Section 1. General

1.1 Purpose. The purpose of this system interface agreement is to formally define the functional, physical, and technical requirements to establish an interface between DAMMS and WPS operating systems.

1.2 Scope.

1.2.1 This agreement applies to all functional proponents, proponent agencies, assigned responsible agencies, application software and other developers, hardware and software maintainers, operators, users, and all others involved with the development of DAMMS and WPS at all locations using this interface.

1.2.2 This interface encompasses requirements pertaining to data (formats, edits and contents), physical and logical interfaces (hardware and software specifications, system software, pertinent application software and databases), communications (protocols and line speeds), service levels (frequencies and response times), and security (sensitivity and restrictions).

1.3 Functional Requirement. This interface is required to provide the following information.

1.3.1 DAMMS with vessel and cargo arrival, discharge and departure information to:

- Support the U.S. Army Strategic Mobility Program.
- Support the Theater Army Distribution Plan.
- Meet requirements of Military Standard Transportation and Movement Procedures (MILSTAMP) DOD 4500.32R, Vol 1, 15 March 1987.
- Provide advance shipment information to the theater of operations (TOPNS).
- Provide commanders with first hand knowledge of arriving cargo prior to actual arrival at the port of debarkation of the vessel carrying the cargo so that they can make accurate decisions to hold, divert, or expedite the delivery of critical cargo throughout the TOPNS so as to influence the successful accomplishment of the mission.
- Comply with current directives to maintain intransit visibility over cargo and containers.

1.3.2 WPS with movement status and planning information to:

- Support the U.S. Army Strategic Mobility Program.
- Support the Theater Army Distribution Plan.

- Provide updated movement and address information to streamline and enhance port operations.

- Economize the use of military mode assets to clear the water port of debarkation (WPOD) of arriving cargo and to ensure adequate numbers of mode assets are available.

1.4 Interface Overview. The DAMMS - WPS interface is being developed to permit the exchange of pertinent transportation movements management information between the systems. It gives DAMMS the capability to receive advance ocean cargo manifest information, from which it can allocate transportation movement assets, redirect critical cargo coming into the theater, and maintain visibility over intransit cargo in the theater of operations while maintaining a capability for electronic information transfer between DAMMS and other ports of call worldwide. It gives WPS the capability to support its ocean terminal management mission which includes documentation control and monitoring of import and export cargo while in the port area of operation.

1.4.1 DAMMS receives advanced ocean cargo manifest data from WPS at the port of embarkation (POE) through the Defense Data Network (DDN) prior to a vessel's arrival at a WPOD. This data will be directed through the theater communications network to a database located at the theater army movement control agency or corps movement control center. Arriving cargo information is then formatted into a report, sorted by consignee and forecasted to the appropriate supply or materiel management center. All forecasts are provided in time to allow the appropriate supply or materiel management center to hold, divert, or expedite the cargo prior to the cargo actually arriving at the port. Once cargo arrives at a WPOD, DAMMS is notified again when the vessel has been discharged or if the port needs mode assets to move the cargo to the consignee. The movement record is updated one final time when the cargo departs the port.

1.4.2 WPS will receive requests to hold, divert, or expedite cargo from DAMMS via DDN. WPS will employ a local area network (LAN) supporting minicomputers as file servers, Desktop III/IV microcomputers, and multiple high-speed printers. WPS will locate the shipment and determine if the requested action can be taken on the cargo. Based on their decision, WPS will send DAMMS status on the action taken. DAMMS will maintain a record of all known requirements for mode assets. With this information, DAMMS will provide a movement program to WPS. This program ensures adequate mode assets are available and on-hand to clear the cargo from the port when the off-loading is complete and the port requires mode assets.

1.5 Responsibilities. All authorized representatives contributing to this interface agreement will sign and date the

signature page as outlined in accordance with DA PAM 25-6, Configuration Management for Automated Information Systems.

1.5.1 Project Officer (PO) DAMMS will develop all required software and provide hardware and software to DAMMS users as necessary to transmit and receive data from WPS.

1.5.2 Project Management Office (PMO) WPS will develop all required software and provide hardware and software to WPS users as necessary to transmit and receive data from DAMMS.

1.6 Procedural and System Changes.

1.6.1 Requested changes will be communicated in writing to all concerned parties not less than 180 days prior to required implementation. Notification will clearly state the changes that need to be made, justification for the change, and the impact if the changes are not made. The party requesting the change will initiate the required notification to all affected parties.

