

DISTRIBUTION STANDARD SYSTEM (DSS)

EQUIPMENT CONTROL SYSTEM (ECS)

SOFTWARE INSTALLATION PLAN (SIP)

(DI-IPSC-81428)

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1.0 **SCOPE**

1.1 **Identification**

This document provides instruction for installing of the Distribution Standard System - Equipment Control System (DSS-ECS). The DSS-ECS is the standard DSS interface to computerized material handling systems located within DLA's distribution warehouses/facilities. The ECS portion of DSS will be installed at sites identified by DDC-ES as requiring interface from the DSS Distribution applications to material handling systems for material movement. The DLA depots currently targeted to receive DSS-ECS as part of their DSS application are listed in APPENDIX A.

1.2 **System Overview**

The DSS-ECS consists of two parts, application programs residing within the DSS mainframe applications (upper tier programs) and programs residing on the ECS Windows NT platform (lower tier programs). The upper tier ECS programs are any programs specifically required to support a unique physical storage, consolidation, or conveyance system and the lower tier applications are those programs that provide the direct interface to the Programmable Logic Controllers (PLC), PC or other computerized hardware controls. For purposes of this overview, the two parts will be referred to as UT (Upper Tier) and LT (Lower Tier).

All distribution application functionality will reside/remain in the UT of DSS. This includes all workload selection, sequencing, parameter and control files/records, and workload release. All screens used by functional DSS operators will reside in the UT. DSS UT processes will drive movement requests to the LT by means of a Standard Movement Message (SMM) created by the application when a product may need to be moved as a result of DSS activity, e.g. Receipt Induction (move a tote to storage), Pick Request (bring tray to workstation), or Pick Complete (return tray to storage). The UT functionality and SMM generation may be part of a fixed terminal (3270) screen, a Radio Frequency (RF) screen, or a batch process.

The LT functions will fall into two basic categories. The first involves processing the SMM to the appropriate Material Handling Equipment (MHE) controller. This function may involve translation of the information into a format that is recognized by the MHE, controlling the release of SMMs to the MHE (buffering, if necessary), interacting with the MHE using all transactions that the MHE is currently programmed to send/receive, and reacting to error conditions. The second major function of the LT is to provide tracking and management/control of MHE conveyances where this function is a requirement of current MHE design. This may involve queuing and release of conveyances, workload balancing across multiple lanes, and empty conveyance management/routing. These are functions that can be performed by the LT without the direct knowledge of the UT processes.

Where the UT user screens require inquiry information only maintained in the LT database, a reach through program will request the information from the LT, a LT program will access the LT database, retrieve the information, and return it to the UT for display.

The UT ECS processes are an integrated part of the total DSS applications and the same program versions will operate at all DSS sites, regardless of ECS installation.

1.3 **Document Overview**

This document describes the installation of the LT ECS. Installation of the UT ECS programs is part of the overall DSS installation at a site. The installation procedures that apply to the DSS in general are not covered in this document. In order for users to understand the interrelationship between UT processes that generate SMMs and the LT processes that process the SMMs, the DSS-ECS training plan includes both UT and LT functions as they apply to ECS specific sites.

The document is structured to contain information pertinent to all DSS-ECS sites in the main body of the SIP. All information specific to an individual site is provided as an appendix. This will allow for easier updates and use of the SIP. DSIO will be referred to in the SIP as the project sponsor. The Defense Depots (DDxx) will be referred to as the users. The developer is DSIO and support agencies are DDC, and DISA.

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* To be delivered 120 days prior to DSIO ET date.

1.4 **Relationship to Other Plans**

This document details the software installation and training portion of the general DSS-ECS. It is to be used in conjunction with the DSIO Site Implementation Plans for DSS.

2.0 **REFERENCED DOCUMENTS**

KPMG Peat Marwick L.L.P report, subject "Lower Tier Standardization Evaluation"

Military Standard Software Development and Documentation Standards, MIL-STD-498

DSDC Project Guide for Implementing CMM Level 2, DSDC 8120.001

DSS Standards & Procedures (MSS/DS-XM0)

Borland C++ Documentation

Microsoft Developer Kit

Microsoft Windows NT Server Documentation

Microsoft SNA Server Documentation

Oracle8 Database and System Administration Guide

Advanced Windows. Jeffrey Richter. ISBN - 1-55615-677-4

Inside Windows NT. Helen Cluster. ISBN - 1-55615-481-X

Mastering Windows NT Programming. B. Myers, E. Hamer. ISBN - 0-7821-1264-1

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Windows NT: A Developers Guide. Kevin Goodman. ISBN - 1-55851-306-X

Windows NT Unleashed. Robert Cowart. ISBN - 0-672-30685-9

DDC Environmental Test Plan

ECS Project Management Plan, latest version

DSS INFO/MAN REFERENCE GUIDE for ENVIRONMENTAL TEST, IOC and PRODUCTION

DSS SECS Psuedocoding Standard

DSS ECS Software Development Plan (SDP), DI-IPSC-81427, archived version dated November 1, 1996

Operation Concept Description (OCD), DI-IPSC-81430, latest version

Interface Requirements Specifications (IRS), DI-IPSC-81434, archived version dated December 14, 2001

Interface Design Description (IDD), DI-IPSC-81436, latest version

Database Design Description (DBDD), DI-IPSC-81437, latest version

System/Subsystem Specification (SSS), DI-IPSC-81431, latest version

System/Subsystem Design Description (SSDD), DI-IPSC-81432, latest version

Software Design Description (SDD), DI-IPSC-81435, latest version

Software Requirements Specification (SRS), DI-IPSC-81433, latest version

Software Installation Plan (SIP), DI-IPSC-81428, latest version

Software Product Specification (SPS), DI-IPSC-81441, latest version

Software User Manual (SUM), DI-IPSC-81443, latest version

ECS Site Survey - Defense Distribution Depot Hill, UT - Memorandum for the Record, dated November 20, 1995

ECS Site Survey - Defense Distribution Depot San Diego, CA - Memorandum for the Record, dated November 20, 1995

ECS Site Survey - Defense Distribution Depot Jacksonville, FL - Memorandum for the Record, dated March 6, 1996

ECS Site Survey - Defense Distribution Depot Norfolk, VA - Memorandum for the Record, dated March 7, 1996

ECS Site Survey - Defense Distribution Depot Puget Sound, WA - Memorandum for the Record, dated March 15, 1996

ECS Site Survey - Defense Distribution Depot Richmond, VA - Memorandum for the Record, dated August 14, 1996

ECS Site Survey - Defense Distribution Depot Mechanicsburg, PA - Memorandum for the Record, dated August 29, 1996

Amendment to DSS-SP5-376, SCR Amendment for ECS Interface with IMC Walk & Pick

DDSP-D Memorandum for DSDC-MDL through DDRE-T, "Cart Flow Information for Standard ECS" with attachment

ECS Site Survey - Defense Distribution Depot New Cumberland, PA - Memorandum for the Record, April 28, 1998

ECS Site Survey - Defense Distribution Depot Tracy, CA - Memorandum for the Record, dated February 23, 1999

ECS Site Survey - Defense Distribution Depot Yokosuka, Japan - Memorandum for the Record

ECS Site Survey - Defense Distribution Depot Pearl Harbor, Hawaii - Memorandum for the Record

ECS Site Survey - Defense Distribution Depot Guam - Memorandum for the Record

ECS Site Survey - Defense Distribution Depot Oklahoma City, OK - Memorandum for the Record

ECS Site Survey - Defense Distribution Depot Warner Robins, GA - Memorandum for the Record

ECS Site Survey - Defense Distribution Depot Red River, TX - Memorandum for the record

ECS Design Requirement Criteria For Triax - Defense Distribution Depot Norfolk, VA – Design Meeting Minutes 05 December 2000

Technical Specification for Upgrade of TRIAX AS/RS, Bldg. W-143, DDNV - TRIAX Project #SP3100-00-C-0027 – Defense Distribution Depot Norfolk, VA

Technical Specification for Active Item Scanner System, Building 2001, DDSP - Defense Distribution Depot Susquehanna, PA

Technical Specification for Replace Tote Conveyor System, Floors 1-4, Building W-143 DDNV - Defense Distribution Depot Norfolk, VA

Technical Specification for Freight Terminal Mechanization System, Building Y-109, DDNV - Defense Distribution Depot Norfolk, VA

Technical Specification for Building 467 Vertical Tote Conveyor Replacement Project for DDPW dated July 16, 2002.

ECS Site Survey - Defense Distribution Depot Tracy - Memorandum for the record.

3.0 **INSTALLATION OVERVIEW**

3.1 **Description**

The installation will follow the guidelines set forth in the SIP. The developer shall install and check out the executable software at the user site; provide training to users as specified; conduct a Site Integration Test (SIT); and provide other assistance to user sites as required. Refer to the appropriate site Appendix for software installation and schedule dates.

3.2 **Contact Point**

DSIO Project Officer:

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DLA System Design Center
2001 Mission Drive, SU2
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DDC POC

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Distribution Information Management Division
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New Cumberland, PA 17070-5000
DSN 771-4544
COMM (717) 770-5389
tom.downs@dla.mil

3.3 **Support Materials**

The developer will be responsible for providing the necessary materials to support software installation of the ECS. This will include diagnostic equipment, programming language documentation, and development tools. The user will be required to purchase tape cartridges and head-cleaning cartridges. Refer to the appropriate site appendix for manufacture, type and quantity. They will be utilized for daily/weekly backups and a complete backup of the system after installation to remain on-site. The user will also be responsible for providing general office supplies as required.

3.4 **Training**

The developer will be responsible for providing a general overview of DSS-ECS and LT and UT application training for daily operation. An ECS Software User Manual will be provided to support the application training for the DSS-ECS LT applications. DSS-ECS UT application documentation will be provided through the Mechanized Specification System (MSS). The user is required to obtain vendor training as recommended by the developer. Refer to APPENDIX C DSS-ECS TRAINING PLAN for recommended vendor training courses and a course outline of the DSS-ECS LT and UT training. All other DSS UT application training will be provided as part of the DSS implementation activities and is not included as part of the SIP. All DSS activities related to training are documented in the DSS POAM for DDxx Implementation along with the required dates for each activity.

3.5 **Tasks**

This section provides a high level list of organizational responsibilities. The detailed list of tasks, responsible person, and dates are documented in the DSS POAM for DDxx Implementation.

a) The developer will:

- provide overall planning, coordination, and preparation for DSS-ECS software installation.
- provide personnel for the support team.
- arrange for lodging and transportation at the installation sites.
- ensure that Borland C++ documentation, Microsoft Developer's Kit documentation, and the ECS Users Manual are available during installation.
- assist in the installation.
- ensure completion of installation and set-up of the ECS system software as specified in the DSS-ECS SSDD
- plan and conduct a general DSS-ECS overview and provide DSS-ECS lower and upper tier application training
- provide on-site and remote computer support and technical assistance for the installation.
- provide for conversion from the current system if required.

b) The user will

- provide office facilities for the installation team. This area will normally be located within or adjacent to the selected computer room for the ECS hardware.

- ensure that Microsoft Windows NT Server documentation, Microsoft SNA Server documentation, and all hardware documentation as specified in Chapter 4 of the DSS-ECS System/Subsystem Design Description (SSDD) are available during installation.
 - ensure that all prerequisites as identified and assigned in the DSS Implementation POAM for the specified sites have been fulfilled prior to the installation.
 - ensure completion of receiving, bar coding (if required), set-up, and initial installation of the ECS hardware as specified in the DSS-ECS SSDD.
 - assist in the installation and set-up.
 - plan and attend designated vendor training as recommended by the developer.
 - provide the required number of students for the general overview, application, and vendor training, as defined in Appendix C.
- c) The support agencies will ensure that all prerequisites as identified and assigned in the DSS Implementation POAM for the specified sites have been fulfilled prior to the installation. The prerequisites include the long haul communication, analog line for an internal modem, communications from the MHE controllers to the ECS Pentium controller, and appropriate power receptacles to accommodate the ECS hardware as specified in the DSS-ECS SSDD for the site designated computer rooms.
- d) The project sponsor will ensure that acquisition of the ECS hardware and software as specified in the DSS-ECS SSDD is completed in accordance with the DSS Implementation POAM for the specified site.

3.6 Personnel

The developer will provide a team of personnel who will perform the ECS Installation at the target site. Skills of the personnel will include technical/hardware, application software, and system software. This team could be larger for the more complex installation of ECS. The user is required to provide a minimum of two personnel to work with the ECS team. The user personnel must have completed the DSS-ECS Training courses as specified in Appendix C.

3.7 Security and Privacy

Security for the DSS-ECS UT applications will be provided and supported by the appropriate Megacenters utilizing RACF or Top Secret. Security for the DSS-ECS LT applications will be provided by the developer/user utilizing Microsoft's Windows NT security model. The Windows NT Logon Process provides for mandatory logon to identify users. Each user must have an account and must supply a password to access that account.

4.0 **SITE-SPECIFIC INFORMATION FOR SOFTWARE CENTER
OPERATIONS STAFF**

This section describes the installation activities to be performed by DSIO, with assistance from the user organization, when installing the of DSS-ECS LT software at a target site.

4.1 **Site Specific Information**

Refer to APPENDIX D through APPENDIX BB for DSS-ECS site-specific information.

