703-752-0806 or 866-TC-AIMS 2 (866-822-4672). The Help Desk can also be reached after hours at 571-237-0850/571-237-0860 or 571-237-0862. E-mail: TCAIMSIIHELP@EIS.ARMY.MIL or by connecting to the web page at: http://www.tis.army.mil/inform.htm

2.6.2.7 Warranties

a. COTS NDI hardware shall be procured with an established warranty period in accordance with the appropriate procurement contract. Warranty periods may be extended through

coordination with the Government and the contractor. Warranty information for specific hardware and contract is addressed in the following paragraphs.

b. Processing of warranty actions as corrective maintenance shall be the responsibility of the TC-AIMS II facility manager

2.6.2.7.1 Warranty Usage and Operation Limits. The following outlines the warranty usage and operation limits for the respective contract. Regardless of the contractor, the warranty does not apply if damage to the equipment is caused by fault or negligence of the Government, or is used outside the environment stipulated in the vendor or OEM warranty.

a. Any written commitment by the contractor, within the scope of the applicable hardware contract, shall be binding upon the contractor. Failure to fulfill any commitment shall render the contractor liable for liquidated or other damages due the Government under the terms of the contract. Written commitments include:

(1) Any warranty or representation made by the contractor in the proposal as to hardware or software performance, total system performance, and other physical, design, or functioning characteristics of a machine, software package or system, or installation date.

(2) Any warranty or representation made by the contractor concerning the characteristics or items described above made in any publications, drawings, or specifications accompanying or referred to in a proposal.

(3) Any modification of, or affirmation or representation to the above, which is made by the contractor in or during the course of negotiations, whether or not incorporated into a formal amendment to the applicable proposal.

b. Prior to the expiration of the warranty period, whenever equipment is shipped for replacement purposes, the contractor will bear all applicable costs.

c. The warranty shall not apply to maintenance required due to fault or negligence by the Government.

2.6.2.7.2 Warranty Maintenance. Information discussed in the following paragraphs pertains to TC-AIMS II hardware, which may be procured from existing IDIQ contracts, GSA Schedule or Blanket Purchase Agreements. Therefore, specific warranty information will be provided at the time of fielding.

a. Hardware contracts/GSA Schedule/Blanket Purchase Agreements may include:

(1) IPI Grammtech Incorporated, San Antonio, TX. GSA Schedule GS-35F-5323H, TC-ACCIS hardware.

(2) SAVI Technology, RFID, DAAB07-97-D-V007.

(3) Symbol Technologies, Inc, AIT II, DAAB15-99-D-0015

(4) Dell Computer Corporation, Round Rock, TX. GSA Schedule, GS-35F-4076D.

(5) Gateway 2000, North Sioux City, SD.

(6) The Portable Warehouse Corp., Anaheim, CA. GSA Schedule GS-35F-0437K.

b. Contractor's Federal Supply Code for Manufacturers (FSCM). Contractor's FSCM for the TC-AIMS II hardware are as follows:

(1) IPI Grammtech Incorporated (TC-ACCIS hardware), ORA56.

(2) SAVI Technology, RFID, OJ463.

(3) Symbol Technologies, Inc, AIT II, OBRG2.

(4) Dell Computer Corporation, 04RE5.

(5) Gateway 2000, 0G3K8.

(6) The Portable Warehouse Corp., 0WWS7.

2.6.2.7.3 Warranty Usage and Operation Limits. Information concerning warranty usage and operation limits for the respective contracts can be found at Appendix B. The warranty does not apply if damage to the equipment is caused by fault or negligence of the Government. All parts replaced under warranty become the property of that contractor.

2.6.2.8 Nuclear Hardness, Maintenance, & Surveillance Requirements. None required.

2.6.2.9 Maintenance Constraints/Requirements. None identified.

2.6.2.10 Prepositioning of Materiel Configured to Unit Sets (POMCUS) Stockage. None required.

2.6.2.11 Battlefield Damage Assessment and Repair. None required.

2.6.3 Manpower and Personnel Integration (MANPRINT). Specific MANPRINT concerns are addressed in the TC-AIMS II Human System Integration Plan (HSIP).

2.6.3.1 Operator and Maintainer Manpower Requirements/Limitations. Manpower necessary to operate, maintain, and support TC-AIMS II is considered to be within the Army's current and projected force structure.

2.6.3.1.1 Personnel Constraints. Personnel requirements will be satisfied by positions included in currently approved Tables of Organization and Equipment (TOE) and Tables of Distribution and Allowances (TDA) for units and organizations. Full deployment of the modernized training systems will not increase the Army end strength. No new MOS will be required for personnel to operator or maintain TC-AIMS II.

2.6.3.1.2 Source Documentation for Manpower Constraints. The System MANPRINT Management Plan will serve as the source document for TC-AIMS II manpower limitations.

2.6.3.1.3 Predecessor System Comparison. TC-AIMS II will leverage existing training and technologies to meet the challenges of the changing training environment and Force Structure. Among the Lessons Learned from the current system that TC-AIMS II is designed to meet are:

a. Efforts must be undertaken to ensure that resident and nonresident systems are not personnel and facility intensive, and expensive to operate and maintain.

b. Resident instruction should not be primarily instructor based and labor intensive.

c. Resources (manpower, training dollars, facilities, training aids, devices, simulators and simulations, ammunition, fuel, etc.) and travel and per diem costs in support of a labor intensive and instructor centered system should be adequate for training and sustaining the skills and tasks required of soldiers and leaders.

d. Training must be made available so that the RC soldiers and leaders can attend.

e. Tasks must be trained to standards. The burden impacts on the capability of Active and Reserve Component units to attain and sustain mission readiness must be reduced.

f. The burden of providing on-demand or just-in-time training requirements for deploying units, and providing sustainment training while deployed must be reduced. Funding for these requirements must be programmed, not diverted from other on-going activities to accomplish the mission.

g. The training environment is demanding digitization of the battlefield.

h. A more effective, responsive, and less costly way must be found to train soldiers, leaders, and units.

2.6.3.2 Operator and Maintainer Skill Requirements/Limitations. There will be limited impact on personnel because TC-AIMS II provides standardized individual, collective, and self-development training to all soldiers, units and DA civilians through the application of multiple means and technologies.

2.6.3.3 System Safety and Human Factors Engineering

2.6.3.3.1 System Safety Program. System safety features and operating characteristics of the system that shall serve to minimize the potential for human or machine errors or failures that cause injurious accidents will be analyzed. Safety Release in support of Operational Test and Evaluation was provided 27 March 2001. Safety Supportability Statement in support of Type Classification and Materiel Release has also been requested.