1.6.2 If the change is due to regulatory change, PO DAMMS, PMO WPS, and any other affected party will mutually agree on required actions and an implementation date.

1.6.3 If the change is initiated by either PO DAMMS or PMO WPS, the initiating system will establish and coordinate required actions and establish implementation dates that are acceptable to both systems.

1.6.4 Once implemented, all modifications to the interface will be documented in this agreement. A new signature page will be signed and dated by all parties concerned. A record of changes will be maintained and included with the agreement.

1.7 Life Cycle Maintenance. This agreement will be reviewed and augmented as indicated below. Milestones viewed for configuration management are those specified in DA PAM 25-6.

1.7.1 Milestone I. This agreement reflects all known information. Agreement will be staffed with all points of contacts (POC) for comments.

1.7.2 Milestone II. Specifics of the interface agreement will be refined along with any additional system information that comes available.

1.7.3 Milestone III. When all sections are completed, the interface agreement will be authenticated by officials representing each system and promulgated to all concerned parties.

1.7.4 Milestone IV. Whenever changes are made to this interface agreement, the new document will be signed and dated by both parties. The agreement will be reviewed once every 12 months.

PO DAMMS will take the lead in staffing this agreement for review by both parties.

Section 2. DAMMS Attributes

2.1 System Description. DAMMS is a tactical standard army transportation management information system designed to support the transportation management functions of a transportation command (TRANSCOM), theater army movement control agency (TAMCA) and supporting movement control teams (MCT), transportation battalion (MC), corps movement control center (CMCC) and supporting MCTs, transportation/group (except marine terminal), division support command (DISCOM), division transportation officer (DTO), and division movement control office (MCO) in a TOPNS. It will also support transportation units within the continental United States (CONUS). The system is divided functionally into seven subsystems, or modules, which interface with each other and other automated logistics, command and control, and communications systems.

2.2 Hardware. DAMMS operates on nondevelopmental item (NDI) computer systems, operating from a self-contained local area network (LAN) environment or a stand-alone workstation configuration. As required, selected transportation organizations and sites within a TOPNS will be equipped with the appropriate hardware for LAN and stand-alone workstation operations.

2.2.1 Communications COMM Host. COMM Hosts act as communications front-end, store-forward file devices for DAMMS organizations as well as other various STAMIS systems. The COMM Host uses the Blocked Asynchronous Transmission (BLAST) protocol for communications with DAMMS communications servers. The COMM Host is also utilized to provide FTP services. BLAST and other software utilities can also be used to communicate with other COMM Host devices within the TOPNS. Specifications for the SUN SPARC station 20 UNIX COMM Host are: 64 megabyte (MB) random access memory (RAM) bundled, 1.3 gigabyte (GB) disk (canister), 424 MB SCSI internal disk, 16-inch color monitor, standard 3.5-inch and 5.25-inch high density diskette drives, 644 MB SUN CD-ROM disk drive, 150 MB 1/4-inch external streaming tape drive, SBUS Centronics with 12 serial ports and one (1) parallel port, power backup unit with an uninterruptible power supply (UPS). When required, modems and line drives will also be employed to satisfy individual off-site connectivity requirements.

2.2.2 File Server. File servers act as common storage devices for network and user applications that users within a LAN can share. Specifications for the file server are: 80486 processor with a 66 megahertz (MHZ) central processing unit (CPU), 16 MB of RAM, 1.2 GB disk (2 each 676 MB hard disks), 3.5-inch and 5.25-inch high density diskette drives, CD-ROM internal SCSI, and a 526 MB cartridge tape. The file server is equipped with a network interface card (netware 3.12) capable of supporting 20 users (Novell Netware LAN), a 16-bit VGA monitor card, Super VGA monitor, and UPS. The latest version processor uses Microsoft Disk Operating System (MS-DOS) (version 6.22).