5.0 **SITE-SPECIFIC INFORMATION FOR SOFTWARE USERS**

This section is "Not Applicable". The DSS-ECS LT software does not have "users" in the typical definition. There are no functional operators, e.g. warehousemen, storage/transportation users, who access the lower tier for daily operations. The users of ECS are technical analysts who are using the logs, etc. to research anomalies or problems with the processing. There is no "installation planning pertinent to users of the software" as stated in DI-IPSC-81428. Any file/database loading that may be required to install DSS at a user site, are available from the DDC analysts responsible for data set-up of DSS at the target site. Those activities listed in the DIDS in paragraph 5.x.2 are typically part of what DLA identifies as the Environmental Test phase.

6.0 **NOTES**

Not Applicable.

APPENDIX A DSS-ECS SITES

- Defense Distribution Depot San Diego, CA (DDDC)
- Defense Distribution Depot Norfolk, VA (DDNV)
- Defense Distribution Depot Jacksonville, FL (DDJF)
- Defense Distribution Depot Puget Sound, WA (DDPW)
- Defense Distribution Depot Hill, UT (DDHU)
- Defense Distribution Depot at Mechanicsburg, PA (DDSP-W IMC),
- Defense Distribution Depot at Richmond, VA (DDRV),
- Defense Distribution Depot at New Cumberland, PA (DDSP-E EDC),
- Defense Distribution Depot Pearl Harbor, HI (DDPH)
- Defense Distribution Depot Guam, (DDPH)
- Defense Distribution Depot Yokosuka, Japan (DDYJ)
- Defense Distribution Depot Oklahoma City, OK (DDOO)
- Defense Distribution Depot at Tracy, CA (DDJC-Tracy)
- Defense Distribution Depot at Red River, TX (DDRT)
- Defense Distribution Mapping Agency at Richmond, VA (DDMA)

APPENDIX B DSS-ECS INSTALLATION REQUIREMENTS

1.0 SCOPE

The scope of this appendix is to define the system requirements for the initial installation of ECS at a target site. The installation will use the vendor supplied setup utilities. Step by step procedures for the setup utilities are contained in the vendor supplied documentation. DSIO personnel will perform the installation at a target site with the assistance of site personnel.

1.1 Identification

1.1.1 System Requirements

1. The minimum system configuration requirements for implementing ECS at a target site are as follows:
 - a) One ECS Primary Server to include at a minimum:
 - Intel Pentium III 500 MHz processor with 512K cache
 - 256 MB RAM (Expandable to 512 MB)
 - MB 3.5" Floppy Disk Drive
 - 15" SVGA Color Monitor .28 Non-Interlaced
 - PCI SVGA Video Card with 2 MB RAM
 - Three (3) 4.5 GB SCSI Hard Disk Drive
 - PCI 32 bit LAN card (100/10 BaseT capable)
 - 300 Watt Power Supply
 - Keyboard, standard 101 keys
 - 2 ISA slots, 3 PCI slots and 2 ISA/PCI slots shared
 - PERC 2/SC internal RAID disk controller with 16 MB cache
 - 14/32X SCSI CD-ROM
 - Microsoft System Mouse
 - 12/24 GB internal DAT Tape Backup Unit
 - 56K Internal Modem
 - SNA communications adapter
 - 1 Parallel Port and 2 Serial Ports
 - b) One Smart UPS capable of supporting 1400 Watts.
 - c) One copy of each of the following software items:
 - Operating System, Windows NT Server version 4.0
 - Network Software and Protocols, Microsoft networking (the network software included in Windows NT)
 - SNA Communication Software, Microsoft SNA Server version 4.0

-
- SEAGATE BackupExec for Windows NT, current release
 - Oracle 8 database management software, current release
- d) The type and quantity of the following items are optional based on the design of the ECS hardware to support a target site:
- DIGI adapter to interface multiple material handling system
 - Ethernet Hub (100/10 BaseT capable)
 - Modems to interface with material handling systems
 - Fiber optic adapters to interface with material handling equipment
 - Ethernet bridges and transceivers
 - Additional internal disk drives
2. The recommended system configuration for implementing ECS at a target site is as follows:
- a) One ECS Traffic Controller Server to include at a minimum:
- Intel Pentium III 500 MHz processor with 512K cache
 - 256 MB RAM (Expandable to 512 MB)
 - 1.44 MB 3.5" Floppy Disk Drive
 - 15" SVGA Color Monitor .28 Non-Interlaced
 - PCI SVGA Video Card with 2 MB RAM
 - Three (3) 4.5 GB SCSI Hard Disk Drive
 - PCI 32 bit LAN card (100/10 BaseT capable)
 - 300 Watt Power Supply
 - Keyboard, standard 101 keys
 - 2 ISA slots, 3 PCI slots and 2 ISA/PCI slots shared
 - PERC 2/SC internal RAID disk controller with 16 MB cache
 - 14/32X SCSI CD-ROM
 - Microsoft System Mouse
 - 12/24 GB internal DAT Tape Backup Unit
 - 56K Internal Modem
 - SNA communications adapter
 - 1 Parallel Port and 2 Serial Ports
- b) One ECS Sub-controller Server to include at a minimum:
- Intel Pentium III 500 MHz processor with 512K cache
 - 256 MB RAM (Expandable to 512 MB)
 - 1.44 MB 3.5" Floppy Disk Drive
 - 15" SVGA Color Monitor .28 Non-Interlaced
 - PCI SVGA Video Card with 2 MB RAM
 - One (1) 4.5 GB SCSI Hard Disk Drive

-
- PCI 32 bit LAN card (100/10 BaseT capable)
 - 300 Watt Power Supply
 - Keyboard, standard 101 keys
 - 2 ISA slots, 3 PCI slots and 2 ISA/PCI slots shared
 - 14/32X SCSI CD-ROM
 - Microsoft System Mouse
 - 1 Parallel Port and 2 Serial Ports
- c) One Smart UPS capable of supporting 1400 Watts.
- d) One Ethernet Hub (100/10 BaseT capable).
- e) One Multi-port A/B Switch to provide redundancy capability.
- f) One copy of each of the following software items on the Traffic Controller and the ECS Sub-controller:
- Operating System, Windows NT Server version 4.0
 - Network Software and Protocols, Microsoft networking (the network software included in Windows NT)
 - SNA Communication Software, Microsoft SNA Server version 3.0
 - SEAGATE BackupExec for Windows NT, current release
 - Oracle 8 database management software, current release
- g) The type and quantity of the following items are optional based on the design of the ECS hardware and software to support a target site:
- DIGI adapter to interface multiple material handling system
 - Modems to interface with material handling systems
 - Fiber optic adapters to interface with material handling equipment
 - Ethernet bridges and transceivers
 - Additional internal disk drives
 - External RAID controllers and external disk drives
 - Cluster configured Traffic Controller and ECS Sub-controller
 - Additional ECS Sub-controllers
 - ECS User Interface Workstations
 - Oracle 8 Failsafe capability
 - Enterprise Edition of Windows NT 4.0

2.0 ECS INSTALLATION/SETUP

2.1 ECS Hardware Setup

1. Remove all PC's from the boxes.
2. Remove the outer case from the PC designated as the Traffic Controller.
3. Remove slot cover for a vacant PCI port.
4. If a SCSI disk board is located inside PC, remove the ribbon cable so that PCI slot is more easily accessible.
5. Insert the DIGI interface card into the vacant PCI slot and tighten the "setscrew".
6. Reattach SCSI ribbon cable from step 4 above to the SCSI disk card.
7. Remove slot cover for the bottom EISA port.
8. Insert the Attachmate Advanced ISCA board for the LU 6.2 interface into the vacant EISA slot and tighten the "setscrew".
9. Replace the cover to the PC.
10. Connect the monitor, the DIGI, the LU 6.2 line, the LAN cable and all power cords to the PC. Plug all power cords into available receptacles.

NOTE: Repeat the above steps for all remaining PC's. Steps 7 & 8 will only be required for the remaining PC that is designated to be the backup to the Traffic Controller.

2.2 ECS Raid Setup

1. If the Traffic Controller system being configured has a RAID disk configuration, power up the system and enter <CTRL M> to access the configuration menu.
2. At the configuration menu select <CLEAR CONFIGURATION>. Then select <NEW CONFIGURATION>. Select each logical drive, by depressing the space bar, and array them as follows: A0 - 0 RAID 0; A1 - 0 RAID 1; A1 - 1 RAID 1
3. Return to the configuration main menu and select <INITIALIZE>; highlight both logical drives and then initialize.
4. Insert the DELL Service Assistant CD and reboot the PC.
5. When the Service Assistant program starts select <CREATE DISKETTE>; <OPERATING SYSTEM SUPPORT>; <CREATE WINDOWS NT SERVER 4.0>; <CREATE RAID DRIVER DISKETTE>.
6. Remove any disks or CD's from the PC.

NOTE: This process will have to be repeated for the PC that will be designated as the backup to the Traffic Controller. Step 4 & 5 will not need to be repeated for the backup controller.

2.3 ECS WindowsNT Setup

1. Insert Setup Disk #1 and restart the PC. The Setup program will read all of Disk #1.
2. Insert Setup Disk #2 when the Setup program calls for the disk. Hit <ENTER> for the response to the two questions that will be asked during the processing of Disk #2.
3. Insert Setup Disk #3 when the Setup program calls for the disk. When the program asks enter <S> for the SCSI disk setup. The setup program will now require you to insert the RAID driver disk created from the ECS RAID SETUP process. Insert the RAID driver disk and depress <ENTER> for each of the three questions that will be asked by the Setup program.
4. Insert Setup Disk #3 when the Setup program calls for the disk. Depress <ENTER> at the question.
5. Insert the WINDOWS NT Server CD when the Setup program calls for the CD.
6. At the step for installing partitions for your fixed disk drives, enter the following: <C>; <INSTALL>; <NTFS FORMAT>; <ENTER> to examine drives question. Insert the RAID driver disk when the Setup program calls for the disk (**NOTE: Leave the WINDOWS NT Server CD in the CD drive during this time**). At the end of this process depress the <ENTER> when asked a question.
7. Enter the ID Number from the WINDOWS NT manual when asked.
8. Enter <10> for the Per Server option.
9. Enter <PRIMARY DOMAIN CONTROLLER> for the Traffic Controller for all other controllers enter <BACKUP DOMAIN CONTROLLER>.
10. Select "Wired to Network"; deselect "Install MICROSOFT Internet".
11. At this point, if the site being installed has a LAN that is to be used, the detailed LAN information will need to be obtained and entered. Enter all required information for the local LAN.
12. Remove all disks and CD's and restart the PC.
13. Rename the Administrative Account information by executing the following: select <START>; <PROGRAMS>; <ADMINISTRATIVE TOOLS>; <USER MANAGER FOR DOMAINS>; enter the new name for the PC.

14. Perform hard drive setup by executing the following: select <START>; <PROGRAMS>; <ADMINISTRATIVE TOOLS>; <DISK ADMINISTRATION>; <OK>; <YES> for Signature Disk; change the CD drive letter from "D" to "F"; select "CREATE PARTITION" for drive 0 & 1; select "COMMIT" for the changes; select "FORMAT" (**NOTE: Use NTFS file system format**).

2.4 ECS Digi Setup

1. Update the BOOT.INI per the DIGI information message with the "/PCILOCK" option. The BOOT.INI file can be changed using the following steps: select <START>; <PROGRAMS>; <WINDOWS EXPLORED>; select the root directory by clicking on the "/C" drive; click on the BOOT.INI file by using the right mouse button; select <PROPERTIES>; change the BOOT.INI file to allow for updates; open the file by clicking twice on the left mouse button; add the "/PCILINK" statement to the end of the last two entries in this file; save the file; right click on the mouse and select <PROPERTIES>; change the file back to "READ ONLY".
2. To configure the DIGI adapter board perform the following steps: insert the NT driver disk from the DIGI software packet; select <START> <CONTROL PANEL> <NETWORK>; select "HAVE DISK" on the network panel and "AccelePort C/X PCI adapter" and "C/CON 8"; start at COMM 3.
3. Remove all disks and restart the PC.
4. Select <START> <CONTROL PANEL> <PORTS>; for ports COMM 3 through COMM 10 set the flow control to "HARDWARE".

2.5 ECS SNA Setup

1. Insert the DELL Server Assistant CD and restart the PC.
2. When Server Assistant program comes up select <CONFIGURE SYSTEM>; <EISA CONFIGURATION>; <CONFIGURE THE COMPUTER>; <SAVE FILES>.
3. Remove all disks or CD's and restart the PC.

4. Install the Microsoft SNA Server and Service Pack 2 for SNA 3.0 by executing the following steps: Insert the SNA CD; select "SERVER SETUP" when the setup program starts; enter the computer name and the site ID; enter the CD key from the SNA Server CD; select "OK"; select "LINK SERVICE" and "DOCUMENTATION" for the selection list, deselect all other options; enter the account name; enter the system password; enter "5" for the "PER SERVER" option; select "PRIMARY SERVER" for the Traffic Controller and "BACKUP SERVER" for the controller designated as the backup; select "NAMED PIPES" and "Microsoft NETWORKING", deselect any other options.
5. Execute the Service Pack 2 ".EXE" file to apply the Service Pack changes.
6. Start the SNA service by selecting <START> <PROGRAMS> <SNA>.
7. Using the Attachmate documentation, perform all steps outlined in Chapter 4.
8. Run the Setup utility for the Attachmate interface board.
9. Start the SNA Manager by selecting <START> <PROGRAMS> <SNA MANAGER>. Right mouse click on "LINK SERVICES" and change the properties to blank out "Network" and "Contact Point". Select "Insert"; "Link Services"; "Advanced ISAC SDLC"; "Constant RTS" under Mode. Select "Insert"; "Connection"; "SDLC"; enter SDLC1 in the name field. Right mouse click "APPC" and select "Insert"; "APPC"; "Mode Definition" and enter "LU62" and "Partner LU's". Save all of the above changes.