2.6.3.4 Basis of Issue Plan/Quantitative and Qualitative Personnel Records Information (BOIP/QQPRI) Status. TC-AIMS II BOIP/QQPRI was approved by HQ DCSOPS September 1999. BOIP numbers for TC-AIMS II configurations are:

BOIP	TC-AIMS II Configuration	
T071AA	TC-AIMS II (Server)	ZLIN: Z90321
T072AA	TC-AIMS II (Workstation)	ZLIN: Z90335
T073AA	Interrogator Set	ZLIN: Z52950
T074AA	TC-AIMS II OMC AMS (Optical Memory Card, Reader/Writer)	ZLIN: Z47995

2.6.4 Supply Support. The supporting MOA between the fielding team and the gaining MACOM/installation will detail specific supply requirements to support the TC-AIMS II implementation. Typically, the following should be on-hand to meet initial operational requirements.

Table 2.6.4-1 TC-AIMS II Expendable/Durable Supplies

STOCK/PART NO.	DESCRIPTION	QUANTITY	COST
7045-01-283-4362	3 ½" HD diskettes	2 boxes/unit	$4.55/bx

7045-01-357-2314	tape cartridge	3 boxes/unit	$14.90 ea
7530-00-264-3703	computer paper	10 reams /unit	$18.21/bx
7530-00-082-2661	Labels	3 boxes/unit	$10.89/bx
7045-01-309-3489	disk cleaning kit	1 per unit	$3.88 ea
7510-01-333-7961	Laser printer toner cartridge	1 cartridge/printer	$190.86 ea
6150-00-057-0607	Power Strip	1 for each CPU	$30.14 ea
7503-01-476-2673	Label TT Green Poly Labels 4x2.5 for PT400	1 per unit	$35.88/Roll
7530-01-475-9605	Label TT Poly Label 2x1 for PT400	1 per unit	$20.00/Roll
8465-01-476-5604	Shoulder strap	1 per unit	$35.00 ea
7025-01-475-9606	Label TT Green Poly Labels 4x2.5 for Z4000	1 per unit	$94.87/Roll
7530-01-475-9604	Label TT Poly Label 2x1 for Z4000	1 per unit	$34.60/Roll
7510-01-475-9609	Printer Ribbon for Label 2x1, Resin for Z4000	1 per unit	$45.75 ea
7510-01-476-2676	Printer Ribbon for Label 4x2.5, Resin for Z4000	1 per unit	$52.20 ea

2.6.5 Support Equipment and Test, Measurement, and Diagnostic Equipment (TMDE). No support equipment and TMDE is required.

2.6.6 Training and Training Devices.

a. The JPMO will provide initial training (new equipment training). System training will be embedded into the prime system to the maximum extent possible (with hooks to the multimedia training package). Any tasks that cannot be embedded or included as part of the multimedia package will be documented in paper-based training to allow the system to be trained in the unit. There are no known requirements for training devices or training simulators. All training will be conducted on target system hardware. The developing contractor will prepare programs of instructions with supporting lesson plans based on the capabilities of each software increment for two specific courses - users and system/database administrators (SA/DBA). These course materials will be provided to Component schools for the development of Component specific training.

b. The training contractor will teach each course as a part of Instructor and Key Personnel (IKP) training and to users during initial fielding. Additionally the development contractor will provide a multi-media training (MMT) capability on CD-ROM. The MMT will be based on the course materials prepared for the user and SA/DBA course. The MMT and other course

materials will be updated concurrent with each delivered Block. MMT materials such as storyboards, scripts, and videos will be made available to each Component for production of Component specific MMT. Each component is responsible for developing specific institutional, unit, and sustainment training in accordance with Component policies.

2.6.6.1 Training Courses.

2.6.6.2 Service School Training. Service schools will conduct training in accordance with the System Training Plan. All TRADOC basic and professional development courses should provide individual training on the employment and use of TC-AIMS II during garrison and wartime operations. Students undergoing Advanced Individual Training (AIT) in the 88N MOS at the Transportation School will receive TC-AIMS II training to enable them to perform effectively in their MOS. TC-AIMS II training will replace the TC-ACCIS and DAMMS training that the 88N now receives when TC-AIMS II completely replaces these systems in the field. The USA Transportation School will determine when to cease training of the legacy systems and completely replace it with TC-AIMS II training. Officer, Warrant Officer, and noncommissioned officer basic, intermediate and advanced level courses as well as system administration and system support training will also be provided through the TRADOC school system.

2.6.6.3 New Equipment Training. Training will be accomplished as initial training in accordance with TC-AIMS II System Training Plan. System extension training will be implemented by PM TC-AIMS II through a memorandum of understanding with each gaining command and site on how the extension training will be conducted. This coordination will provide guidance on when and where the training will be accomplished. The TC-AIMS II system will be fielded with a multimedia training capability. Other customary TRADOC training products such as printed educational and visual aids may be necessary for institutional training. The target TC-AIMS II hardware will be used to teach operators, maintainers, and supervisors. Distributed Learning using video-Teletraining and traditional classroom training will be used. TC-AIMS II training courses include:

BLOCK 1

- SA/DBA Course
  - –5 training days per class
  - –10 students per class
  - –Bde, Div, Corps, Group & Installation, plus CSSAMO
  - –General allocation of 1 per server plus CSSAMO

- UMC-IC Course
  - –9 training days per class
  - –20 students in class

–Battalion & higher-level Operations and Logistics Personnel
–General allocation of 2 per battalion & higher

• UMO Course
–5 training days per class
–20 students per traditional class/16 students per DL classroom
–Company level UMO's
–General allocation 2 per battalion & 1 for brigade & higher HHC's

BLOCK 2

- SA/DBA Course
- 10 training days per class
- All users

2.6.6.4 Training Assistance. Training assistance should be coordinated through:

Joint Program Management Office (JPMO) TC-AIMS II
ATTN: SFAE-PS-TC
8000 Corporate Court
Springfield, VA 22153
Telephone: 703-752-0759

2.6.6.5 Training Equipment, Devices, and Aids. Training support materials to be developed may include the following manuals and procedural guides. Additionally, the New Equipment Training Team will leave the TC-AIMS II training support package and commercial manuals on site.