2.2.3 Communications Server. ***The communications server provides network communications between LAN and other LAN or wide area networks (WAN) and stand-alone configurations. Specifications for the communications server are identical to the file server specifications with a few exceptions. The communications server will be equipped with a host-nation-approved modem and power backup unit with UPS.***

2.2.4 LAN PC Workstation. ***Specifications for the LAN PC workstation are: 80486DX processor with 33 MHZ CPU, 16 MB of RAM, CD-ROM, 526 MB cartridge tape, 245 MB SCSI hard disk, Super VGA card with 512K of RAM, 14-inch Super VGA color monitor, network interface card, and a parallel dot matrix printer. The system uses the MS-DOS version 6.22 operating system.***

2.2.5 Other LAN Peripherals. The standard cable plant for LAN support of DAMMS will be through thin coaxial cable (10BASE-2 Ethernet). Other cable plant mediums such as thick coaxial cable (10BASE-5), fiber optic cable (10BASE-F), twisted pair cable (10BASE-T), or any combination of these can be considered as the communications media to support DAMMS. Bridge/router and gateway devices provide interfaces between LAN and other LAN or WAN, including DDN.

2.2.6 Stand-alone PC Workstation. ***Specifications for the stand-alone PC workstation are: 80486 processor with 33 MHZ CPU, 16 MB of RAM, 1 each 245 MB hard disk drive, 3.5-inch and 5.25-inch floppy drives, 526 MB cartridge tape unit, Super VGA card with 512K of RAM, 14-inch Super VGA color monitor, parallel dot matrix printer, and a host-nation approved external modem. The system uses the MS-DOS version 6.22 operating system.***

2.3 Software. ***DAMMS software is being developed in several stages. The DAMMS initial operating capability (IOC)(Block I) was developed in Quickbasic programming language, using MS-DOS to accommodate the use of a COTS software package. Block II (convoy operations related subsystems) was developed using C programming language and UNIX operating system. Block III (Block I replacement package) employs Ada programming language and MS-DOS operating system. Finally, objective DAMMS will be in Ada programming language and have a UNIX operating system in an open system environment (OSE) compliant Portable Operating System Interface (POSIX) platforms.***

2.3.1 BLAST Software. BLAST provides error-free file data transfer capabilities to users operating from a LAN environment or stand-alone workstations. The software uses standard serial ports and can operate over a variety of circuits, including hardwired links, dial-up modems, and network virtual circuits. BLAST also provides file-transfer capability over poor quality telephone lines and on circuits subject to signal delay, such as satellite links. Other versions of the BLAST software can

provide auxiliary communications features such as auto-dial/auto answer modem support, text-file upload and capture.

2.3.2 Novell Netware Software. LAN connectivity support for DAMMS will be provided by Ethernet (IEEE 802.3 Standard) LAN using Novell Netware operating system software. Novell Netware supports many platform operating systems which includes MS-DOS, Windows, OS/2, UNIX, and Macintosh. Protocols which can operate with Novell Netware include Sequenced Packet Exchange/Internet Work Packet Exchange (SPX/IPX), Transmission Control Protocol/Internet Protocol (TCP/IP), Systems Network Architecture (SNA), AppleTalk, and Open System Interface (OSI).

2.3.3 Combat Service Support Automated Information System Interface (CAISI) Software. The CAISI software operates using the store-and-forward methodology. Using CAISI software, the COMM Host device acts as a repository for DAMMS site users. Files are transferred to the COMM Host device where they are stored. Once the appropriate receiving DAMMS site accesses the COMM Host device, the DAMMS user pulls the files from the COMM Host via CAISI.

2.4 Interface Attributes.

2.4.1 Communications Architecture EAC and ECB - Garrison Operations. Data communication for DAMMS in garrison is accomplished with the DDN through MILNET, or the U.S. Government and host-nation commercial communications systems. DDN access at the TAMCA/CMCC is handled through the COMM Host device (appendix F, page F-1). These transportation elements will be equipped with LAN equipment, file server, communications server, work stations, and COMM Host device. The COMM Host device will be fielded to the TAMCA/CMCC and selected transportation battalions (MC) when the battalion is the senior movement activity in theater. As indicated in appendix F, page F-1, DDN access is established through a direct data connection (RS-232) from the communications server within the LAN of the TAMCA/CMCC to the COMM Host device. The COMM Host device acts as a data storage device for the TAMCA/CMCC. It routes data through a gateway into the DDN. Receiving transportation elements can then access the DDN to retrieve data from the TAMCA/CMCC. Transportation battalions (MC), MCTs, and other transportation elements which operate in a LAN environment without a COMM Host or in a stand-alone work station configuration can access the DDN with a dial-up modem through a TAC, mini-TAC, or a terminal server (appendix F, page F-1). Division, separate brigade, and armored cavalry regiment transportation units in garrison will operate with stand-alone workstations and dial the local DDN (TAC, mini-TAC, or terminal server) for COMM Host access (appendix F, page F-1).