NOTE: The steps above only need to be executed for the Traffic Controller and the controller designated as the backup to the Traffic Controller.

2.6 ECS Oracle Data Base Setup

1. Insert the Oracle 8 CD. This CD will automatically start the install program.
2. Select <INSTALL> when the program starts.
3. Select <ENGLISH> when asked what language for the install.
4. Place the Oracle software on the "D" drive.
5. Select "Oracle Data Base" only.
6. Select "TYPICAL" for the install type.

NOTE: This setup is only required for the Traffic Controller and any controller requiring an Oracle database for the ECS application processing on the controller.

2.7 ECS Seagate Backup Setup

1. Insert the Seagate CD. The CD will automatically start the install program.
2. Select "Windows NT" and "Install Product".
3. Enter "Primary Server" if installing the Traffic Controller PC else enter "Backup Server" for the PC designated as the backup to the Traffic Controller.
4. Enter the serial number from the CD-ROM package.
5. Select "Install".
6. Enter the user name and password as indicated.
7. After the install is complete select <START> <CONTROL PANEL> <TAPE DRIVES>. Insure that the system has picked up the tape drive as an available system device.
8. Insert the Windows NT Server CD. Insure that the CD drive is defined as device "F".
9. Restart the PC
10. Start the Seagate backup process by select <START> , <BACKUP EXEC>. Check the settings and hardware panels to insure the installation was correct.

NOTE: The above steps need only be executed for the Traffic Controller and the controller designated as a backup to the Traffic Controller.

2.8 ECS WindowsNT Service Pack 3 Install

1. Insert the Windows NT Service Pack 3.0 CD. This CD will automatically start the install program.
2. Accept the time.
3. Select the "Create an Uninstall Directories" option.

NOTE: This Service Pack should be installed on all ECS servers.

2.9 ECS Borland C++ Setup

1. Insert the Borland CD in the drive.
2. To start the install select: <START>; <WINDOWS EXPLORER>; click on the CD drive (i.e. "F") and select the Borland C++ file. This will execute the install program.
3. Select the "TYPICAL" setup when asked.
4. Load the following patches for C++: BC501p1.rtp; Patchnt.exe; Patchw32.dll. These patches can be loaded by entering DOS; change directories to the "BC5" directory and executing "Patchnt.exe".
5. If the site being installed requires an Oracle database, the following steps should be executed: Load the Oracle 8 Client CD (this CD will automatically start the setup program); select "Install"; "English"; "Programmer 2000"; from the option list select "PROC/C++" only. When the Oracle 8 install is complete start Borland C++ by doing the following: select <START>; <BORLAND C++>; <OPTIONS>; "TOOLS"; "NEW" from the available list select PRO*C/C++ Precompiler, under BROWSE select ORANT; BIN; Procui80.exe, under COMMAND enter "\$PRJNAME", under MENU HELP select "PRO*C/C++". Finally under "OPTIONS" select "SAVE".

NOTE: The above steps need only be executed on one of the ECS application servers.

2.10 ECS Application Setup

1. Create an "ECS" directory by selecting: <START>; <PROGRAMS>; <Windows Explorer>; "File"; "New" and enter "ECS" as the name.
2. Create a folder under the "ECS" directory called "ECS_Logs" by selecting: <START>; <PROGRAMS>; <Windows Explorer>; "ECS"; "File"; "New"; "Folder" and enter "ECS_Logs".
3. Copy the following files from the ECS program disk to the ECS_Log folder using Windows Explorer: ECS_User.exe; ecsmain.exe; qry.exe.

APPENDIX C DSS-ECS TRAINING PLAN

1.0 SCOPE

1.1 Vendor Training

Planning, selection, and scheduling of Vendor Training is the responsibility of the user/depot. Appropriate vendors or certified professional training organizations can be contracted to provide the appropriate instruction. The developer recommends the following minimum training be supplied to the assigned ECS personnel. This training should be provided to a minimum of 2 people to allow for backup. Recommend the following courses:

System Management/Administration for Microsoft's Windows NT 4.0 Workstation/Server. The vendor course has no defined prerequisite, however, it is recommended that the individuals have a computer specialist background with experience in supporting PCs and LANs.

Introduction to Oracle 8 and Database Administration for Oracle 8. **This training is only recommended if the Oracle DBMS is installed with the implementation of ECS at a site.**

The following two courses are suggested for additional training, but are not required:

- Windows NT Optimization and Troubleshooting
- Implementing Windows NT Security

1.2 DSS-ECS Training

The developer will provide the following training at each DSS-ECS site:

- DSS-ECS Overview
- DSS-ECS Upper Tier (Mainframe Applications)
- DSS-ECS Lower Tier (Windows NT Applications)
- DSS-ECS Hands-On Training

1.2.1 DSS-ECS Overview

All personnel who will have a direct responsibility for DSS-ECS operation and management should attend the DSS-ECS Overview training. The session will be a classroom lecture which will familiarize the user with the background of the DSS-ECS development, the computer equipment, the software configuration used at the depots, and how these components support material processing operations.

1.2.1.1 **Audience**

All personnel who will be involved in operating, managing, or problem solving related to the DSS-ECS or material movement functions. Also, any management personnel who desire a general knowledge of what DSS-ECS is and how it is designed.

1.2.1.2 **Prerequisites**

None

1.2.1.3 **Supporting Documentation**

None

1.2.2 **DSS-ECS Upper Tier Applications**

The session will explain the concept of the Standard Movement Message (SMM), the Database repository for the workload, and the use of the Workload Management Screens for requesting/completing the workload. The course consists of the following topics:

- a) Parameters and Databases
- b) SMM generation and flow of material
- c) General Work Queue and Allocated Work Queue processing
- d) Workload Selection
- e) Workload Completion
- f) Inbound Consolidation
- g) Packing Consolidation
- h) Misc. to be combined with Lower Tier (Logs, Troubleshooting, Errors, and Recovery)

1.2.2.1 **Audience**

- Workstation Operators supporting DSS-ECS
- Supply Systems Analysts supporting DSS-ECS

1.2.2.2 **Prerequisites**

- Knowledge of DSS processing
- DSS-ECS Overview

1.2.2.3 **Supporting Documentation**

- DSS MSS User Documentation

1.2.3 **DSS-ECS Lower Tier Applications**

This session will target the ECS technical support personnel in teaching all aspects of the ECS, from installation to error recovery. The course consists of the following topics:

- a) Installation
- b) Table Maintenance
- c) Logs
- d) Startup/Shutdown
- e) Normal Operations
- f) Utilities
- g) Misc.
 - Troubleshooting
 - Errors
 - Recovery
 - Security
- h) Database (if required at site, see APPENDIX C, section 1.1 Vendor Training)

1.2.3.1 **Audience**

Technical support personnel who will be responsible for managing and troubleshooting the ECS hardware and software system including technical personnel (computer specialists) supply systems analysts and MHE support personnel.

1.2.3.2 **Prerequisites**

- Vendor Training APPENDIX C, section 1.1
- DSS-ECS Overview
- DSS-ECS Upper Tier Applications Training

1.2.3.3 **Supporting Documentation**

- ECS Software User's Manual (SUM)
- Course Handouts

1.2.4 **DSS-ECS Hands-On Training**

This session will allow the ECS technical support personnel to utilize the knowledge obtained in the DSS Upper/Lower Tier Application training in a Hands-On environment.

1.2.4.1 **Audience**

Technical Support Personnel who will be responsible for using, managing, and troubleshooting the ECS software, both UT and LT. Most of this hands-on training will happen during the environmental test.

1.2.4.2 **Prerequisites**

- Vendor Training APPENDIX C, section 1.1
- DSS-ECS Overview
- DSS-ECS Upper Tier Applications Training
- DSS-ECS Lower Tier Applications Training

1.2.4.3 **Supporting Documentation**

- ECS Software Users Manual (SUM)
- Course Handouts
- Online HELP

1.3 **Course Durations**

Course Description	Hours
DSS-ECS Overview	3.00
ECS Background, Concepts, Architecture	1.00
Hardware Overview	1.00
Upper Tier/Lower Tier Communication	1.00
DSS-ECS Upper Tier Applications	8.00
Parameters and Data Bases	2.00
SMM Generation	1.00
Workload Selection/Completion	
Picks	1.00
Stows	.5
Inventory	.5
COSIS	.5
Location Survey	.5
Inbound Consolidation	1.0
Packing Consolidation	1.0
DSS Lower Tier Applications	12.00
Installation	1.00
Table Maintenance	1.00
Logs	1.00
Startup/Shutdown	.5
Normal Operations	.5
Utilities	1.00
Misc.	
Trouble Shooting	2.00
Errors and Recovery	2.00
Security	1.00
Database	2.00
DSS-ECS Hands-On	4.00

Table C 1.3-1 Course Description

APPENDIX D DSS-ECS INSTALLATION AT DDHU - HILL

1.0 HILL SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 Hill Schedule

The detailed schedule for the HILL implementation can be located in the referenced document DSS POAM for DDHU Implementation.

1.1.1 Contact Point

DDSC Implementation POC for DDHU: Sue Fox
Defense Logistics Agency
DDSC-EI
8725 John J. Kingman Road
Fort Belvoir, VA 22060-6221
DSN 427-6545
COMM (703) 767-6545

DDHU DSS POC Susan Cady
DDHU-XS
DSN 777-9585

DDRW DDHU POC Dotty Clark
DDRW-TMS
DSN 462-9148

1.2 Hill Software Installation Procedures

Refer to APPENDIX B DSS-ECS INSTALLATION REQUIREMENTS.

1.2.1 Support Materials

The user will be required to purchase 4mm Data-grade, 4.0 GB DDS DAT cartridges and DDS DAT head-cleaning cartridges. Recommend a minimum of 20 data cartridges be procured at an average cost of \$20 - \$30 per/cartridge and 5 - 10 cleaning cartridges at an average cost of \$10 - \$15 per/cartridge with a capacity of 40 - 50 passes of cleaning. Conner, Sony, and Maxell are reliable sources.

1.3 **Hill Hardware Installation Procedures**

1.3.1 **Prerequisites**

The support agencies and the user will ensure that all prerequisites as identified and assigned in the DSS Implementation POAM for DDHU have been fulfilled prior to the installation. The prerequisites include the installation of the 56 KBPS LU6.2 communication line and modems (v.35) from the Megacenter to the PDP computer room, two analog lines to support the internal modems on the Pentiums, and appropriate power receptacles to accommodate the ECS hardware as specified in the DSS-ECS SSDD. Standard power receptacles are adequate. No special air conditioning requirements.

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS computer equipment as procured by the project sponsor. All ECS equipment will need to be transferred into the PDP computer room. Equipment serial #'s should be recorded and barcodes applied to each piece.

1.4 **Set-up**

The developer will be responsible for set-up of the ECS computer equipment. The designated DDHU ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, see Appendix B, the developer will conduct an ECS/MHE Integration Test with the assistance of the user.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the Hill Automated Storage Modules (ASM) Ministackers. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action (i.e. retrieve and store tray) that is generated by the ASM to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and an ASM Ministackers to insure compatibility of transaction length and data.

- c) Conduct a multi-thread test where SMM transactions generated at the Upper Tier of DSS are passed through ECS to the ASM to validate compatibility throughout the entire hierarchy.

1.5.2 Test Schedule

- a) The test will be conducted in two parts. Part 1 was completed on March 4-6, 1997. It consisted of testing the requirements as identified in 1.3.1.a. successfully. Part 2 will be completed two weeks prior to environmental testing.
- b) Testing will occur Monday - Friday. The option will be available to conduct the test on Saturday and Sunday if required.
- c) Testing will start at 1800 hours or earlier as determined by the user. The workday's activity will determine the availability of starting earlier. The developer will only start earlier if the testing requires additional time.
- d) Testing will end at 2400 hours.
- e) Set-up will occur 1600 - 1800 hours.

1.5.3 Test Procedure

- a) Complete all workload at the end of aisles and then switch the end of aisle workstations to manual mode and return all trays to their appropriate location. Switch back to automatic mode.
- b) Communications will be established between the DSS upper tier and the ECS lower tier by connecting the LU6.2 cable to the A/B 2-port switch that is connected to the DCA board in the Traffic Controller Pentium.
- c) Communications will be established between the ECS lower tier and the ASM Ministackers by disconnecting the eighteen 20 Ma 4-wires (located in the PDP computer room in the back of the Digital cabinet) and reconnecting them into the Blackbox Multi-Channel Converter ports. There will be three 9-port Multi-Channel devices with 6 ports being utilized on each device. Reference Table D1.4.3-1 for connection information. The category marked MC8 represents the 20 Ma 4-wires coming from the MC8. The category marked Multi-Channel represents the connection points on the Multi-Channel that the MC8 20 Ma 4-wires will be connecting into. Active Transmit/Passive Receive are parameters that will need to be set on the MultiChannel for each of the 18 ports. This will be accomplished through the use of dipswitches.