Draft TC-AIMS II System User Manual
Draft TC-AIMS II System Computer Operations Manual
Draft TC-AIMS System Computer Installation Procedure

2.6.7 Technical Data. TC-AIMS II hardware is commercial off-the-shelf; therefore, no technical data package will be purchased. All TC-AIMS II software will be delivered with unlimited data rights. Manuals to be provided are listed in paragraph 2.6.6.5

2.6.8 Computer Resources Support. TC-AIMS II software design will include commercial-off-the shelf software products, government off-the-shelf software products and developed software. The initial increment will support basic capabilities necessary to plan, coordinate, and execute deployment or redeployment. The second increment will optimize the basic unit move capabilities to provide a more robust and flexible technical architecture for rapidly adding the Incremental Development Packages (IDP) defined by the Joint Requirements Office and

approved by the Configuration Management Board. All TC-AIMS II applications will be written to system component Application Programming Interface standards. The TC-AIMS II computer resources must be DII COE compliant.

2.6.8.1 Commercial Software.

a. Each unit will be responsible for the licenses and maintenance on the commercial software purchased for operating systems. The unit will also be responsible for their commercial software upgrades. However, the upgrades should be certified by the JPMO for compatibility with TC-AIMS II prior to purchase.

b. The JPMO will be responsible for commercial products associated with application software. These products will be incorporated in the application software release cycles.

2.6.8.2 Application Software.

a. Initial fielding of the software will be done concurrently with the delivery of hardware.

b. Software updates will be released semi-annually or as required. Distribution will migrate from push via CD-ROM to web-based distribution.

2.6.8.3 Software Problems. Software maintenance will be contractor support for life of the system. Decision to transition to a government software design facility has not yet been made. Software problems can be addressed to TC-AIMS II JPMO by use of DA Form 5005-R, Engineering Change Proposal-Software. The TC-AIMS II helpdesk will serve as the receiving point of contact for all software change requests. Contact the Help Desk at 703-923-1060, DSN 656-1060, by email:

TCAIMSIIHELP@EIS.BELVOIR.ARMY.MIL

or by connecting to the web page at:

http://www.tis.army.mil/inform.htm

2.6.8.1 Computer Resource Management. A Computer Resources Management Plan (CRMP) is not required.

2.6.8.2 System Software Requirements. All TC-AIMS II software shall demonstrate compliance with the Joint Technical Architecture. All software for TC-AIMS II shall be COTS/GOTS unless specifically authorized by the TC-AIMS II program office.

2.6.8.3 Computer Software Test and Evaluation. Computer software is tested and evaluated during developmental and user tests, as outlined in the TC-AIMS II TEMP.

2.6.8.4 Computer Manpower and Personnel Operation and Support. Manpower and personnel requirements for fielding are addressed in the TC-AIMS II Materiel Fielding Plan. No new Military Occupational Specialty, Additional Skill Identifier, or Civilian Job Series will be required for TC-AIMS II.

2.6.8.5 Configuration Management Requirements. TC-AIMS II is a joint program. The Configuration Control Board (CMB), chaired by USA Transportation Command, defines, prioritizes, and approves functional requirements for development and fielding.

2.6.9 Packaging, Handling, and Storage (PHS). For initial shipment of hardware to fixed facilities, maximum use is to be made of the packaging material in which the equipment was originally received. Transportable DL sites/systems must be capable of being transported by ground and air transportation. They may be set up to operate in self-contained shelters or in fixed buildings.

2.6.9.1 Anticipated Storage Modes and Constraints. TC-AIMS II hardware will be stored (dry storage only), if required in the packaging/shipping material/transit cases in which the equipment was originally received. A general-purpose warehouse will suffice. The storage temperature range is -25^{o} to 140^{o}F. The storage humidity range is 5% to 95%.

2.6.9.2 PHS Tradeoffs. Procurement of transit cases for deployable/mobile units would increase life cycle costs. However, if determination is made that there would be a great risk to the hardware without transit cases, the need shall be reassessed. The tradeoff of accepting this risk for reduced life cycle costs is not acceptable. There are no other PHS tradeoffs or risks that affect life cycle costs.

2.6.9.3 Resource Requirements/Availability. Not Applicable.

2.6.9.4 Test and Evaluation Requirements. Specific PHS requirements requiring testing are outlined in the TC-AIMS II TEMP.

2.6.9.5 Major Item/Component/ASIOE Shipping Requirements. Not applicable.

2.6.9.6 Container Requirements/Care. None identified at this time. Original Equipment Manufacturer packaging will be used for initial shipment of TC-AIMS II hardware to the installation.

2.6.9.7 Supply Bulletin Requirements. Not applicable.

2.6.10 Transportation and Transportability.

2.6.10.1 Transportability Requirements/Constraints. TC-AIMS II is a flexible system, which can be tailored to meet operational missions in both garrison and deployed environments. As defined by AR 70-47, Engineering for Transportability, STAMIS COTS/NDI computer systems are not transportability problem items. US Army Military Traffic Management Command Transportation Engineering Agency provided transportability approval for STAMIS computer systems by memorandum dated January 19, 1995.

2.6.10.2 Test Requirements/Results. Specific transportability requirements requiring testing are outlined in the TC-AIMS II TEMP.

2.6.10.3 Interservice Requirements. Not applicable.

2.6.10.4 Lifting/Tie-down/Handling Requirements. TC-AIMS II hardware will be transportable as containerized or palletized cargo for shipment via commercial or Government conveyances, with appropriate blocking, bracing, and other packaging requirements that conform to Government acceptable practices.

2.6.10.5 Resource Requirements/Availability. Not applicable

2.6.10.6 LSA/LSAR Interface. Not applicable

2.6.11 Facilities.

2.6.11.1 Facilities Requirements Identification. No special facilities are required. Fielding and NET training teams will make maximum use of existing facilities. Each MACOM will be responsible to survey, modify and ensure facilities are ready for TC-AIMS II fielding. While the TC-AIMS II system must be protected from normal environmental conditions, there are no unique weather, oceanographic, or astrophysical environmental support requirements. There are no unique facility and shelter requirements for the objective system other than the typical requirements for heating, cooling, and electrical support.

2.6.11.2 Security Requirements. TC-AIMS II will operate at the unclassified level and will contain multiple levels of access control to ensure sensitive but unclassified information is not compromised. TC-AIMS II will receive or process information according to guidelines set forth by DoD and Components, including the protection of data aggregation at a higher level as necessary. TC-AIMS II will meet the requirements for C2 level security accreditation. PEO EIS is the Designated Accreditation Authority (DAA). TC-AIMS II currently has an Initial Authority to Operate (IATO) and is pursuing Accreditation in accordance with the DOD Instruction 5200.40, DOD Information Technology Security Certification and Accreditation Process

(DITSCAP). The final certification test has been scheduled and a decision is expected by 4thQTRFY02.