2.4.2 Communications Architecture EAC - Tactical Operations. Data communications support for the TAMCA, transportation battalions (MC), and MCTs will be accomplished through the use of Tri-service Tactical Communications (Tri-TAC) tactical packet

network (TPN). Access to the TPN from EAC transportation units is established through the COMM Host device. As depicted in appendix F, page F-2, a TAMCA operating in a LAN environment can use BLAST to communicate through a direct data connection (RS-232) from the communications server within the LAN to the COMM Host device. In turn, the COMM Host receives the data from the TAMCA and routes into the TPN by way of the Tri-TAC large extension node (LEN) (AN/TTC-46). The distance between the COMM Host device and the Tri-TAC node is determined by terrain and field conditions. However, the maximum distance between the COMM Host and the node is 180 meters (IEEE 802.3 LAN standards). Future data communications (X.25 Packet Switching standards) enhancements will extend the distance between the COMM Host device and the communications node to 4 kilometers for greater remote communications capabilities on the battlefield. Subscribers operating from a stand-alone work station can also access the TPN by using their workstation's tactical terminal adapter (TTA) to dial the COMM Host's TTA. In the future, the interface with the COMM Host will be achieved using ethernet. Again, the COMM Host device stores the data from the theater transportation elements and routes it into the TPN by way of a LEN.

2.4.3 Communications Architechture ECB - Tactical Operations. Data communications support for the CMCC, corps transportation units, corps MCTs and other corps-and-below units will be accomplished through the Mobile Subscriber Equipment (MSE) TPN. Access to the TPN from corps to division and below is established through the COMM Host device. As depicted in appendix F, page F-3, a CMCC operating in a LAN environment can use BLAST to communicate through a direct data connection (RS-232) from the communications server within the LAN to the COMM Host device. In turn, the COMM Host receives the data from the CMCC and routes into the TPN by way of the MSE large extension node (LEN) (AN/TTC-46). The distance between the COMM Host device and the MSE node is determined by terrain and field conditions. However, the maximum distance between the COMM Host and the MSE node is 180 meters (IEEE 802.3 LAN standards). Future data communications (X.25 Packet Switching standards) enhancements will extend the distance between the COMM Host device and the MSE node to 4 kilometers for greater remote communications capabilities on the battlefield. Subscribers operating from a stand-alone work station can also access the TPN by using their workstation's TTA to dial the COMM Host's TTA. In the future, the interface with the COMM Host will be achieved using ethernet. In appendix F, page F-4, data communication at the division is established in the same manner. As illustrated, the DTO, the MCO in the division support command (DISCOM), the main support battalion (MSB) and the transportation motor transport (TMT) company can access the host COMM Host by way of the TPN or TTA. Again, the COMM Host device stores the data from the division transportation elements and routes it into the TPN by way of a LEN. Data communication within the separate brigade and armored cavalry regiment (ACR) is established in the same manner, with

one exception. TPN access at the separate brigade and ACR is supported by the MSE small extension node (SEN) (AN/TTC-48) as depicted in appendix F, page F-5.

2.4.4 File Naming Convention. When the DAMMS/WPS SIA was developed, file naming conventions for the interface were not available. File naming conventions were developed and they are included in the MOA which is at Appendix G.

2.5 Service Levels. Transmission speed: 9.6 kbps; receiving speed: 9.6 kbps; Protocols: X.25 (packet switching), IEEE 802.3 (ethernet LAN standard); data communications protocol: BLAST, combat service support (CSS) CAISI; LAN system protocols: Novell, transmission control protocol/internet protocol (TCP/IP), file transfer protocol (FTP); operating systems: Ada/MS-DOS (current), Ada/UNIX (objective) OSE compliant POSIX (objective); threshold bandwidth (traffic capacity): 16 kbps; PSN node-to-node bandwidth: 12 kbps; hub-to-user bandwidth: 24 kbps; expected frequency: daily; response time: 24 hours.