MC8		BLACKBOX Multi-Channel Converter	
R+	BLACK	T+	BLACK
R-	RED	T-	RED
T+	Black	R+	Black
T-	WHITE	R-	WHITE
ACTIVE TRANSMIT	PASSIVE RECEIVE	ACTIVE TRANSMIT	PASSIVE RECEIVE

Table D 1.5.3-1 ECS lower tier and ASM Ministacker Connection Table

- a) Begin testing as identified in paragraph 1.3.1.
- b) Complete all ECS test workload and then switch the end of aisle workstations to manual mode and return all trays to their appropriate location. Switch back to automatic mode.
- c) Communications will be reestablished between SC&D and the ASM Ministackers by disconnecting the eighteen 20 Ma 4-wires from the Blackbox Multi-Channels and reconnecting them into the PDP I/O ports.
- d) Disconnect the LU 6.2 cable from the A/B switch.
- e) Resume normal operations.

APPENDIX E DSS-ECS INSTALLATION AT DDJF - JACKSONVILLE

1.0 JACKSONVILLE SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 Jacksonville Schedule

The detailed schedule for the Jacksonville implementation can be located in the referenced document DSS POAM for DDJF Implementation.

1.1.1 Contact Point

DDSC Implementation POC for DDJF:	Sharon Ward Defense Logistics Agency DDSC-EI 8725 John J. Kingman Road Fort Belvoir, VA 22060-6221 DSN 427-6557 COMM (703) 767-6557
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DDJF DSS POC	Yolette Williams DDJF-XZ DSN 942-0175
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DDC POC	Sheryl Matter DDC-TME DSN 771-5618
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1.2 Jacksonville Software Installation Procedures

Refer to APPENDIX B DSS-ECS INSTALLATION REQUIREMENTS.

1.2.1 Support Materials

The user will be required to purchase 4mm Data-grade, 4.0 GB DDS DAT cartridges and DDS DAT head-cleaning cartridges. Recommend a minimum of 20 data cartridges be procured at an average cost of \$20 - \$30 per/cartridge and 5 - 10 cleaning cartridges at an average cost of \$10 - \$15 per/cartridge with a capacity of 40 - 50 passes of cleaning. Conner, Sony, and Maxell are reliable sources.

1.3 **Jacksonville Hardware Installation Procedures**

1.3.1 **Prerequisites**

The support agencies and the user will ensure that all prerequisites as identified and assigned in the DSS Implementation POAM for DDJF have been fulfilled prior to the installation. The prerequisites include:

- a) Buildings 110/2 and 191
- b) Carousel Controller Boxes - have Facility Engineers supply and install a duplex box within each of the controllers and provide 110/115 VAC at each outlet for installation of the ECS modems.
- c) Building 110/2
- d) Construct and mount a shelf at the top of each corner of the passage going to the Carousels for:
 - DIGI Controller
 - 8-Port Modem Rack
- e) Install a 4-plex-outlet box at each DIGI Controller location, and provide 110/115 VAC at each box.
- f) Run cables from each Carousel Controller to each point of the 8-Port Modem Rack, with even numbers on the East side and odd numbers on the West side.
- g) TELCO/Communication/Data lines:
 - Two (2) analog telephone lines to support DSN and on/off installation to be located in the ECS Computer Room for dial up capability into the two ECS servers.
 - One (1) dedicated 56KB line from the ECS Computer Room through Building #919 (DMC) to the Mechanicsburg DMC for LU6.2 SNA connectivity.
 - One (1) 9.6KB line from the ECS Computer Room to building #191 (Mayport) for ECS control of the Carousels.
 - Two (2) RS-422 (Belden 9831) lines from the ECS Computer Room to the storage carousel area.
 - One (1) RS-422 (Belden 9831) line from the ECS Computer Room to the platform Sorter area for control of the consolidation carousels.

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS computer equipment as procured by the project sponsor. All ECS equipment will need to be transferred into the ECS computer room. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

The developer will be responsible for set-up of the ECS computer equipment. The designated DDJF ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, the developer will conduct an ECS/MHE Integration Test with the assistance of the user.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the Jacksonville Carousel systems. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action (rotation of carousel) that is generated by the Carousel controller to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and a carousel controller to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where SMM transactions generated at the Upper Tier of DSS are passed through ECS to the Carousels to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of testing the requirements as identified in successfully. Part 2 will be completed several weeks prior to environmental testing. The exact schedule for both parts are shown on the current DDJF POAM.

- b) Testing will occur Monday - Friday. The option will be available to conduct the test on Saturday and Sunday if required.
- c) Testing will start at 0900 hours daily. The user will make available one carousel aisle daily. The developer will be responsible for switching from one carousel aisle to another based upon priority workload as determined by the user. If no aisles are available, testing will be conducted at the end of the sites workday as determined by the user. The workday's activity will determine the availability of starting earlier.
- d) Testing will end at 1700 hours or an agreed upon time between the developer/user.
- e) Set-up will occur 0800 - 0900 hours.

1.5.3

Test Procedure

- a) Complete all workload at the end of the storage carousel aisle and then switch the carousel controller to ECS control. Complete all workload in the sorter platform chute and then switch the consolidation carousel controller to ECS control.
- b) Communications will be established between the DSS upper tier and the ECS lower tier by connecting the LU6.2 cable to the A/B 2-port switch that is connected to the SNA board in the Traffic Controller Pentium.
- c) Communications will be established between the ECS lower tier and the carousel controller by disconnecting the data line from NISTARS and connecting either the null modem cable from the DIGI AccelePort or the cable from the BLACKBOX modem to the carousel controller.
- d) Begin testing as identified in paragraph 1.5.
- e) Complete all ECS test workload.
- f) Communications will be reestablished between NISTARS and the Carousel Controller by reconnecting the data line from NISTARS.
- g) Disconnect the LU 6.2 cable from the A/B switch.
- h) Resume normal operation

APPENDIX F DSS-ECS INSTALLATION AT DDPW - PUGET

1.0 PUGET SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 Puget Schedule

The detailed schedule for the Puget implementation can be located in the referenced document DSS POAM for DDPW Implementation.

1.1.1 Contact Point

DDSC Implementation POC for DDPW:	Sharon Ward Defense Logistics Agency DDSC-EI 8725 John J. Kingman Road Fort Belvoir, VA 22060-6221 DSN 427-6557 COMM (703) 767-6557
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DDPW DSS POC	Tom Carter DDPW-XP DSN 439-2779
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DDC POC	Dottie Clark DDC-T DSN 462-9148
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1.2 Puget Software Installation Procedures

Refer to APPENDIX B DSS-ECS INSTALLATION REQUIREMENTS.

1.2.1 Support Materials

The user will be required to purchase 4mm Data-grade, 4.0 GB DDS DAT cartridges and DDS DAT head-cleaning cartridges. Recommend a minimum of 20 data cartridges be procured at an average cost of \$20 - \$30 per/cartridge and 5 - 10 cleaning cartridges at an average cost of \$10 - \$15 per/cartridge with a capacity of 40 - 50 passes of cleaning. Conner, Sony, and Maxell are reliable sources.

1.3 Puget Hardware Installation Procedures

1.3.1 Prerequisites

The support agencies and the user will ensure that all prerequisites as identified and assigned in the DSS Implementation POAM for DDPW have been fulfilled prior to the installation. The prerequisites include:

- a) Construct and mount a shelf within Storage/Consolidation Carousel area for:
 - 8-Port DIGI Controller (quantity of 4)
- b) Install a 4-plex outlet box at each DIGI Controller location (quantity of 4), and provide 110/115 VAC at each box.
- c) Run RS-232 shielded null modem cables (quantity of 19) from each Carousel Controller to ports on the 8-Port DIGI controller.
- d) TELCO/Communication/Data lines:
 - Two (2) analog telephone lines to support DSN and on/off installation to be located in the ECS Computer Room for dial up capability into the two ECS servers.
 - One (1) dedicated 56KB line from the ECS Computer Room to the Hill AFB Megacenter (DMCO) in Ogden, UT for LU6.2 SNA connectivity.
 - Three (3) RS-422 cables (Belden 9831) from the ECS Computer Room to the 8-Port DIGI controllers located in the storage/consolidation carousel areas.
 - One (1) RS-422 cable (Belden 9831) from 8-Port DIGI controller to 8-Port DIGI controller in the Storage Carousel area.

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS computer equipment as procured by the project sponsor. All ECS equipment will need to be transferred into the ECS computer room. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

The developer will be responsible for set-up of the ECS computer equipment. The designated DDPW ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, the developer will conduct an ECS/MHE Integration Test with the assistance of the user.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the Puget Carousel systems. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action (rotation of carousel) that is generated by the Carousel controller to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and a carousel controller to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where SMM transactions generated at the Upper Tier of DSS are passed through ECS to the Carousels to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of testing the requirements as identified in 1.5.1. successfully. Part 2 will be completed several weeks prior to environmental testing. The exact schedule for both parts are shown on the current DDPW POAM.
- b) Testing will occur Monday - Friday. The option will be available to conduct the test on Saturday and Sunday if required.
- c) Testing will start at 0900 hours daily. The user will make available one carousel aisle daily. The developer will be responsible for switching from one carousel aisle to another based upon priority workload as determined by the user. If no aisles are available, testing will be conducted at the end of the sites workday as determined by the user. The workday's activity will determine the availability of starting earlier.
- d) Testing will end at 1700 hours or an agreed upon time between the developer/user.
- e) Set-up will occur 0800 - 0900 hours.

1.5.3

Test Procedure

- a) Complete all workload at the end of the storage/consolidation carousel aisle and then switch the carousel controller to ECS control.
- b) Communications will be established between the DSS upper tier and the ECS lower tier by connecting the LU6.2 cable to the A/B 2-port switch that is connected to the Attachmate board in the Traffic Controller Pentium.
- c) Communications will be established between the ECS lower tier and the carousel controller by disconnecting the data line from NISTARS and connecting the cable from the DIGI AccelePort to the carousel controller.
- d) Begin testing as identified in paragraph 1.5.1.
- e) Complete all ECS test workload.
- f) Communications will be reestablished between NISTARS and the Carousel Controller by reconnecting the data line from NISTARS.
- g) Disconnect the LU 6.2 cable from the A/B switch.
- h) Resume normal operation.

APPENDIX G DSS-ECS INSTALLATION AT DDDC - SAN DIEGO

1.0 SAN DIEGO SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 San Diego Schedule

The detailed schedule for the San Diego implementation can be located in the referenced document DSS POAM for DDDC Implementation.

1.1.1 Contact Point

DSIO Implementation POC for
DDSC:

Sharon Ward
Defense Logistics Agency - DDSC
8725 John J. Kingman Road
Fort Belvoir, VA 22060-6221
DSN 427-6557
COMM (703) 767-6557

DDDC DSS POC

Ashley White
DDDC-XS
DSN 526-8532

DDC POC

Mike Ruth
DDC-T
DSN 462-9162

1.2 San Diego Software Installation Procedures

Refer to APPENDIX B DSS-ECS INSTALLATION REQUIREMENTS.

1.2.1 Support Materials

The user will be required to purchase 4mm Data-grade, 4.0 GB DDS DAT cartridges and DDS DAT head-cleaning cartridges. Recommend a minimum of 20 data cartridges be procured at an average cost of \$20 - \$30 per/cartridge and 5 - 10 cleaning cartridges at an average cost of \$10 - \$15 per/cartridge with a capacity of 40 - 50 passes of cleaning. Conner, Sony, and Maxell are reliable sources.

1.3 San Diego Hardware Installation Procedures

1.3.1 Prerequisites

The support agencies and the user will ensure that all prerequisites as identified and assigned in the DSS Implementation POAM for DDDC have been fulfilled prior to the installation. The prerequisites include:

- a) Construct and mount a shelf within Carousel area for:
 - 8-Port DIGI Controller (quantity of 1)
- b) Install a 4-plex outlet box at each DIGI Controller location (quantity of 1), and provide 110/115 VAC at each box.
- c) Install dedicated 120V circuit with a 30A breaker for the UPS. A special receptacle is required for the UPS, refer to the UPS documentation for specifications on this receptacle.
- d) Run RS-232 shielded null modem cables (quantity of 8) from each Carousel Controller to ports on the 8-Port DIGI controller.
- e) TELCO/Communication/Data lines:
 - Two (2) analog telephone lines to support DSN and on/off installation to be located in the ECS Computer Room for dial up capability into the two ECS servers.
 - One (1) dedicated 56KB line from the ECS Computer Room to the Hill AFB Megacenter (DMCO) in Ogden, UT for LU6.2 SNA connectivity.
 - One (1) 9.6KB RS-422 cable from the ECS Computer Room to the 8-Port DIGI controller located in the carousel area.
 - Two (2) asynchronous modems and one (1) twisted pair wire to be installed between the computer room patch panel and the Stackman Controller.