2.6.11.3 Programming and Scheduling Requirements. Major Army Commands in coordination with PM TC-AIMS II and their designated representative(s) will have the responsibility to survey, modify, and ensure facilities are ready for the TC-AIMS II implementation.

2.6.12 Standardization and Interoperability (S&I). The S&I constraints are outlined in paragraph 2.6.1.8. The system will be in compliance with applicable JTA, GCSS and DII/COE standards
and obtain interoperability certification from the Joint Interoperability Test Command (JITC). TC-AIMS II will be fully integrated with port operations systems and inter-operable with other automated transportation, logistics, operations, personnel, and finance systems.

2.7 SUPPORT TRANSITION PLANNING. Support transition planning is the responsibility of PM TC-AIMS II. When the TC-AIMS II system is transitioned from PM management to a sustainment or retirement phase, a transition plan shall be developed. The Transition Plan will detail the methodology and schedule for transferring responsibility for managing the TC-AIMS II equipment, maintenance, and training. The Transition Plan will be coordinated with the SIPT.

2.8 SUPPORT RESOURCE FUNDS. The TC-AIMS II funding profile is provided in Table 2.8-1. TC-AIMS II is a joint program and cost reflected is for entire program.

Table 2.8-1. TC-AIMS II Funding Profile
(Millions of Dollars)
Constant FY02 $

Total Life Cycle Cost	Objective	Threshold
RDT&E	34,468	37,915
Procurement	5,247	5,772
Acquisition O&M	167,709	184,480
Operations & Support	2,972	3,269
TOTAL	210,396	231,436

2.9 POST-FIELDING ILS ASSESSMENTS. The SIPT will determine the requirement for post fielding assessments.

2.10 POST-PRODUCTION SUPPORT

2.10.1 Post-Production Support (PPS) Planning. PPS will document resources and management actions to ensure sustainment of system readiness objective requirements and logistic support at all levels following the cessation development and fielding of TC-AIMS II. PPS planning, other than as specified in the following paragraphs, is not envisioned for TC-AIMS II hardware. TC-AIMS II hardware is COTS/NDI procured with an established warranty period. The life cycle of this equipment is expected to be five years, depending on user requirements and funding constraints.

2.10.2 Post-Warranty Maintenance Support. Post warranty maintenance for TC-AIMS II hardware will be organic (depot) level maintenance for tactical users and life cycle contractor support for non-tactical (sustaining base) users.

2.10.3 PPS Responsibilities. PM TC-AIMS II is responsible for PPS planning. This Supportability Strategy will be updated to accommodate future PPS needs identified in subsequent block development.

2.10.4 Post Deployment Software Support (PDSS).

a. PM TC-AIMS II has established a funding line for PDSS and will be responsible for software program management for life of the system. Decision to transition to a government software design facility has not yet been made. TC-AIMS II operational and support software includes commercial off-the-shelf, government off-the-shelf software products and developed software. Upgrades/modifications will be procured using existing contracts, GSA schedules and Blanket Purchase Agreements. TC-AIMS II system software configuration is shown at Table 1.2.3-1.

b. The TC-AIMS II Help Desk will serve as the first line of support. Basic system diagnostics will be performed as required. The Help Desk will continue to assist and support users in operation of TC-AIMS II with problem resolution, assistance, and/or information with respect to their issues or concerns that relate to hardware, software, networking, and/or applications. The Help Desk provides administration and/or support for a variety of functions, to include, problem management, problem identification, troubleshooting and resolution

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SECTION III - ILS MILESTONE SCHEDULE

3.1 GENERAL SCHEDULE INFORMATION. TC-AIMS II is being acquired under an accelerated program in which all milestones are compressed as compared to a standard acquisition.

3.2 MILESTONE SCHEDULE. TC-AIMS II proposed schedule, which is dependent upon funding and availability of hardware and corresponding executive software is shown at 3.2-1. Deviations of more than three months will require approval of milestone decision authority.

3.3 COORDINATION. All milestones will be coordinated with the organizations involved to ensure that tasks, events, and dates are agreed upon and can be accomplished. Formal quarterly In-Process Reviews will be conducted to accomplish necessary coordination.

3.4 REPORTING RESPONSIBILITY. PM TC-AIMS II is responsible for initiating and maintaining milestones. Participating and supporting organizations are responsible for informing the Program Manager of any changes to their milestones or actions that will affect other milestones.

Milestones:

ORD approved	4QFY99
BOIP approved	1QFY99
Joint ILSP	2QFY01
HSIP approved	1QFY00
OT&E	3QFY01
Milestone C	3QFY02

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APPENDIX A

TERMS, ABBREVIATIONS, AND ACRONYMS

A

AAE	Army Acquisition Executive
AAL	Additional Authorization List
AALPS	Automated Air Load Planning System
AC	Alternating Current
ACOS	Army Command and Control System Common Operating System
ADP	Automatic Data Processing
ADPE	Automatic Data Processing Equipment
ADPSSO	ADP Systems Security Office
AIS	Automated Information Systems
AIT	Advanced Individual Training
AIT	Automatic Identification Technology
AMC	United States Army Materiel Command
AR	Army Regulation
ARA	Assigned Responsible Agency
ARNG	United States Army National Guard
ARTEP	Army Training and Evaluation Program
AS	Asset Management
ASD	Application System Developer
ASI	Additional Skill Identifiers
ASIMS	Army Standard Information Management System
ASMP	Army's Strategic Mobility Program
ATCCS	Army Tactical Command and Control System
ATMCT	Air Terminal Movement Control Team
AVN	Aviation
AVN BDE	Aviation Brigade

B

BDE	Brigade
BLAST	Blocked Asynchronous Transmission
BII	Basic Issue Items
BIT	Built-In-Test
BN	Battalion

BOI	Basis of Issue
BOIP	Basis of Issue Plan
BPA	Blanket Purchase Agreement
BPS	Bits Per Second
BSC	Binary Synchronous Communications
BSM	Basic Sustainment Materiel

C

CAGE	Commercial and Government Entity
CAPS II	Consolidate Aerial Port System
CASCOM	Combined Army Support Command
CBT DEV	Combat Developer
CCB	Configuration Control Board
CD	Combat Developer
CE	Continuous Evaluation
CECOM	Communications Electronics Command
CFMS-Host	CONUS Freight Management System-Host
CHS	Common Hardware and Software
CINC	Commander-in-Chief
CLS	Contractor Logistic Support
CM	Configuration Management
CMB	Configuration Management Board
CMM	Cargo Movements Module
CMCC	Corps Movements Control Center
CMOS	Cargo Movement Operational System
CMP	Configuration Management Plan
CO	Company
COE	Common Operating Environment
COEI	Components of End Item
COI	Chief of Installation
COIC	Critical Operational Issues and Criteria
COMPASS	Computerized Movement Planning and Status System
CONUS	Continental United States
COOP	Continuity of Operations Plan
COTS	Commercial-Off-The-Shelf
CPU	Central Processing Unit
CRMP	Computer Resources Management Plan
CSATF	Central Storage Acceptance and Training Facility
CSCI	Computer Software Configuration Item
CSO	Customer Support Office