2.6 Points of Contact.

2.6.1 Technical Point of Contact: Lieutenant Colonel Robert M. Stanley, U.S. Army Information Systems Software Development Center-Lee (USAISSDCL), ATTN: ASQB-ILA-TP, Fort Lee, VA 23801. DSN 687-0899, Commercial (804) 765-0899.

2.6.2 Functional Point of Contact: Mr. Bob Taber, USAISSDCL, ATTN: ASQB-ILA-T, Fort Lee, VA 23801. DSN 687-0184, Commercial (804) 765-0184.

2.6.3 Communications Point of Contact: Lieutenant Colonel Robert M. Stanley, USAISSDCL, ATTN: ASQB-ILA-TP, Fort Lee, VA 23801. DSN 687-0899, Commercial (804) 765-0899.

2.7 Security. DAMMS has been designated by the Department of the Army, Deputy Chief of Staff for Logistics (DA DCSLOG) as an unclassified system and is categorized as Unclassified-Sensitive 2 (US2). DAMMS shall employ safeguards to ensure all users are held accountable. Each DAMMS installation will have an associated access control policy. It will include features or procedures to enforce the access control measures required of unclassified-sensitive information within DAMMS. User identification and password systems support the minimum requirements of accountability, access control, and data integrity.

2.8 System Problems.

2.8.1 Failure Contingencies. Alternative courses of action will be taken to satisfy the interface requirement in the event of system(s) failure. Once system failure is identified, interface data will be collected on magnetic media (tape or diskette) and

transferred using courier procedures (i.e., sneaker net) to support information exchanges.

2.8.2 Alternate Site. Local standard operating procedures (SOP) will address alternate sites of operation. Included in the SOP will be organizational designation, data processing installation (DPI) number, if applicable, and exact location. The user unit should store one copy of all automated data processing (ADP) files, programs, and procedures necessary to operate high priority applications at the alternate site. Software recovery, backup, restore, and rebuild capabilities will be provided through software file utilities and through unit transfer capabilities. Microcomputer-based systems will be capable of operational recovery on replacement hardware within four hours. Microcomputer-based systems will be operational on replacement hardware within 24 hours (limited by hardware availability).

2.8.3 Continuity of Operations Plan (COOP). COOP procedures provide for the continuity of automated data processing (ADP) operations in the event of emergencies and disasters. This plan provides the minimum information essential to DAMMS users for on-site and contingency operations in the event of emergencies, disasters, mobilization, or war. This plan also provides the necessary level of ADP support to user activities. Since each DAMMS user unit has its own particular set of circumstances, this plan may be supplemented to coincide with existing COOPs. If a major failure in the system should occur, various contingency processes are provided in this plan to allow the user to perform a DAMMS backup and restore and data and communication files backup and restore on tape or floppy diskette.

2.9 Audit Procedures. BLAST protocol will handle all transmission auditing. One of the features of the BLAST protocol is its ability to convert text files automatically to the receiving system's native format.

2.10 Data Requirements.

2.10.1 Data Description. See appendix A.

2.10.2 Record Layout. See appendix B.

2.11 Selection Criteria. The following descriptions and criteria are applicable to the transactions passed from DAMMS to WPS. These transactions are in DAMMS Block III, SCP 01, and SCP 03. Appendix A identifies the data element descriptions that are related to the record layouts (appendix B) which are applicable to these transactions. Appendix D identifies which OPFACs are involved.

2.11.1 Tracing Request (TM1). This transaction requests transportation movement status or location of a cargo shipment identified by a specific transportation control number (TCN). It

will generate a transaction back to DAMMS of a tracing reply (TMA).

2.11.2 Diversion Request (TM2). This transaction requests that a shipment TCN be diverted from one Department of Defense Activity Address Code (DODAAC) to another. Ideally the request is sent prior to the arrival of the cargo at the WPOD. The request will generate a transaction from WPS back to DAMMS of either a diversion confirmation (TMB) or diversion denial (TMK).

2.11.3 Hold Request (TM3). This transaction requests that a hold be placed on intransit cargo by specific TCN. Ideally the request is sent prior to the arrival of the cargo at the WPOD. The request will generate a transaction back to DAMMS of either a shipment hold acknowledgment (TMC) or shipment hold denial (TML).

2.11.4 Disposition Instructions (TMS). This transaction directs the WPOD to release cargo by specific TCN from hold status and directs further shipment. This transaction is directed to the WPOD holding the shipment and is in response to a disposition request (TMT) from WPS.