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS computer equipment as procured by the project sponsor. All ECS equipment will need to be transferred into the ECS computer room. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

The developer will be responsible for set-up of the ECS computer equipment. The designated DDDC ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, the developer will conduct an ECS/MHE Integration Test with the assistance of the user.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software, developed at the development activity in New Cumberland, PA and tested on development hardware at that location, is compatible and can be integrated with the San Diego Automated Material Handling Equipment (AMHE) systems (e.g. Carousels, NLSC/AGV, STACKMAN and NMC Stacker). The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action that is generated by an AMHE controller to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and an AMHE controller to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where SMM transactions generated at the Upper Tier of DSS are passed through ECS to the AMHE to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in three parts. Part 1 will test the NMC Stacker system. Part 2 will consist of testing the Carousels and the STACKMAN systems. Part 3 will consist of testing the NLSC/AGV systems. The tentative schedule for the three parts is as follows:
 - Part 1 08-10 May 1998
 - Part 2 11-14 May 1998
 - Part 3 15-17 May 1998

- b) Testing will occur Sunday - Saturday.
- c) Testing will start at 0900 hours daily. The user will make available one AMHE system daily. The developer will be responsible for switching from production to testing for the AMHE system being tested based upon priority workload as determined by the user. If no AMHE systems are available, testing will be conducted at the end of the sites workday as determined by the user. The workday's activity will determine the availability of starting earlier.
- d) Testing will end at 1700 hours or an agreed upon time between the developer and the user.
- e) Set-up will occur 0800 - 0900 hours.

1.5.3

Test Procedure

- a) Complete all workload in a given AMHE area and then switch the AMHE controller to ECS control.
- a) Communications will be established between the DSS upper tier and the ECS lower tier by connecting the LU6.2 cable to the A/B 8-port switch that is connected to the Attachmate board in the Traffic Controller Pentium.
- b) Communications will be established between the ECS lower tier and the carousel controller by disconnecting the data line from NISTARS and connecting the cable from the ECS DIGI AccelePort, located in the carousel area, to the carousel controller being tested. Communications with the NLSC3, the AGV and the STACKMAN controllers being tested will be accomplished by utilizing the existing communications patch panel, located in the computer room, to switch between NISTARS and ECS. Communications with the NLSC11, the NLSC21 and the NMC Stacker being tested will be accomplished by bridging from the ECS 10BaseT Ethernet Hub to the existing 10BaseT Ethernet Hub, located in the computer room via an established TCP/IP address.
- c) Begin testing as identified in paragraph 1.5.1.
- d) Complete all ECS test workload.

- e) Communications will be reestablished between NISTARS and the Carousel Controller by reconnecting the data line from NISTARS. Communications will be reestablished between NISTARS and the NLSC3, the AGV and the STACKMAN by using the computer room patch panel. The NISTARS communication interface will not be affected by the ECS testing for the NLSC11, the NLSC21 and the NMC Stacker due to the use of the bridging technique between the ECS 10BaseT Ethernet Hub and the existing 10BaseT Ethernet Hub.
- f) Disconnect the LU 6.2 cable from the A/B switch.
- g) Resume normal operation.

APPENDIX H DSS-ECS INSTALLATION AT DDNV - NORFOLK

1.0 NORFOLK SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 Norfolk Schedule

The detailed schedule for the Norfolk implementation can be located in the referenced document DSS POAM for DDNV Implementation.

1.1.1 Contact Point

DDSC Implementation POC for DDNV:	Sharon Ward Defense Logistics Agency DDSC -EI 8725 John J. Kingman Road Fort Belvoir, VA 22060-6221 DSN 427-6557 COMM (703) 767-6557
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DDNV DSS POC	Jose Mendoza DDNV-XB DSN 564-2739
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DDC POC	Sheryl Matter DDC-T DSN 771-5618
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1.2 Norfolk Software Installation Procedures

Refer to APPENDIX B DSS-ECS INSTALLATION REQUIREMENTS.

1.2.1 Support Materials

The user will be required to purchase 4mm Data-grade, 4.0 GB DDS DAT cartridges and DDS DAT head-cleaning cartridges. Recommend a minimum of 20 data cartridges be procured at an average cost of \$20 - \$30 per/cartridge and 5 - 10 cleaning cartridges at an average cost of \$10 - \$15 per/cartridge with a capacity of 40 - 50 passes of cleaning. Conner, Sony, and Maxell are reliable sources.

1.3 **Norfolk Hardware Installation Procedures**

1.3.1 **Prerequisites**

The support agencies and the user will ensure that all prerequisites as identified and assigned in the DSS Implementation POAM for DDNV have been fulfilled prior to the installation. The prerequisites include:

- a) Construct and mount shelves within Carousel and Stacker area for:
 - 8-Port DIGI Controller (quantity of 9)
 - DIGI Fiber Optic Adapter (quantity of 4)
- b) Install a 4-plex outlet box at each DIGI Controller location (quantity of 9), and provide 110/115 VAC at each box.
- c) Install dedicated 120V circuit with a 30A breaker for the UPS. A special receptacle is required for the UPS, refer to the UPS documentation for specifications on this receptacle.
- d) Run RS-232 shielded null modem cables (quantity of 24) from each Carousel Controller to ports on the 8-Port DIGI controller. Run RS-232 shielded null modem cables (quantity of 30) from each Stacker Controller to ports on the 8-Port DIGI controller.
- e) TELCO/Communication/Data lines:
 - Install two (2) analog telephone lines to support DSN and on/off installation to be located in the ECS Computer Room for dial up capability into the two ECS servers.
 - Install one (1) dedicated 56KB line from the ECS Computer Room to the Mechanicsburg Megacenter (DMCM) in Mechanicsburg, PA for LU6.2 SNA connectivity.
 - Install two (2) Fiber cables with ST connectors between the computer room and the NLSC controllers.
 - Install four (4) Fiber cables with ST connectors between the computer room and the Carousel storage area and Stacker areas.

- Install four (4) RS-422 cables (Belden 9831) from the DIGI Fiber Optic Adapter to the first 8-Port DIGI controller located in the carousel area and the stacker areas. Install eleven (11) RS-422 cables between the 8- Port DIGI controllers located in the carousel area and stacker areas.
- Install two (2) asynchronous modems and one (1) twisted pair wire to be installed between the computer room and the V52 Stacker Controller.

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS computer equipment as procured by the project sponsor. All ECS equipment will need to be transferred into the ECS computer room. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

The developer will be responsible for set-up of the ECS computer equipment. The designated DDNV ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, the developer will conduct an ECS/MHE Integration Test with the assistance of the user.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the Norfolk Automated Material Handling Equipment (AMHE) systems. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action that is generated by an AMHE controller to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and an AMHE controller to insure compatibility of transaction length and data.

- c) Conduct a multi-thread test where SMM transactions generated at the Upper Tier of DSS are passed through ECS to the AMHE to validate compatibility throughout the entire hierarchy.

1.5.2 Test Schedule

- a) The test will be conducted in two parts. Part 1 consists of testing the requirements as identified in 1.5.1. successfully. Part 2 will be completed several weeks prior to environmental testing. The exact schedule for both parts are shown on the current DDNV POAM.
- b) Testing will occur Monday - Friday. The option will be available to conduct the test on Saturday and Sunday if required.
- c) Testing will start at 0900 hours daily. The user will make available one carousel aisle daily. The developer will be responsible for switching from one carousel aisle to another based upon priority workload as determined by the user. If no aisles are available, testing will be conducted at the end of the sites workday as determined by the user. The workday's activity will determine the availability of starting earlier.
- d) Testing will end at 1700 hours or an agreed upon time between the developer and the user.
- e) Set-up will occur 0800 - 0900 hours.

1.5.3 Test Procedure

- a) Complete all workload in a given AMHE area and then switch the AMHE controller to ECS control.
- b) Communications will be established between the DSS upper tier and the ECS lower tier by connecting the LU6.2 cable to the A/B 8-port switch that is connected to the Attachmate board in the Traffic Controller Pentium.
- c) Communications will be established between the ECS lower tier, the carousel controller or the stacker controller by disconnecting the data line from NISTARS and connecting the cable from the ECS DIGI AccelePort for the carousel or stacker controller being tested. Communications with the NLSC and V52 Stacker will be accomplished by disconnecting the modems for NISTARS and then connecting the modems for ECS at the NLSC and V52 controllers.
- d) Begin testing as identified in paragraph 1.5.1.
- e) Complete all ECS test workload.

- f) Communications will be reestablished between NISTARS, the Carousel Controller or the Stacker Controller by reconnecting the data line from NISTARS. Communications will be reestablished between NISTARS, the NLSC controller and the V52 controller by disconnecting the modems for ECS and connecting the modems for NISTARS at the NLSC and V52 controllers.
- g) Disconnect the LU 6.2 cable from the A/B switch.
- h) Resume normal operation.

APPENDIX I DSS-ECS INSTALLATION AT DDSP - NEW CUMBERLAND

1.0 NEW CUMBERLAND SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 New Cumberland Schedule

The detailed schedule for the New Cumberland implementation can be located in the referenced document DSS POAM for DDSP Implementation.

1.1.1 Contact Point

DDSC Implementation POC for DDSP:	Sharon Ward Defense Logistics Agency DDSC -EI 8725 John J. Kingman Road Fort Belvoir, VA 22060-6221 DSN 427-6557 COMM (703) 767-6557
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DDSP DSS POC	Tom Yeckley DDSP-Z DSN 771-4351
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DDC POC	Skip Stuyvesant DDC-TZ DSN 771-8617
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1.2 New Cumberland Software Installation Procedures

Refer to APPENDIX B DSS-ECS INSTALLATION REQUIREMENTS.

1.2.1 Support Materials

The user will be required to purchase 4mm Data-grade, 4.0 GB DDS DAT cartridges and DDS DAT head-cleaning cartridges. Recommend a minimum of 20 data cartridges be procured at an average cost of \$20 - \$30 per/cartridge and 5 - 10 cleaning cartridges at an average cost of \$10 - \$15 per/cartridge with a capacity of 40 - 50 passes of cleaning. Conner, Sony, and Maxell are reliable sources.

1.3 **New Cumberland Hardware Installation Procedures**

1.3.1 **Prerequisites**

The support agencies and the user will ensure that all prerequisites as identified and assigned in the DSS Implementation POAM for DDSP have been fulfilled prior to the installation. The prerequisites include:

- a) TELCO/Communication/Data lines:
- Two (2) analog telephone lines to support DSN and on/off installation to be located in the ECS Computer Room for dial up capability into the two ECS servers.
 - One (1) dedicated 56KB line from the ECS Computer Room to the Mechanicsburg Megacenter (DMCO) in Mechanicsburg, PA for LU6.2 SNA connectivity.
 - Ten (10) LAN drops from the installation LAN to each of the ECS Workstations located throughout the distribution center.
- b) Install electrical circuits for four (4) quad outlets from the existing Power Distribution Unit (PDU) to the ECS servers.

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS computer equipment as procured by the project sponsor. All ECS equipment will need to be transferred into the ECS computer room. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

The developer will be responsible for set-up of the ECS computer equipment. The designated DDSP ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, the developer will conduct an ECS/MHE Integration Test with the assistance of the user.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the New Cumberland Automated Material Handling Equipment (AMHE) systems. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action that is generated by an AMHE controller to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and an AMHE controller to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where SMM transactions generated at the Upper Tier of DSS are passed through ECS to the AMHE to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in three parts. Part 1 will test the Tote Conveyor and Sortation subsystems. Part 2 will test the Pallet Conveyor and Towline subsystem. Part 3 will test the Keypads and User Interface subsystem. Part 3 testing will be conducted during the testing of Part 1&2. The exact schedule for all parts is shown on the current DDSP POAM.
- b) Testing will occur Monday - Friday. The option will be available to conduct the test on Saturday and Sunday if required.
- c) Testing will start at 2200 hours daily. The user will make two AMHE subsystems available daily. If no AMHE subsystems are available during the day, testing will not be conducted. The workday's activity will determine the availability of starting earlier.
- d) Testing will end at 0500 hours or an agreed upon time between the developer and the user.
- e) Set-up will occur 2100 - 2200 hours.

1.5.3 **Test Procedure**

- a) Complete all workload in a given AMHE area and then switch the AMHE controller to ECS control.

Note: Before switching the AMHE controller to ECS control, the PLC scanner/table files and Sorter Intel PC should be purged for a clean testing of ECS/PLC messages. The purges executed will depend on the AMHE being tested.

- b) Communications will be established between the DSS upper tier and the ECS lower tier by connecting the LU6.2 cable to the A/B 2-port switch that is connected to the Attachmate board in the Traffic Controller Pentium.
- c) Communications will be established between the ECS lower tier and the Keypads and Sortation subsystems controller by connecting the Ethernet transceiver from the ECS to the AUI port on the PCS LAN Bridge located in the PCS computer room. Communications to the Tote/Pallet Conveyors and the Towline will be accomplished by disconnecting the Allen/Bradley Data Highway cables from the KF-2 and KF-3 modules, located in the PCS computer room, and connecting them to the ECS Allen/Bradley Gateway subsystem.
- d) Begin testing as identified in paragraph 1.5.1.
- e) Complete all ECS test workload.
- f) Normal production communications for the Sortation and the Keypad systems will be reestablished by disconnecting the ECS Ethernet transceivers from the AUI port on the PCS LAN Bridge and connecting the PCS LAN Bridge back to the DELNI. The normal communications for the Tote/Pallet Conveyor and the Towline systems will be reestablished by disconnecting the Data Highway cables from the ECS Allen/Bradley Gateway subsystem and reconnecting them to the KF-2 and KF-3 units.