CS	Combat Support
CSS	Combat Service Support
CSSAMO	Combat Service Support Automation Management Office

D

DA	Department of the Army
DAA	Designated Accreditation Authority
DAE	Defense Acquisition Executive
DA PAM	Department of the Army Pamphlet
DAMMS-R	Department of Army Movements Management System – Redesign
DAMPL	Department of the Army Master Priority List
DCSOPS	Deputy Chief of Staff for Operations
DDN	Defense Data Network
DFAS	Defense Finance Accounting System
DFBS	Defense Finance Battlefield System
DFO	TC-AIMS II Fielding Office
DIA	Defense Intelligence Agency
DII	Defense Information Infrastructure
DISA	Defense Investigation Security Agency
DL	Distributed Learning
DMIL	Demilitarized
DNVT	Digital Nonsecure Voice Terminal
DOD	Department Of Defense
DODAAC	Department Of Defense Activity Address Code
DOIM	Director of Information Management
DOS	Disk Operating System
DRAM	Dynamic Random Access Memory
DS	Direct Support
DSN	Defense Switching Network
DSU	Direct Support Unit
DSVT	Digital Subscriber Voice Terminal
DT	Development Test
DTO	Division Transportation Office
DTP	Development Test Plan
DTPS	Defense Transportation Payment System
DTRR	Development Test Readiness Review
DTS	Defense Transportation System
DTTS	Defense Transportation Tracking System

E

ECP	Engineering Change Proposal
ECP-S	Engineering Change Proposal – Software
EDI	Electronic Data Interchange
EDS	Electronic Data Systems
EIR	Equipment Improvement Recommendation
EIS	Enterprise Information Systems
EMS	Enterprise Management System
EOD	Explosive Ordinance Disposal
ERC	Equipment Readiness Code
ET	Embedded Training
EUM	End User Manual
EUR	Europe
EUSA	Eighth United States Army
EW	Electronic Warfare

F

FACTS	Financial and Air Clearance Transportation System
FD	Functional Description
FORSCOM	United States Army Forces Command
FP	Functional Proponent
FRA	Forward Repair Activity
FSCM	Federal Supply Code for Manufacturer (Replaced by CAGE)

G

GATES	Global Air Transportation Execution System
GB	GigaByte
GCCS-Army	Global Command and Control System-Army
GCSS-Army	Global Combat Support System-Army
GEN	General
GOPAX	Groups Operational Passenger System
GOTS	Government-off-the-Shelf
GS	General Support
GSA/ADNET	GSA/Depot Transportation System

GTN	Global Transportation Network

H

HCSSA	Health Care Systems Services Activity
HHD	Headquarters and Headquarters Detachment
HSC	Health Services Command
HSI	Human Systems Interface
HSIP	Human Systems Interface Plan
HQDA	Headquarters, Department of the Army
HWCI	Hardware Configuration Items

I

IAW	In accordance with
IBS	Integrated Booking System
ICODES	Integrated Computerized Deployment System
ICP	Interim Change Package
IDIQ	Indefinite Delivery/Indefinite Quantity
IDP	Incremental Development Packages
IEEE	Institute of Electronic and Electrical Engineers
ILSP	Integrated Logistic Support Plan
ILSR	Integrated Logistic Support Review
IMMA	Installation Maintenance Management Activity
INSCOM	United States Army Information Security Command
IOC	Initial Operating Capability
IOT	Initial Operational Test
IPR	In-process Review
IS	Installation Survey
ISEC	Information System Engineering Center
ISSA	Installation Supply Support Activity
ITO	Installation Transportation Office
ITCRA	In-Theater Computer Repair Activity
ITEC4	Information Technology E-Commerce & Commercial Contracting Center
ITV-MOD	In-Transit Visibility-Modernization

J

JCS	Joint Chiefs of Staff
JFRG II	Joint Force Requirements Generator II
JITC	Joint Interoperability Test Command
JOPES	Joint Operational Planning and Execution System

JPMO	Joint Project Management Office
JTA	Joint Technical Architecture
JTF	Joint Tactical Forces

K

Kbps	Kilobytes per second
KPP	Key Performance Parameters

L

LAN	Local Area Network
LAO	Logistics Assistance Office
LAP	Logistics Assistance Program
LAR	Logistics Assistance Representative
LCC	Life Cycle Cost
LD	Logistics Demonstration
LOI	Letter of Instruction
LOGAIS	Logistics Automated Information System
LOGSA	Logistics Support Agency
LP	Limited Production
LP	Load Planning
LRU	Line Replaceable Unit
LRAMP	Long Range Army Materiel Requirements Plan
LSA	Logistics Support Analysis
LSC	Logistic Support Center
LSE	Logistic Support Element
LVST	Lead Verification Site Test

M

MAC	Maintenance Allocation Chart
MACOM	Major Army Command
MAGTF	Marine Air Ground Task Force
MAISRC	Major Automated Information Systems Review Council
MANPRINT	Manpower and Personnel Integration
MATDEV	Materiel Developer
MB	MegaBytes
MC	Movement Coordination
MCO	Movement Control Officer

MCT	Movement Control Team
MDR	Milestone Decision Review
MDSS	Marine Deployment Support System
ME	Movement Execution
MEDLOG	Medical Logistic
MEDSUP	Medical Supply
MENS	Mission Element Need Statement
MFA	Materiel Fielding Agreement
MFP	Materiel Fielding Plan
MHE	Material Handling Equipment
Mhz	Megahertz
MICOM	US Army Missile Command
MMT	Multimedia Training
MNS	Mission Needs Statement
MOA	Memorandum of Agreement
MOBCON	Mobilization Control
MOS	Military Occupational Specialty
MP	Movement Planning
MRL	Materiel Requirements List
MTBF	Mean Time Between Failures
MTL	MACOM Team Leader
MTMC	Management Transportation Movement Command
MTMS	Munitions Traffic Management System
MTOE	Modified Table of Organization and Equipment
MTTR	Mean Time to Repair
MTS	Movement Tracking System
MSE	Mobile Subscriber Equipment
MSP	Mission Support Plan
MWO	Modification Work Order