2.11.5 Expedite Request (TT4). This transaction requests that a shipment delivery be expedited. When input to WPS, it will generate a transaction to DAMMS of either an expedite delivery confirmation (TTS) or an expedite delivery denial (TT6).

2.11.6 Trace/Hold/Divert/Expedite Activity File. This transaction provides WPS with address information for those Army activities authorized to approve Military Standard Transportation and Movement Procedures (MILSTAMP) related trace, hold, divert, or expedite requests.

2.11.7 Reply To Movement Requirements. This transaction is still under study and has not been finalized as of yet. When a final decision has been made by the DAMMS technical and functional analysts, a change will be made to the SIA.

2.11.8 Movement Program. This transaction contains movement requests which have been programmed and are ready for transportation asset tasking. The program provides information to the WPOD regarding how many and what type transportation mode assets are programmed to support cargo movements from the WPOD.

2.12 Software Package Installation Schedule. Objective DAMMS is being developed in five distinct software package installation increments (Block II, Block III, and SCPs 01-03). Each installation of a specific software package will increasingly add to the capability contained in the Block I package. The transactions passed to WPS from DAMMS will be implemented by DAMMS during three separate software installations (Block III, SCP 01, and SCP 03).

***2.12.1 DAMMS Block III**. All transactions identified in paragraph 2.11, except for subparagraphs 2.11.7 (Reply to Movement Requirement) and 2.11.8 (Movement Program), were implemented in late September 1995 in Korea.*

***2.12.2 DAMMS Software Change Package (SCP) 01**. The transaction identified in subparagraph 2.11.7 (Reply to Movement Requirement) will be implemented in SCP 01 which will have its software acceptance test (SAT) by the user beginning in TBD. In order to meet this SAT date programming by both DAMMS and WPS programmers shall be completed in time for an SIT and SDT in TBD time period.*

***2.12.3 DAMMS SCP 03**. The transaction identified in subparagraph 2.11.8 (Movement Program) will be implemented in SCP 03 which will have its SAT in TBD. In order to meet this SAT date, programming by both DAMMS and WPS programmers shall be completed not later than TBD.*

***2.12.4 SDT and Software Qualification Test (SQT) Plans**. In order to adequately test the sending, receiving, completeness, and communications related to transactions passed between DAMMS and WPS, it is important that the test plans be developed in a concerted effort among representatives from each system. In this regard, system representatives for both DAMMS and WPS will participate in the actual writing of the testing procedures as well as be involved in the testing. For the DAMMS/WPS interface, as indicated above, the DAMMS portion of the installation is scheduled to be implemented in three phases, Block III, SCP 01, and SCP 03. Test plan completion for each of the three phases must occur 4-6 months prior to the actual software acceptance test. More detail on scheduling is included in the MOA at Appendix G.*

Section 3. WPS Attributes

3.1 System Description. WPS is a single standard automated information system (AIS) designed to support the function of cargo documentation and tracking at common user ocean terminals associated with the Military Traffic Management Command (MTMC), U.S. Army Forces Command (FORSCOM), Automated Cargo Documentation Detachments (ACDs) and Reserve Transportation Terminal Units (TTUs). WPS has been designed to replace four current cargo documentation AIS: Terminal Management System (TERMS), Department of the Army Standard Port System - Enhanced (DASPS-E), Mediterranean Prototype (MED) and Terminal Support Module (TSM). WPS is intended to replace these systems with a single integrated AIS. WPS will support worldwide peacetime and wartime operation of common user water terminals and the requirements of the water terminal units designated to support the contingency mission. The WPS system design is comprised of three distinct operational components: regional, terminal, and carry away configuration. Each of these components will have a hardware configuration that is tailored to the anticipated workload volume and functional requirement. The basic design of WPS has been driven by several key requirements to rectify or accommodate a variety of current system deficiencies. The ORACLE Relational Data Base Management System (RDBMS) enhances this flexibility by being able to adapt to different types of hardware platforms to enable system mobility. WPS is completely upgradeable and capable of expansion to support additional users and data retention volumes. WPS will enable terminals to process cargo in a single, standardized manner, while at the same time allow each site and the area command access functions which are unique to its specific environment.