Note: Before resuming normal operations of the PCS System, all PLC scanner/table files should be purged and the Sorter Intel PC being tested should be purged and reloaded with PCS Database control numbers destined for that Sorter. The purges executed will depend on the AMHE being tested.

- g) Disconnect the LU 6.2 cable from the A/B switch.
- h) Resume normal operation.

APPENDIX J DSS-ECS INSTALLATION FOR DDPH - PEARL HARBOR

1.0 PEARL HARBOR SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 Pearl Harbor Schedule

The detailed schedule for the Pearl Harbor implementation can be located in the referenced document DSS POAM for DDPH Implementation.

1.1.1 Contact Point

DDSC Implementation POC for DDSP:	Sharon Ward Defense Logistics Agency DDSC -EI 8725 John J. Kingman Road Fort Belvoir, VA 22060-6221 DSN 427-6557 COMM (703) 767-6557
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DDPH DSS POC	John Suetsugu DDPH DSN 473-4672
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	Denise Cordeiro DDPH DSN 473-4670
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1.2 Pearl Harbor Software Installation Procedures

Refer to Appendix B for DSS-ECS Installation Procedure.

1.2.1 Support Materials

The user will be required to purchase 4mm Data-grade, 4.0 GB DDS DAT cartridges and DDS DAT head-cleaning cartridges. Recommend a minimum of 20 data cartridges be procured at an average cost of \$20 - \$30 per/cartridge and 5 - 10 cleaning cartridges at an average cost of \$10 - \$15 per/cartridge with a capacity of 40 - 50 passes of cleaning. Conner, Sony, and Maxell are reliable sources.

1.3 **Pearl Harbor Hardware Installation Procedures**

1.3.1 **Prerequisites**

The support agencies and the user will ensure that all prerequisites as identified and assigned in the DSS Implementation POAM for DDPH have been fulfilled prior to the installation. The prerequisites include:

- a) Construct and mount a shelf within Storage Carousel area for:
 - 8-Port DIGI Controller (quantity of 1)
- b) Install a 4-plex outlet box at each DIGI Controller location (quantity of 1), and provide 110/115 VAC at each box.
- c) Run RS-232 shielded null modem cables (quantity of 5) from each Carousel Controller to ports on the 8-Port DIGI controller.
- d) TELCO/Communication/Data lines:
 - Two (2) analog telephone lines to support DSN and on/off installation to be located in the ECS Computer Room for dial up capability into the two ECS servers.
 - One (1) dedicated 56Kb line from the ECS Computer Room to the Hill AFB Megacenter (DMCO) in Ogden, UT for LU6.2 SNA connectivity.
 - One (1) 9.6Kb RS-422 cables from the ECS Computer Room to the 8-Port DIGI controllers located in the storage carousel areas.

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS computer equipment as procured by the project sponsor. All ECS equipment will need to be transferred into the ECS computer room. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

The developer will be responsible for set-up of the ECS computer equipment. The designated DDPH ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, the developer will conduct an ECS/MHE Integration Test with the assistance of the user.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the Pearl Harbor Carousel systems. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action (rotation of carousel) that is generated by the Carousel controller to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and a carousel controller to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where SMM transactions generated at the Upper Tier of DSS are passed through ECS to the Carousels to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of successfully testing the requirements as identified in 1.5.1. Part 2 will be completed several weeks prior to environmental testing. The exact schedule for both parts are shown on the current DDPH POAM.
- b) Testing will occur Monday - Friday. The option will be available to conduct the test on Saturday and Sunday if required.
- c) Testing will start at 0900 hours daily. The user will make available one carousel aisle daily. The developer will be responsible for switching from one carousel aisle to another based upon priority workload as determined by the user. If no aisles are available, testing will be conducted at the end of the sites workday as determined by the user. The workday's activity will determine the availability of starting earlier.
- d) Testing will end at 1700 hours or an agreed upon time between the developer/user.
- e) Set-up will occur 0800 - 0900 hours.

1.5.3 **Test Procedure**

- a) Complete all workload at the end of the storage carousel aisle and then switch the carousel controller to ECS control.

- b) Communications will be established between the DSS upper tier and the ECS lower tier by connecting the LU6.2 cable to the A/B 2-port switch that is connected to the Attachmate board in the Traffic Controller Pentium.

- c) Communications will be established between the ECS lower tier and the carousel controller by disconnecting the data line from NISTARS and connecting the cable from the Digi AccelePort to the carousel controller.

- d) Begin testing as identified in paragraph 1.5.1.

- e) Complete all ECS test workload.

- f) Communications will be reestablished between NISTARS and the Carousel Controller by reconnecting the data line from NISTARS.

- g) Disconnect the LU 6.2 cable from the A/B switch.

- h) Resume normal operation.

APPENDIX K DSS-ECS INSTALLATION AT DDPH - GUAM

1.0 GUAM SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 Guam Schedule

The detailed schedule for the Guam implementation can be located in the referenced document DSS POAM for DDPH Implementation.

1.1.1 Contact Point

DSIO Implementation POC for DDSP:	Sharon Ward Defense Logistics Agency DSIO-EI 8725 John J. Kingman Road Fort Belvoir, VA 22060-6221 DSN 427-6557 COMM (703) 767-6557
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DDPH DSS POC	John Suetsugu DDPH DSN 473-4672
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	Denise Cordeiro DDPH DSN 473-4670
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1.2 Guam Software Installation Procedures

Refer to Appendix B for DSS-ECS Installation Procedure.

1.2.1 Support Materials

The user will be required to purchase 4mm Data-grade, 4.0 GB DDS DAT cartridges and DDS DAT head-cleaning cartridges. Recommend a minimum of 20 data cartridges be procured at an average cost of \$20 - \$30 per/cartridge and 5 - 10 cleaning cartridges at an average cost of \$10 - \$15 per/cartridge with a capacity of 40 - 50 passes of cleaning. Conner, Sony, and Maxell are reliable sources.

1.3 **Guam Hardware Installation Procedures**

1.3.1 **Prerequisites**

The support agencies and the user will ensure that all prerequisites as identified and assigned in the DSS Implementation POAM for DDPH have been fulfilled prior to the installation. The prerequisites include:

- a) Construct and mount a shelf within Storage Carousel area for:
 - 8-Port DIGI Controller (quantity of 2)
- b) Install a 4-plex outlet box at each DIGI Controller location (quantity of 2), and provide 110/115 VAC at each box.
- c) Run RS-232 shielded null modem cables (quantity of 10) from each Carousel Controller to ports on the 8-Port DIGI controllers.
- d) TELCO/Communication/Data lines:
 - Two (2) analog telephone lines to support DSN and on/off installation to be located in the ECS Computer Room for dial up capability into the two ECS servers.
 - One (1) dedicated 56Kb line from the ECS Computer Room to the Hill AFB Megacenter (DMCO) in Ogden, UT for LU6.2 SNA connectivity.
 - One (1) 9.6Kb RS-422 cable from the ECS Computer Room to the first 8-Port DIGI controllers located in the storage carousel areas.
 - One (1) 9.6Kb RS-422 cable from the first 8-Port DIGI controller to the second 8-Port DIGI controller in the Storage Carousel area.

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS computer equipment as procured by the project sponsor. All ECS equipment will need to be transferred into the ECS computer room. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

The developer will be responsible for set-up of the ECS computer equipment. The designated DDPH ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, the developer will conduct an ECS/MHE Integration Test with the assistance of the user.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the Guam Carousel systems. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action (rotation of carousel) that is generated by the Carousel controller to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and a carousel controller to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where SMM transactions generated at the Upper Tier of DSS are passed through ECS to the Carousels to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of successfully testing the requirements as identified in 1.5.1. Part 2 will be completed several weeks prior to environmental testing. The exact schedule for both parts are shown on the current DDPH POAM.
- b) Testing will occur Monday - Friday. The option will be available to conduct the test on Saturday and Sunday if required.

- c) Testing will start at 0900 hours daily. The user will make available one carousel aisle daily. The developer will be responsible for switching from one carousel aisle to another based upon priority workload as determined by the user. If no aisles are available, testing will be conducted at the end of the sites workday as determined by the user. The workday's activity will determine the availability of starting earlier.
- d) Testing will end at 1700 hours or an agreed upon time between the developer/user.
- e) Set-up will occur 0800 - 0900 hours.

1.5.3

Test Procedure

- a) Complete all workload at the end of the storage carousel aisle and then switch the carousel controller to ECS control.
- b) Communications will be established between the DSS upper tier and the ECS lower tier by connecting the LU6.2 cable to the A/B 2-port switch that is connected to the Attachmate board in the Traffic Controller Pentium.
- c) Communications will be established between the ECS lower tier and the carousel controller by disconnecting the data line from NISTARS and connecting the cable from the Digi AccelePort to the carousel controller.
- d) Begin testing as identified in paragraph 1.5.1.
- e) Complete all ECS test workload.
- f) Communications will be reestablished between NISTARS and the Carousel Controller by reconnecting the data line from NISTARS.
- g) Disconnect the LU 6.2 cable from the A/B switch.
- h) Resume normal operation.

APPENDIX L DSS-ECS INSTALLATION AT DDYJ -YOKOSUKA

1.0 YOKOSUKA SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 Yokosuka Schedule

The detailed schedule for the Yokosuka implementation can be located in the referenced document DSS POAM for DDYJ Implementation.

1.1.1 Contact Point

DSIO Implementation POC for DDSP:	Sharon Ward Defense Logistics Agency DSIO-EI 8725 John J. Kingman Road Fort Belvoir, VA 22060-6221 DSN 427-6557 COMM (703) 767-6557
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DDYJ DSS POC	Dotti Pollreisz FISC-YOKI DSN 243-6980
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	Dotti Clark DDYJ DSN 462-9600
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1.2 Yokosuka Software Installation Procedures

Refer to Appendix B for DSS-ECS Installation Procedure.

1.2.1 Support Materials

The user will be required to purchase 4mm Data-grade, 4.0 GB DDS DAT cartridges and DDS DAT head-cleaning cartridges. Recommend a minimum of 20 data cartridges be procured at an average cost of \$20 - \$30 per/cartridge and 5 - 10 cleaning cartridges at an average cost of \$10 - \$15 per/cartridge with a capacity of 40 - 50 passes of cleaning. Conner, Sony, and Maxell are reliable sources.

1.3 Yokosuka Hardware Installation Procedures

1.3.1 Prerequisites

The support agencies and the user will ensure that all prerequisites as identified and assigned in the DSS Implementation POAM for DDYJ have been fulfilled prior to the installation. The prerequisites include:

- a) Construct and mount a shelf within Storage/Consolidation Carousel area for:
 - 8-Port DIGI Controller (quantity of 5)
- b) Install a 4-plex outlet box at each DIGI Controller location (quantity of 5), and provide 110/115 VAC at each box.
- c) Run RS-232 shielded null modem cables (quantity of 28) from each Carousel Controller to the ports on the 8-Port DIGI controllers.
- d) TELCO/Communication/Data lines:
 - Two (2) analog telephone lines to support DSN and on/off installation to be located in the ECS Computer Room for dial up capability into the two ECS servers.
 - One (1) dedicated 56Kb line from the ECS Computer Room to the Hill AFB Megacenter (DMCO) in Ogden, UT for LU6.2 SNA connectivity.
 - Two (2) 9.6Kb RS-422 cables from the ECS Computer Room; one to the first 8-Port DIGI controllers located in the storage carousel areas and one to the 8-Port DIGI controller located in the packing carousel area.
 - Three (3) 9.6Kb RS-422 cables to be installed between each 8-Port DIGI controller located in the Storage Carousel area.

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS computer equipment as procured by the project sponsor. All ECS equipment will need to be transferred into the ECS computer room. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

The developer will be responsible for set-up of the ECS computer equipment. The designated DDYJ ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, the developer will conduct an ECS/MHE Integration Test with the assistance of the user.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the Yokosuka Carousel systems. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action (rotation of carousel) that is generated by the Carousel controller to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and a carousel controller to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where SMM transactions generated at the Upper Tier of DSS are passed through ECS to the Carousels to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of successfully testing the requirements as identified in 1.5.1. Part 2 will be completed several weeks prior to environmental testing. The exact schedule for both parts are shown on the current DDYJ POAM.
- b) Testing will occur Monday - Friday. The option will be available to conduct the test on Saturday and Sunday if required.
- c) Testing will start at 0900 hours daily. The user will make available one carousel aisle daily. The developer will be responsible for switching from one carousel aisle to another based upon priority workload as determined by the user. If no aisles are available, testing will be conducted at the end of the sites workday as determined by the user. The workday's activity will determine the availability of starting earlier.
- d) Testing will end at 1700 hours or an agreed upon time between the developer/user.
- e) Set-up will occur 0800 - 0900 hours.