N

NDI	Non-developmental Item
NET	New Equipment Training
NETP	New Equipment Training Plan
NGB	National Guard Bureau
NOEF	No Evidence of Failure
NOS	Network Operating System
NSA	National Security Agency
NSN	National Stock Number

O

OCAR	Office, Chief of the Army Reserve
OEM	Original Equipment Manufacturer
O&O	Operational and Organizational
OCONUS	Outside the Continental United States
OJT	On-the-Job-Training
OIPT	Overarching Integrated Product Team
OMSD	Operations and Mission Support Directorate
OPPM	Outside Principal Period of Maintenance
ORD	Operational Requirements Document
OSE	Open System Environment
OT	Operational Test
OTP	Outline Test Plan
OTRS	Operational Test Readiness Statement

P

PA	Proponent Agency
PAM	Pamphlet
PBO	Property Book Officer
PC	Personal Computer
PCS	Physical Control Zone
PDSS	Post Deployment Software Support
PEO EIS	Program Executive Office Standard Army Management Information Systems
PERSCOM	Personnel Command
PHS	Packaging, Handling and Storage
PM	Program/Product/Project Manager
PMCS	Preventive Maintenance Checks and Services
POC	Point Of Contact
POL	Petroleum, Oils and Lubricants
POMCUS	Prepositioning of Materiel Configured to Unit Sets
PPM	Principal Period of Maintenance
PPS	Post Product Support
PR	Problem Report
PRAMS	Passenger Reservation and Manifest System
PSE	Programming Support Environment

Q

QA	Quality Assurance
QQPRI	Qualitative and Quantitative Personnel Requirements Information

R

RAM	Random Access Memory
RC	Repair Center
RFID	Radio Frequency Identification
RISC	Reduced Instruction Set Computer
ROC	Required Operational Capability
ROM	Read Only Memory
RSC	Regional Service Center

S

SAA	Systems Application Architecture
SAAS	Standard Army Ammunition System
SAAM	Special Assignment Airlift Mission
SA/DBA	System/Database Administrator
SAP	System Assessment Plans
SCC	STAMIS Computer Contract
SCP	Software Change Proposal
SCX	STAMIS Computer Exchange
SCSI	Small Computer System Interface
SDC	Sample Data Collection
SEAT	Systems Extension and Acceptance Team
SETT	System Extension Training Team
SF	Standard Form
SHADE	Shared Data Environment
SIA	System Interface Agreements
SIPT	Supportability Integrated Product Team
SMM	Shipment Management Module
SOCOM	United States Army Special Operations Command
SQL	Standard Query Language
SQT	Software Qualification Test
SRO	System Readiness Objective
SSA	Supply Support Activity
SSSC	Self Service Supply Center
STAR	System Threat Assessment Report
STD	Standard
STTE	Special Tools and Test Equipment

STRAP	System Training Plan
SUN	Shipment Unit Number
SVGA	Super Video Graphics Array

T

TAMMIS	Theater Army Medical Management Information System
TAMMS	The Army Maintenance Management System
TAV	Total Asset Visibility
TBD	To Be Determined
TC-ACCIS	Transportation Coordinator Automated Command and Control Information System
TCC	Transportation Component Commands
TDA	Table of Distribution and Allowance
TED	Threat Environment Description
TEMP	Test and Evaluation Master Plan
TEMPEST	Emanations Security
TERMS	Terminal Management System
TEXCOM	Test and Experimentation Command
TM	Technical Manual
TMDE	Test, Measurement and Diagnostic Equipment
TMAS	Transportation Movement Address System
TMCA	Transportation Management Control Agency
TMO	Transportation Management Officer
TOE	Table of Organization and Equipment
TOPN	Theater of Operations
TP	Training Plan
TPCOM	Transportation Planning and Control Model
TPF	Total Package Fielding
TPFDD	Time-Phased Force and Deployment Data
TPS	Tactical Personnel System
TRADOC	United States Army Training and Doctrine Command
TRAMS	Transportation Automated Measuring System
TRANS	Transportation
TRI-TAC	Tri-service tactical
TTA	Tactical Terminal Adapter
TTP	Trailer Transportation Point
TTSP	Training Test Support Package

U

UIC	Unit Identification Code
UIR	User Interface Requirements
UM	User Manual
USAISC	United States Army Information Systems Command
USAISEC	United States Army Information Systems Engineering Command
USAISSC	United States Army Information Systems Software Center
USAMC	United States Army Materiel Command
USAR	United States Army, Reserve
USAREUR	United States Army, Europe
USARPAC	United States Army, Pacific
USARSO	United States Army, South
USATEC	United States Army Test and Evaluation Command
USATRADOC	United States Army Training and Doctrine Command
USATRANSCOM	United States Army Transportation Command

V

V	Volt

W

WAN	Wide Area Network
WARCO	Warranty Coordinator
WIPT	Working Integrated Product Team
WPS	Worldwide Port System

APPENDIX B

WARRANTY INFORMATION

1. IPI Grammtech, San Antonio, TX – TC-ACCIS Hardware.

a. IPI Grammtech will administer warranty maintenance for hardware purchased from Dell Computer Corporation under Contract GS-35F-5323H. The warranty term begins on date of invoice.

b. Hardware products are warranted to be free from defects in materials and workmanship for a specified period of time. Compaq servers purchased through Dell Computer Corporation are covered under a thirty-six (36) month on-site warranty. Desktop and Laptop computers are covered under twelve 12) month on-site warranty with two additional years that require contacting Dell for diagnostics. Users requiring warranty support should contact Dell at 800-234-1490. Ask for "Major Accounts (Army)". User will need the Service Tag (5 Character Serial Number) located on the back of the system and/or Express Service Code (8 Character Number, i.e., XXX-XXX-XX). These numbers were given to each installation for each machine.

2. SAVI Technology, RFID, AIT I. All RFID equipment is warranted for the period of time stated below.

a. All RFID hardware items and software products, except third-party commercial software is warranted for a three (3) year period.

b. All third-party commercial software is warranted for a fourteen (14) month period.

c. Customer support for assistance and warranty or maintenance services is available 24 hours a day, 7 days a week by calling the SAVI toll free support line or sent via e-mail.

Toll-Free: CONUS/OCONUS: 888-994-7284
E-mail: help@savi.com
Users requiring additional assistance should contact Ms. Elizabeth Rinker at commercial (703) 806-3955 or DSN 656-3955.