3.2 Hardware. WPS architecture for established terminals will consist of a LAN supporting Hewlett Packard minicomputers as file servers, Desktop III/IV microcomputer workstations, and multiple high speed printers. Stand-alone computer and communications capabilities for deployment to undeveloped locations are undefined at this stage of development.

3.3 Software. WPS will use the UNIX operating system with ORACLE as the relational database management system.

3.4 Interface Attributes.

3.4.1 Local Procedure. Alternative courses of action will be taken to satisfy the interface requirement in the event of system(s) failure. Once system failure is identified, interface data will be collected on magnetic media (tape or diskette) and transferred using courier procedures (i.e., sneaker net) to support information exchanges.

3.4.2 Communications Link. The objective network for this interface will be by MILNET hosts using DDN COMM Hosts with store-forward and virtual connectivity (end-to-end acknow-

ledgment) capabilities. These devices will serve as front-end, store-forward file servers for the interfacing systems. Users operating within a LAN environment or with stand-alone computers can access DDN with a dial-up modem through a terminal access controller (TAC), a mini-TAC, or through a terminal server.

3.5 Service Levels. Transmission speed: 9.6 kpbs; receiving speed: 9.6 kpbs; protocols: X.25 (packet switching), IEEE 802.3 (Ethernet LAN standard); data communications protocol: serial line interconnect protocol (SLIP); threshold bandwidth (traffic capacity): unknown; expected frequency: As required.

3.6 Points of Contact.

3.6.1 Technical Point of Contact. Ms. Terry Beardsley, Commander, Military Traffic Management Command, Western Area, Attn: (MTIM-WD), Bldg 1, Rm 1218, 100 Alaska Street, Oakland Army Base, CA 94626-5000, DSN 859-2766, Commercial (510) 466-2766.

3.6.2 Functional Point of Contact. Mr. Allen Bates, Worldwide Port System Project Management Office, ATTN: MTIM-WP, 5611 Columbia Pike, Falls Church, VA 22041-5050, DSN 289-7884, Commercial (703) 756-7884.

3.6.3 Communications Point of Contact. Mr. Dave Charamuga, Commander, Military Traffic Management Command, Western Area, Attn: (MTIM-WD), Bldg 1, Rm 1218, 100 Alaska Street, Oakland Army Base, CA 94626-5000, DSN 859-2857, Commercial (510) 466-2857.

3.7 Security. The WPS architecture is designed to accommodate US2 data. Information availability and integrity are the primary data projection requirements for WPS. Confidentiality of information and data will be protected in accordance with the Computer Security Act of 1987 and Army Regulation (AR) 380-19. Valid passwords are required and access is limited to only that information required to meet mission requirements.

3.8 System Problems.

3.8.1 Failure Contingencies. Alternative courses of action will be taken to satisfy the interface requirement in the event of system(s) failure. DAMMS and WPS will resort to data transfer using MODEM to MODEM over local telephone lines, or interface data will be collected on magnetic media (tape or diskette) and transferred using courier procedures (i.e., sneaker net) to support information exchanges.

3.8.2 Restart. Local standing operating procedures (SOP) will address backup procedures. An alternate site of operation, to include organizational designation, data processing installation (DPI) number, if applicable, and exact location must be identified. The user unit should store one copy of all automated data processing files, programs, and procedures necessary to operate high priority applications at the alternate site.

Software recovery, backup, restore, and rebuild capabilities will be provided through software file utilities and through unit transfer capabilities. Microcomputer-based systems will be capable of operational recovery on replacement hardware within four hours. Microcomputer-based systems will be operational on replacement hardware within 24 hours (limited by hardware availability).

3.8.3 COOP. User unit will provide an alternate site of operation in accordance with AR 25-3 and TB 18-108, to include organizational designation, DPI number if applicable, and exact location. The user unit may choose to store one copy of all ADP files, programs, and procedures necessary to operate the high priority applications at the alternate site. Key personnel, points of contact, and location of sites will become part of the COOP Plan.

3.9 Audit Procedures. BLAST is currently not available to WPS. However, once WPS and DAMMS have compatible links, the BLAST protocol will handle all transmission auditing. One of the features of the BLAST protocol is its ability to convert text files automatically to the receiving system's native format.