1.5.3

Test Procedure

- a) Complete all workload at the end of the storage carousel aisle and then switch the carousel controller to ECS control.
- b) Communications will be established between the DSS upper tier and the ECS lower tier by connecting the LU6.2 cable to the A/B 2-port switch that is connected to the Attachmate board in the Traffic Controller Pentium.
- c) Communications will be established between the ECS lower tier and the carousel controller by disconnecting the data line from NISTARS and connecting the cable from the Digi AccelePort to the carousel controller.
- d) Begin testing as identified in paragraph 1.5.1.
- e) Complete all ECS test workload.
- f) Communications will be reestablished between NISTARS and the Carousel Controller by reconnecting the data line from NISTARS.
- g) Disconnect the LU 6.2 cable from the A/B switch.
- h) Resume normal operation.

APPENDIX M ECS AWOS INSTALLATION AT DDSP - NEW CUMBERLAND

1.0 NEW CUMBERLAND SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 New Cumberland Schedule

The detailed schedule for the New Cumberland implementation can be located in the referenced document ECS POAM for DDSP AWOS Implementation.

1.1.1 Contact Point

DSIO Implementation POC for DDSP:	Ramona Douglas DLA/Defense Distribution Center DSIO-TZ 2001 Mission Drive, Bldg 54-2 New Cumberland, PA 17070-5001 DSN 771-7893 COMM (717) 770-7893
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DDSP DSS POC	Tom Yeckley DDSP-Z DSN 771-4351
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1.2 New Cumberland Software Installation Procedures

Refer to APPENDIX B DSS-ECS INSTALLATION REQUIREMENTS.

1.2.1 Support Materials

N/A

1.3 New Cumberland Hardware Installation Procedures

1.3.1 Prerequisites

The support agencies and the user will ensure that all prerequisites as identified and assigned in the ECS Implementation POAM for DDSP AWOS have been fulfilled prior to the installation. The prerequisites include:

- a) TELCO/Communication/Data lines:
 - Two (2) LAN drops from the installation LAN to the current AWOS PC located at pole F34 in the distribution center.
 - Assign two (2) IP addresses for the DIGI Portserver and the ECS User Interface workstation located at the AWOS area.

- b) Temporarily move the User Interface workstation located at loop 8 to the AWOS work area located at pole F34 until IOC when the current AWOS PC will be converted to an ECS User Interface workstation.

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS AWOS computer equipment as procured by the project sponsor. All equipment will need to be transferred into the ECS computer room. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

The developer will be responsible for set-up of the ECS AWOS computer equipment. The designated DDSP ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/AWOS/MHE Integration Test**

After the completion of the ECS AWOS hardware set-up and software installation, the developer will conduct an ECS/AWOS/MHE Integration Test with the assistance of the user.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS AWOS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the New Cumberland Automated Material Handling Equipment (AMHE) systems. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action that is generated by an AMHE controller to insure the correct action as directed by ECS AWOS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and an AMHE controller to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where SMM transactions generated at the Upper Tier of DSS are passed through ECS to the AMHE to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 will test functions described above in paragraph 1.5.1(a) & (b). Part 2 will test the function described above in paragraph 1.5.1(c). The exact schedule for all parts is shown on the current DDSP POAM.
- b) Testing will begin on Saturday and end on Sunday. The option will be available to conduct testing during a weekday, if required.
- c) Testing will start at 1800 hours on Saturday. The user will insure that the AMHE subsystem is available for the test. If the AMHE subsystem is not available, testing will not be conducted. The workday's activity will determine the availability of starting earlier.
- d) Testing will end at 1600 hours on Sunday or an agreed upon time between the developer and the user.
- e) Set-up will occur 1700 - 1800 hours on Saturday.

1.5.3 **Test Procedure**

- a) Complete all workload in the AWOS area and then switch the AMHE controller to ECS control.
- b) Communications will be established between the AWOS lower tier and the AWOS subsystem controller by moving the AWOS scanner connection, the AWOS scale connection and the AWOS steeple chase PLC connection from the production DIGI Concentrator to the ECS DIGI Portserver. The User Interface workstation will be connected to the installation LAN prior to testing.
- c) Begin testing as identified in paragraph 1.5.1.
- d) Complete all ECS test workload.
- e) Normal production communications for the AWOS system will be reestablished by disconnecting the AWOS scanner, the AWOS scale and the AWOS steeple chase PLC from the ECS DIGI Portserver and reconnecting them to the production DIGI Concentrator.
- f) Resume normal operation.

APPENDIX N DSS-ECS INSTALLATION FOR DDOO - OKLAHOMA CITY

1.0 **OKLAHOMA CITY SITE SPECIFIC INFORMATION FOR SOFTWARE USERS**

1.1 **Oklahoma City Schedule**

The detailed schedule for the Oklahoma City implementation can be located in the referenced document DSS POAM for DDOO Implementation.

1.1.1 **Contact Point**

DSIO Implementation POC for DDOO:	Katy Cornter-Wentz DLA/Defense Distribution Center DSIO-TZ 2001 Mission Drive, Bldg 54-2 New Cumberland, PA 17070-5001 DSN 771-6153 COMM (717) 770-6153
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DDOO DSS POC	Joyce Nickell DDOO-XS DSN 339-7263
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1.2 **Oklahoma City Software Installation Procedures**

Refer to Appendix B for DSS-ECS Installation Procedure.

1.2.1 **Support Materials**

The user will be required to purchase 4mm Data-grade, 4.0 GB DDS DAT cartridges and DDS DAT head-cleaning cartridges. Recommend a minimum of 20 data cartridges be procured at an average cost of \$20 - \$30 per/cartridge and 5 - 10 cleaning cartridges at an average cost of \$10 - \$15 per/cartridge with a capacity of 40 - 50 passes of cleaning. Conner, Sony, and Maxell are reliable sources.

1.3 **Oklahoma City Hardware Installation Procedures**

1.3.1 **Prerequisites**

The support agencies and the user will ensure that all prerequisites as identified and assigned in the DSS Implementation POAM for DDOO have been fulfilled prior to the installation. The prerequisites include:

- a) Construct and mount a shelf within DAWS area for:
 - 8-Port DIGI Port Server (quantity of 1)
- b) Install a 4-plex outlet box at each DIGI Port Server location (quantity of 1), and provide 110/115 VAC at each box.
- c) Run RS-232 shielded null modem cables (quantity of 4) from each Fairbanks Controller to ports on the 8-Port DIGI Port Server.
- d) Reconfigure current DSS Workstations (quantity of 4) to support Windows NT and the ECS User Interface.
- e) TELCO/Communication/Data lines:
 - Two (2) analog telephone lines to support DSN and on/off installation to be located in the ECS Computer Room for dial up capability into the two ECS servers.
 - One (1) dedicated 56Kb line from the ECS Computer Room to the local Cisco router for LU6.2 SNA connectivity to the Hill AFB Megacenter in Layton, UT.
 - One (1) LAN drop to the 8-Port DIGI Port Server located in the DAWS area.

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS computer equipment as procured by the project sponsor. All ECS equipment will need to be transferred into the ECS computer room. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

The developer will be responsible for set-up of the ECS computer equipment. The designated DDOO ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, the developer will conduct an ECS/MHE Integration Test with the assistance of the user.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, PA; and tested on development hardware at that location, is compatible and can be integrated with the Oklahoma City DAWS systems. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action (weigh and cube) that is generated by the Fairbanks controller to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and a Fairbanks controller to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where M02 transactions generated by ECS are passed to the Upper Tier (DSS) to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of successfully testing the requirements as identified in paragraph 1.5.1 items a) and b). Part 2 consists of successfully testing the requirement identified in paragraph 1.5.1 item c), and will be completed several weeks prior to environmental testing. The exact schedule for both parts are shown on the current DDOO POAM.
- b) Testing will occur Monday - Friday. The option will be available to conduct the test on Saturday and Sunday if required.
- c) Testing will start at 0900 hours daily. The user will make available one Fairbanks controller daily. The developer will be responsible for switching the Fairbanks controller from the production environment to the testing environment. If no Fairbanks controllers are available, testing will be conducted at the end of the sites workday as determined by the user. The workday's activity will determine the availability of starting earlier.
- d) Testing will end at 1700 hours or an agreed upon time between the developer and the user.
- e) Set-up will occur 0800 - 0900 hours.

1.5.3 **Test Procedure**

- a) Complete all workload for a specified DAWS line and then switch the Fairbanks controller to ECS control.

- b) Communications will be established between the DSS upper tier and the ECS lower tier by connecting the LU6.2 cable to the A/B 2-port switch that is connected to the Attachmate board in the Traffic Controller PC.

- c) Communications will be established between the ECS lower tier and the Fairbanks controller by disconnecting the data line from the Intermec 9165A controller at the Fairbanks controller and connecting the cable from the Digi AccelePort to the Fairbanks controller.

- d) Begin testing as identified in paragraph 1.5.1.

- e) Complete all ECS test workload.

- f) Communications will be reestablished between Intermec 9165A and the Fairbanks Controller by reconnecting the data line from Intermec 9165A.

- g) Resume normal operation.

APPENDIX O ECS AWOS INSTALLATION FOR DDJC - TRACY

1.0 TRACY SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 Tracy Schedule

The detailed schedule for the Tracy implementation can be located in the referenced document ECS/AWOS POAM for DDJC Implementation.

1.1.1 Contact Point

DSIO Implementation POC for
DDJC:

Ramona Douglas
DLA/Defense Distribution Center
DSIO-TZ
2001 Mission Drive, Bldg 54-2
New Cumberland, PA 17070-5001
DSN 771-6153
COMM (717) 770-6153

DDJC DSS POC

Walt White
DDJC-ZM
DSN 462-9689

1.2 Tracy Software Installation Procedures

Refer to Appendix B for DSS-ECS Installation Procedure.

1.2.1 Support Materials

The user will be required to purchase 4mm Data-grade, 4.0 GB DDS DAT cartridges and DDS DAT head-cleaning cartridges. Recommend a minimum of 20 data cartridges be procured at an average cost of \$20 - \$30 per/cartridge and 5 - 10 cleaning cartridges at an average cost of \$10 - \$15 per/cartridge with a capacity of 40 - 50 passes of cleaning. Conner, Sony, and Maxell are reliable sources.

1.3 Tracy Hardware Installation Procedures

1.3.1 Prerequisites

The support agencies and the user will ensure that all prerequisites as identified and assigned in the DSS Implementation POAM for DDJC have been fulfilled prior to the installation. The prerequisites include:

- a) Run RS-232 shielded null modem cable (quantity of 1) from the AWOS PLC to the ports on the ECS 8-Port DIGI controller. Existing cables will be utilized for all other AWOS devices (i.e. scanners and scales).
- b) Insure that the AWOS PLC and all scanning devices can support the 7 digit control numbers utilized by DSS 8.0. Review the AWOS PLC logic to insure that the existing AWOS workstations can be removed without adversely impacting the current functionality of the PLC.
- c) TELCO/Communication/Data lines:
 - Two (2) analog telephone lines to support DSN and on/off installation to be located in the ECS Computer Room for dial up capability into the two ECS servers.
 - One (1) dedicated 56Kb line from the ECS Computer Room to the local Cisco router for LU6.2 SNA connectivity to the Hill AFB Megacenter in Layton, UT.
 - Four (4) LAN drops are required in Building 16 to accommodate the ECS 8-Port DIGI concentrator and the ECS User Interface workstations. The LAN drop for the ECS 8-Port DIGI should be located by the existing AWOS DIGI interface. The LAN drops for the ECS User Interface Workstations should be located in the immediate vicinity of the proposed locations of the workstations.

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS computer equipment as procured by the user. All ECS equipment will need to be transferred into the ECS computer room. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

The developer in conjunction with the equipment supplier will be responsible for set-up of the ECS computer equipment. The designated DDJC ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, the developer will conduct an ECS/MHE Integration Test with the assistance of the user.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the Tracy AWOS systems. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action that is generated by the AWOS to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and the AWOS devices (i.e. scanners, scales and PLC) to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where M02 transactions generated by ECS are passed to the Upper Tier (DSS) to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of successfully testing the requirements as identified in 1.5.1.a) & b). Part 2 will be completed several weeks prior to environmental testing and will cover the requirement identified in paragraph 1.5.1.c) above. The exact schedules for both parts are shown on the current DDJC POAM.
- b) Testing will occur Monday - Friday. The option will be available to conduct the test on Saturday and Sunday if required.
- c) Testing will not start any earlier than 0900 hours daily. The user will make the AWOS available at a predetermined time daily. The developer will be responsible for switching the AWOS devices from the production environment to the testing environment. If the AWOS cannot be made available, testing will be conducted at the end of the sites workday as determined by the user. The workday's activity will determine the availability of starting earlier.
- d) Testing will end at 1700 hours or an agreed upon time between the developer and the user.
- e) Set-up will occur 1 hour prior to testing. Switching back to the production environment will occur 1 hour prior to the end of testing.

1.5.3

Test Procedure

- a) Complete all workload for AWOS and then switch the AWOS devices to ECS control.
- b) Communications will be established between the DSS upper tier and the ECS lower tier by connecting the LU6.2 cable to the A/B 2-port switch that is connected to the Attachmate board in the Traffic Controller PC.
- c) Communications will be established between the ECS lower tier and the AWOS devices by disconnecting the data lines from the existing AWOS workstation DIGI and connecting the cables from the ECS 8-Port DIGI.
- d) Begin testing as identified in paragraph 1.5.1.
- e) Complete all ECS test workload.
- f) Communications will be reestablished between the production AWOS workstation and the AWOS devices by disconnecting the data lines from the ECS 8-Port DIGI and connecting them to the DIGI on the production AWOS workstation.
- g) Resume normal operation.