3. Symbol Technologies, AIT II. All AIT II equipment is warranted for a period of three (3) years.

a. COLLECT Calling: 631-738-6299 Collect calls will be accepted from AIT-II user locations, which are restricted from toll-free calling (as per the Kuwait example above), by

calling 631-738-6299. Once connected to the Symbol Support Center, the caller (user) will immediately be asked for their name, facility, and phone number for an immediate call back. To minimize the high costs of incoming collect calls, the Support Center Specialist will notify the user that they will disconnect, and the Support Center Specialist will immediately call the user back. Symbol technical assistance is available 24 hours a day; 7 days a week by calling the Symbol Support Center. See the following Tables for support listings.

TABLE B-1
AIT II Contract Support Numbers

AIT-II Contract Support Numbers

TOLL-FREE phone support for **AIT-II** Contract

CONUS: 877-802-1907

OCONUS: 877-802-1907
(plus country calling code)

Country Calling Codes

Belgium:	0-800-100-10
Germany:	0-800-2255-288
Italy:	172-1011
Japan KDD:	005-39-111
Japan IDC:	0066-55-111
Korea, Republic of:	0072-911
Korea, Republic of, US Military:	550-4663
Korea, DACOM:	0030-911
Korea, DACOM, US Military:	550-2USA (872)
Korea Republic:	0036-911
Kuwait:	800-288
Netherlands:	0800-022-9111
Norway:	800-190-11
Saudi Arabia:	1-800-10
Spain:	900-99-00-11
United Kingdom BT:	0800-89-0011
United Kingdom Mercury:	0500-89-0011
United Kindom AT&T:	0800-013-0011

Technical Support questions can be sent via email to Symbol at **AITsupport@symbol.com**.

Users requiring additional assistance should call Ms. Elizabeth Rinker at commercial (703) 806-3955 or DSN 656-3955.

b. TOLL-number: 631-738-6299 Optional back up to the toll-free line, for worldwide AIT-II assistance, through the Symbol Support Center. Note: The caller (user) incurs the cost of this method.

c. Repair Centers (RC). The following is a listing of Symbol's worldwide Repair Centers servicing the AIT-II contract. While local Repair Center information is provided, **please utilize the Symbol Support Center toll free number above for product/RMA assistance.**

TABLE B-2
AIT-II Support Repair Centers

Chicago Service Center Paul Swiech Symbol Technologies, Inc. 709 W. Algonquin Road Arlington Heights, IL 60005 Phone: 847-758-4586 Fax: 847-228-9664 swiech@symbol.com	**Costa Mesa Service Center** Manager: Gary Smith Symbol Technologies, Inc. 340 Fischer Avenue Costa Mesa, CA 92626 Phone: 714-549-6656 Fax: 714-549-6418 email: smithg@symbol.com
Hawaii (Symbol Distributor) IPC Enterprises Contact: Jeff Itoman 345 Queen Street Suite 600 Honolulu, HI 96813 Phone: 808-526-1730 Fax: 808-545-3818 email: jitoman@aol.com	**United Kingdom** Manager: Roger Phillips Symbol Technologies International 12 Oaklands Park Wokingham Berkshire RG41-2FD Phone: +44-118945-7523 Fax: +44-118977-5905 email: roger.phillips@uk.symbol.com
Germany Manager: Bill Bigelow Symbol Technologies GmbH Waldstrasse 66 D-63128 Dietzenbach Germany Phone: +49-6074-49020 Fax: +49-6074-42795 email: william.bigelow@de.symbol.com	**Italy** Manager: Daniele Schinelli Symbol Technologies Italia S.R.L. Via Cristoforo Columbo 49 20090 Trezzano S/N Naviglio Milano Italy Phone: +39-0248-4441 Fax: +39-0244-54385 email: daniele.schinel@it.symbol.com
Spain Manager: Gustavo Orozco Symbol Technologies S.A. Edificio La Piovera Azul C. Peonias, No 2 Sexta Planta 28042 Madrid Spain	**The Netherlands** Manager: Nico Pols Symbol Technologies Kerkplein 2 7051 CX Postbus 24 7050 AA Varsseveld The Netherlands

Phone: +34-913-203-908 Fax: +34-913-207-412 gustavo.orozco@es.symbol.com	Phone: +31-315-27170 Fax: +31-315-271740 nico.pols@nl.symbol.com
Belguim Contact: Agnes Masfrancx Zetes/Europdata Da Vinci Science Park Rue de Strasbourg 3 B4 B-1130 Brussels Belgium Phone: +32 2 702 4111 Fax: +32 2 702 4100 email: masfrancx.a@zetes.com	**Norway** Manager: Tom Elverhoi Symbol Technologies Trollasveien 36 N-1414 Trollasen Norway Phone: +47-6680-4150 Fax: +47-6680-8903 email: tom.elverhoi@no.symbol.com
Saudi Arabia (Symbol Distributor) Contact: Hani Al Husseini Arabian Computer Projects Limited PO Box 14730 Jeddah 21434 Saudi Arabia Phone: +966 2 669 4605/09 Fax: +966-2 669 4624 email: Hani_Al-Husseini@acproj.com	**Kuwait (Symbol Distributor)** Contact: Manohar Duvvuri Data Capture Systems Bahrain 307 Falcon Tower Diplomatic Area PO Box 113 Manama State of Bahrain Phone: +973 535 503 Fax: +973 530 933 email: Manod@batelco.com.bh
Japan Manager: Mr. Roger Erdin Olympus Symbol Inc. San-Ei Building 4F, 1-22-2 Nishi-Shinjuku, Shinjuku-ku, Tokyo 160-0023 Japan Phone: +81-3-3348-0213 Fax: +81-3-3348-0216 email: csjapan@symbol.com	**Korea (Symbol Distributor)** Contact: Mr. S.J. Kwon Cheil Comtech Co., Ltd Seowon Bldg, 1675-1 Seocho-Dong, Seocho-ku, Seoul, 137-070 Korea Phone: +82-2-525-8631 Fax: +82-2-523-0323 email: cictc@unitel.co.kr

4. Dell Computer Corporations. Servers and workstations are warranted for a period of five (5) years. Both CONUS and OCONUS on-site services are provided by calling the Dell toll-free numbers or via e-mail.

Dell E-mail: http://support.dell.com

Toll-Free Numbers (direct to Dell)
800-234-1490

Germany: 0130-81-2590
Japan: 0041-800-22893355

Korea: 002-800-22893355

a. CONUS. On-site warranty is provided at all locations for desktop and servers only. Mail-in service is available for laptop computers. On-site service is provided within the next business day. Technical Support is available 24 hours a day, 7 days a week toll-free access or e-mail requests.

b. CONUS. On-site warranty is provided for locations at Germany, Korea, Japan, Hawaii, and Alaska. On-site service is provided within the third (3rd) business day. Technical support is available 24 hours a day at all locations.

c. The following information will be required for warranty calls.