3.10 Data Requirements.

3.10.1 Data Description. See appendix A.

3.10.2 Record Layout. See appendix C.

3.11 Selection Criteria. The following descriptions and criteria are applicable to the transactions passed from WPS to DAMMS. Appendix A identifies the data element descriptions that are related to the record layouts (appendix C) which are applicable to these transactions. Appendix E identifies which OPFACs are involved.

3.11.1 Ocean Cargo Manifest Header Data (TAJ). This is a message header that provides prime ocean cargo manifest data for cargo loaded aboard a specific ship. It is sent to the TAMCA/CMCC and is used to produce the container and shipment forecast. These forecasts provide supply and ammunition management activities with advance notice of arriving shipments so they will have time to send hold, divert, or expedite requests to the WPOD before the cargo arrives at the port. The container forecast is sent to the MCT who services the area to where the container is destined. The forecast is used to maintain 100 percent accountability of containers in the theater as prescribed by DA DCSLOG.

3.11.2 Ocean Cargo Manifest Information (Nonheader) (T_J - T_R). This message identifies specific nonheader type ocean cargo manifest information regarding all surface cargo moving between a WPOE and WPOD. This information will be part of the prime ocean cargo manifest. It is used by DAMMS to produce the shipment forecast.

3.11.3 Ocean Cargo Prime Header Data (Vans) (T_K). This is a message header which provides the prime document information about vans. This document is part of the prime ocean cargo manifest. It is used by DAMMS to develop the shipment forecast.

3.11.4 Ocean Cargo Prime Header Data (Consolidated Container) (T_L). This is a message header which provide the prime document information about consolidated pallets. This document is part of the prime ocean cargo manifest. It is used by DAMMS to develop the shipment forecast.

3.11.5 Ocean Cargo Manifest Adjustment (Add, Change, Delete Corrections) (T_J - T_R). This transactions changes, adds, or deletes manifest information previously transmitted. The information is used by DAMMS to update cargo information relating to intransit visibility.

3.11.6 Tracing Reply (TMA). This transaction provides the requester current transportation status of specified cargo and is in response to a tracing request (TM1).

3.11.7 Diversion Confirmation (TMB). This transaction confirms the requester's diversion of cargo and is in response to a diversion request (TM2).

3.11.8 Shipment Hold Acknowledgment (TMC). This transaction indicates a cargo shipment is being held pending further instructions and is in response to a hold request (TM3).

3.11.9 Diversion Denial (TMK). This transaction reply from a transportation organization indicates a cargo shipment cannot be diverted as requested and is in response to a diversion request (TM2).

3.11.10 Shipment Hold Denial (TML). This transaction indicates the cargo shipment cannot be held at the transportation organization because the shipment has been lifted, loaded, forwarded to the the destination, or is uneconomical to hold and is in response to a hold request (TM3).

3.11.11 Disposition Request (TMT). This transaction from a transportation organization requests disposition instructions on a cargo shipment that is in a hold status. The TMT is directed to the activity who requested the hold and is in response to a hold request (TM3).

3.11.12 Expedite Delivery Confirmation (TT5). This transaction confirms that action will be taken to expedite the movement of cargo and is generated in response to a specific expedite request (TT4).

3.11.13 Expedite Delivery Denial (TT6). This transaction denies a request for expedited delivery of a shipment and is generated in response to a specific expedite request (TT4).

3.11.14 Cargo Discharge from Vessel (TTC1). This transaction reports the discharge of seavan and breakbulk cargo at the WPOD.

3.11.15 Z Correction Document TTC1 Format (ZTC1). This transaction reports corrections to a previously transmitted cargo discharge from vessel transaction (TTC1).

3.11.16 Cargo Departure from WPOD (TTC2). This transaction reports the departure of seavan and breakbulk cargo from the WPOD. This transaction excludes any shipment involving personal property, privately owned vehicles, and containers moving under the Military Sealift Command (MSC) rate guide.

3.11.17 Z Correction Document TTC2 Format (ZTC2). This transaction reports corrections to a previously transmitted cargo departure from WPOD transaction (TTC2).

3.11.18 Vessel Status Information (TTV). This transaction reports vessel arrival and completion of cargo discharge for vessels transiting a WPOD.

3.11.19 Z Correction Document TTV Format (ZTV). This transaction reports corrections to a previously transmitted vessel status information transaction (TTV).

3.11.20 Movement Requirements. Deleted at the request of PM WPS.

3.12 Software Package Installation Schedule. Deleted at the request of PM WPS.