Select Department of Defense at Dell Web Site
Service TAG number off the back of the CPU
Description of Problem
Serial Number of Device
POC and telephone number
Alternate POC and telephone number
Location of Systems (Building number and location, room number, etc.)

5. Gateway 2000. TC-AIMS II hardware purchased from Gateway Computers is warranted for a three-year period. On-site warranty is available for all hardware other than laptop computers (mail-back). Hardware will be returned to service within the next business day. Technical support is available 24 hours a day by telephone or on-line. For OCONUS, warranty is 3 years mail-back (unit pays shipping to Gateway). For on-line support contact Gateway at: http://www.gatewayatwork.com/gw_atwork/support/contact/contact_tech2.shtml. Toll-free number is 800-846-2301. Information required for warranty calls include:

Client ID (located on CPU above serial number)
Description of Problem
Serial Number of Device
POC and telephone number
Alternate POC and telephone number
Location of Systems (Building number and location, room number, etc.)

6. The Portable Warehouse Corp (TPW). TC-AIMS II hardware purchased from TPW is warranted for a six-year period. On-site warranty for CONUS and OCONUS covers all equipment delivered under contract. Technical support is available from the hours of 8:00 AM to 6:00 PM Monday through Friday. TPW incurs the cost of all delivery to CONUS and OCONUS destination sites to include initial fielding delivery and those related to repair services. Additionally, TPW will assume the cost of insurance for deliveries. TPW will arrange for

pickup, warranty repair and the return of a customer's unit. TPW will provide an authorized technical engineer to be dispatched directly to the customer's location or if required, a replacement CPU/LAPTOP to swap the defective components within 24 hours of a trouble call originating. Telephone warranty service is as follows:

CONUS: TPW
800-333-3085
714-701-1830
714-701-1828 (FAX)

OCONUS: TPW
800-333-3085

TAIWAN
886-2-3789-5888
886-2-3789-5899 (FAX)

GERMANY
49-2102-157-777
49-2102-157-799 (FAX)

JAPAN
81-48-290-1819
81-48-290-1820 (FAX)

KOREA
82-270-50800

CHINA
86-21-622-58622
86-21-622-57926 (FAX)

APPENDIX C

SUPPORTABILITY STRATEGY COORDINATION LIST

HQDA, ATTN: DAMO-ZD/DAMO-FDL/DAMO-TR, 400 Army Pentagon, Washington, DC 22332-0400
HQDA, ATTN: DALO-Z/DALO-T/DALO-SMS, 500 Army Pentagon, Washington, DC 22332-0500
HQDA, OCAR, ATTN: DAAR-L, Washington, DC 20310-2424
HQDA, National Guard Bureau, ATTN: NGB-ARL-S, Washington, DC 20310-0400
Commander in Chief, US Army Europe and 7th US Army, ATTN: AEAGC-FMD, APO AE 09014-0100
Commander, US Army The Surgeon General, ATTN: DASG-LOZ, 5109 Leesburg, Pike, Falls Church VA 22041
Commander, US Total Army Personnel Command, ATTN: TAPC-PL, -OP, -EP, 200 Stovall Street, Alexandria, VA 22332-0405
Commander, US Army Materiel Command, ATTN: AMCLG-ME, 5001 Eisenhower Avenue, Alexandria, VA 22333-0001
Commander, US Army Logistic Assistance Office-FORSCOM, ATTN: AMXLS-F, Ft McPherson, GA 30330-1062
Commander, US Army Logistic Assistance Office-Europe ATTN: AMXLS-E, Unit 29331, APO AE 09266
Commander, US Army Logistic Assistance Office-Far East, ATTN: AMXLS-K, Unit 15293, APO AP 96205-0066
Commander, US Army Logistic Assistance Office-Pacific, ATTN: AMXLS-P, Fort Shafter, HI 96858-5400
Commander, US Army Forces Command, ATTN: AFOP-F, Fort McPherson, GA 30330-5000
Commander, US Army Europe, ATTN: AMXEU-LM, Unit 29331, APO AE 09266
Commander, US Army Europe, ATTN: AMXEU-FMD, Unit 29351, APO AE 09014
Commander, US Army South, Fort Buchanan, Puerto Rico AA 00934
Commander, Eighth US Army, ATTN: EACJ-FD-F, APO AP 96301-0009
Commander, US Army Pacific, ATTN: APLG-MMS, Fort Shafter, HI 96858-5100
Commander, US Army Training and Doctrine Command, ATTN: ATBO-HSM, Fort Monroe, VA 23651-5000
Commander, US Army Transportation School, ATTN: Bldg 705, Fort Eustis, VA 23604
Commander, US Army Combined Armed Support Command, ATTN: ATCL-S/ATCL-T, 3901 A Avenue, Suite 120, Fort Lee, VA 23801
Commander, US Army Military Traffic Management Command, Transportation Engineering Agency, ATTN: MTTE-DPE, 720 Thimble Shoals Boulevard, Suite 130, Newport News, VA 23606-2574
Commander, US Army Medical Management Agency, ATTN: MCMR-MMT-E, Fort

Detrick, MD 21707-5001
Commander, US Army Corps of Engineers, ATTN: CELD, DAEN-ECE-T, 20 Massachusetts Avenue, N.W., Washington, DC 20314-1000
Commander, US Army Aviation and Missile Command, ATTN: AMSAM-TMD-ER, Redstone Arsenal, AL 35898-5000
Director, Defense Logistics Supply Center, ATTN: DCSC-O, 3990 E. Broad Street, Columbus, OH 43215
Commander, US Army Operations Support Command, ATTN: AMSOS-LS, Rock Island, IL 61299-6000
Commander, 200th TAMMC, ATTN: AERLA-MMC-C, Unit 23203, APO AE 09263
Commander, US Army Force Management Support Agency, ATTN: MOFI-FMA-SD, 9900 Belvoir Road, Suite 120, Fort Belvoir, VA 20060-5578
Commander, Defense Logistics Agency, ATTN: DLA-MMDOS, 8725 J.J. Kingman Road, Suite 2533, Fort Belvoir, VA 22060-6221
Commander, US Army Reserve Command, ATTN: AFRC-FDO-S, 1401 Deshler Street, S.W., Fort McPherson, GA 30330
Director, Army Test and Evaluation Command, ATTN: CSTE-EAC-ILS, Bldg 4120, Susquehanna Avenue, Aberdeen Proving Ground, MD 20115-3013

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