APPENDIX P ECS AWOS INSTALLATION FOR DDNV - NORFOLK

1.0 NORFOLK SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 Norfolk Schedule

The detailed schedule for the Norfolk implementation can be located in the referenced document ECS/AWOS Implementation POAM for DDNV.

1.1.1 Contact Point

DSIO Implementation POC for
DDNV:

Walt Schilling
DLA/Defense Distribution Center
DSIO-TZ
2001 Mission Drive, Bldg 54-2
New Cumberland, PA 17070-5001
DSN 771-6153
COMM (717) 770-6153

DDNV DSS POC

Hilliard Reese
DDNV-XB
1968 Gilbert Street (Code XB)
Norfolk, VA 23512
DSN 646-3460

1.2 Norfolk Software Installation Procedures

Refer to Appendix B for DSS-ECS Installation Procedure.

1.2.1 Support Materials

None.

1.3 Norfolk Hardware Installation Procedures

1.3.1 Prerequisites

The contractor and the user will ensure that all prerequisites as identified and assigned in the ECS/AWOS Implementation POAM for DDNV have been fulfilled prior to the installation. The prerequisites include:

- a) The installation, to include the required LAN drop, of the 8-Port DIGI Portserver (quantity of 1) is completed.
- b) Run RS-232 cables (quantity of 5) from each scanner controller (quantity of 3), the scale (quantity of 1) and the MODICON PLC (quantity of 1) to the ports on the 8-Port DIGI controller.

- c) Setup the ECS AWOS subcontroller hardware in the ECS computer room.

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS computer equipment as procured by the contractor. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

The contractor will be responsible for set-up of the ECS computer hardware. DSIO will be responsible for the loading of the Windows and ECS software on the AWOS subcontroller. DDNV will assist in the loading of the software. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, DSIO will conduct an ECS/MHE Integration Test with the assistance of the user.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the Norfolk AWOS systems. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action (scan, weigh and divert) that is generated by the scanner and scale controllers to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and the MODICON PLC to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where M02 transactions generated by ECS are passed to the Upper Tier (DSS) to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of successfully testing the requirements as identified in 1.5.1.a) & b). Part 2 will be completed several weeks prior to environmental testing and will test the requirement in 1.5.1.c). The exact schedules for both parts are shown on the current DDNV POAM.

- b) Testing will occur Monday - Friday. The option will be available to conduct the test on Saturday and Sunday if required.
- c) Testing will start at 0900 hours daily.
- d) Testing will end at 1700 hours or an agreed upon time between DSIO, the user and the contractor.
- e) Set-up will occur 0800 - 0900 hours.

1.5.3

Test Procedure

- a) Communications will be established between the DSS upper tier and the ECS lower tier by utilizing the existing LU6.2 connection. It should be noted that LU6.2 configuration would need to be updated to incorporate the new uplink for the AWOS M02 messages.
- b) Communications will be established between the ECS lower tier and the DIGI 8-Port Portserver.
- c) Begin testing as identified in paragraph 1.5.1.
- d) Complete all ECS test workload.
- e) Restore the LU6.2 link to its normal configuration (i.e. remove the LU for the M02 up message).
- f) Resume normal operation.

APPENDIX Q ECS CAROUSEL & ASRS INSTALLATION FOR DDJC - TRACY

1.0 TRACY SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 Tracy Schedule

The detailed schedule for the Tracy implementation can be located in the referenced document ECS Carousel & ASRS POAM for DDJC Implementation.

1.1.1 Contact Point

DSIO Implementation POC for
DDJC:

Ramona Douglas
DLA/Defense Distribution Center
DSIO-TZ
2001 Mission Drive, Bldg 54-2
New Cumberland, PA 17070-5001
DSN 771-6153
COMM (717) 770-6153

DDJC DSS POC

Walt White
DDJC-ZM
DSN 462-9689

1.2 Tracy Software Installation Procedures

Refer to Appendix B for DSS-ECS Installation Procedure.

1.2.1 Support Materials

N/A

1.3 Tracy Hardware Installation Procedures

1.3.1 Prerequisites

The support agencies and the user will ensure that all prerequisites as identified and assigned in the DSS Implementation POAM for DDJC have been fulfilled prior to the installation. The prerequisites include:

- a) Run RS-232 shielded null modem cable (quantity of 18) from each carousel controller to the ports on the ECS 8-Port DIGI controller.
- b) Insure that the carousel DIGI concentrators (quantity of 4) are mounted in the carousel area with sufficient power and LAN availability.
- c) Provide cables (quantity of 19) for the DIGI to crane interface (18) and the DIGI to Allen Bradley interface (1).

- d) Insure that the ASRS DIGI concentrators (quantity of 3) are mounted in the ASRS crane area (2) and the ASRS computer room (1) with sufficient power and LAN availability.
- e) TELCO/Communication/Data lines:
- Four (4) LAN drops are required in Building 16 to accommodate the ECS 8-Port DIGI concentrators located in the area of the Raymond carousels. The LAN drop for the ECS 8-Port DIGI should be located adjacent to where the DIGI concentrators are mounted. Additional LAN drops will be required in this area for the DSS workstations and printers that are needed.
 - Eleven (11) LAN drops are required in Building 30 to accommodate the ECS 16-Port and 8-Port DIGI concentrators located in the ASRS crane area (2), the ECS User Interface (UI) workstations (8) and the ECS 8-Port DIGI concentrator located in the ASRS computer room (1). The LAN drops in the ASRS crane area should be located in the crane communications panel. The LAN drop for the ASRS computer room will be placed in the vicinity of the DIGI location. The LAN drops for the UI workstations should be located next to the existing DEC terminals in the ASRS crane area (4) and the ASRS material processing area (4). Additional LAN drops will be required in ASRS material processing area for DSS workstations and printers.

1.3.2 **Delivery**

N/A

1.4 **Set-up**

The developer (DSIO-U) will be responsible for set-up of the ECS computer equipment. The designated DDJC ECS Systems Administrators will assist in the set-up.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, the developer will conduct an ECS/MHE Integration Test with the assistance of the user.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the DSS/ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the Tracy Carousel systems and the Tracy ASRS. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action that is generated by the Carousels and the ASRS to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and the Carousels and that will pass between the ECS and the ASRS to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where transactions generated by DSS are passed to the ECS to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of successfully testing the requirements as identified in 1.5.1.a) & b). Part 2 will be completed several weeks prior to environmental testing and will cover the requirement identified in paragraph 1.5.1.c) above. The exact schedules for both parts are shown on the current DDJC POAM.
- b) Testing will occur Monday - Friday. The option will be available to conduct the test on Saturday and Sunday if required.
- c) Testing will not start any earlier than 0900 hours daily. The user will make the Carousels and ASRS available at a predetermined time daily. The developer will be responsible for switching the devices from the production environment to the testing environment. If the systems cannot be made available, testing will be conducted at the end of the sites workday as determined by the user. The workday's activity will determine the availability of starting earlier.
- d) Testing will end at 1700 hours or an agreed upon time between the developer and the user.
- e) Set-up will occur 1 hour prior to testing. Switching back to the production environment will occur 1 hour prior to the end of testing.

1.5.3

Test Procedure

- a) Complete all workload for the Carousels or ASRS and then switch the devices to ECS control.
- b) Communications will be established between the ECS lower tier and the ASRS devices by disconnecting the data lines from the existing DEC port servers and connecting the cables to the ECS 16-Port DIGI (1) and the 8-Port DIGI's (2).
- c) Communications with the Carousels will be established by connecting the RS232 cables (18) to the Carousel controllers.
- d) Begin testing as identified in paragraph 1.5.1.
- e) Complete all ECS test workload.
- f) Communications will be reestablished between with the production ASRS devices by disconnecting the data lines from the ECS 16-Port DIGI (1) and the 8-Port DIGI's (2) and connecting them to the production DEC port servers.
- g) Communications with ECS will be terminated on the Carousels by disconnecting the RS232 cables (18) from the Carousel controllers.

APPENDIX R DSS-ECS INSTALLATION FOR DDRT - RED RIVER

1.0 RED RIVER SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 Red River Schedule

The detailed schedule for the Red River implementation can be located in the referenced document DSS POAM for DDRT Implementation.

1.1.1 Contact Point

DSIO Implementation POC for
DDRT:

Ramona Douglas
DLA/Defense Distribution Center
DSIO-J6
Bldg 54-2
New Cumberland, PA 17070-5001
DSN 771-7893
COMM (717) 770-7893

DDRT DSS POC

Larry Scrivner
DDRT-W
DSN 829-2181

1.2 Red River Software Installation Procedures

Refer to Appendix B for DSS-ECS Installation Procedure.

1.2.1 Support Materials

The user will be required to purchase magnetic tape cartridges and head-cleaning cartridges. Recommend a minimum of 20 data cartridges be procured at an average cost of \$20 - \$30 per/cartridge and 5 - 10 cleaning cartridges at an average cost of \$10 - \$15 per/cartridge with a capacity of 40 - 50 passes of cleaning. Conner, Sony, and Maxell are reliable sources.

1.3 Red River Hardware Installation Procedures

1.3.1 Prerequisites

The support agencies and the user will ensure that all prerequisites as identified and assigned in the DSS Implementation POAM for DDRT have been fulfilled prior to the installation. The prerequisites include:

- a) Construct and mount a shelf within the AWOS area for:
 - 8-Port DIGI Controller (quantity of 1)

- b) Install a 4-plex-outlet box at each DIGI Controller location (quantity of 1), and provide 110/115 VAC at each box. Insure that adequate power exists in Room 125 of Building 499 for installation of the ECS servers and subcontroller. The ECS servers and subcontroller will require minimum of two (2) 4-plex-outlet boxes.
- c) TELCO/Communication/Data lines:
- Two (2) analog telephone lines to support DSN and on/off installation to be located in the ECS Computer Room (Room 125 of Building 499) for dial up capability into the two ECS servers.
 - One (1) dedicated 56Kb line from the ECS Computer Room to the local Cisco router for LU6.2 SNA connectivity to the Hill AFB Megacenter in Layton, UT.
 - One (1) LAN drops to the 8-Port DIGI controller located in the AWOS area of Building 499.
 - Three (3) LAN drops to the ECS servers and subcontroller located in Room 125 of Building 499.
 - One (1) LAN drops to the Powerlink computer located in Building 499.
 - Two (2) RS-232 cables from the AWOS scale and scanner to the DIGI PortServer.

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS computer equipment as procured by the project sponsor. All ECS equipment will need to be transferred into the ECS computer room. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

The developer will be responsible for set-up of the ECS computer equipment. The designated DDRT ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, the developer will conduct an ECS/MHE Integration Test with the assistance of the user.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the Red River AWOS system. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action (weigh and scan) that is generated by the AWOS scale and scanner to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and the Powerlink controller and between the ECS and the AWOS scale and scanner to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where M02 transactions generated by ECS are passed to the Upper Tier (DSS) to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of successfully testing the requirements as identified in paragraph 1.5.1.a) and 1.5.1.b). Part 2 will consist of successfully testing the requirements as identified in paragraph 1.5.1.c). The exact schedule for both parts is shown on the current DDRT POAM.
- b) Testing will occur Monday - Friday. The option will be available to conduct the test on Saturday and Sunday if required.
- c) Testing will start at 0900 hours daily. The user will make available one AWOS scale, scanner and conveyor daily. If AWOS equipment cannot be made available, testing will be conducted at the end of the sites workday as determined by the user. The workday's activity will determine the availability of starting earlier.
- d) Testing will end at 1700 hours or an agreed upon time between the developer and the user.
- e) Set-up will occur 0800 - 0900 hours.

1.5.3 **Test Procedure**

- a) Complete all production workload in the AWOS area. Place the AWOS scale and scanner under ECS control. Notify the warehouse that the Powerlink MHE controller is going down. Switch to the backup Powerlink MHE controller, which runs the software for the new ECS interface message. Notify the warehouse when the Powerlink MHE controller is up.
- b) Communications will be established between the DSS upper tier and the ECS lower tier by connecting the LU6.2 cable to the A/B 2-port switch that is connected to the Attachmate board in the Traffic Controller PC.
- c) Communications will be established between the ECS lower tier and the AWOS scale and scanner via the Depot LAN to the DIGI PortServer.
- d) Communications with the Powerlink MHE controller will be accomplished via the Depot LAN.
- e) Begin testing as identified in paragraph 1.5.1.
- f) Complete all ECS test workload.
- g) Notify the warehouse that the Powerlink MHE controller is going down. Switch to the production Powerlink MHE controller for normal processing. Notify the warehouse when the Powerlink MHE controller is up.
- h) Resume normal operation.

APPENDIX S ECS TRIAX INSTALLATION FOR DDNV - NORFOLK

1.0 NORFOLK SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 Norfolk Schedule

The detailed schedule for the Norfolk implementation can be located in the referenced document ECS/TRIAX Implementation POAM for DDNV.

1.1.1 Contact Point

DSIO Implementation POC for DDNV:	Tom Downs DLA/Defense Distribution Center DSIO-J6 2001 Mission Drive, Bldg 54-2 New Cumberland, PA 17070-5001 DSN 771-4544 COMM (717) 770-5389
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DDNV DSS POC	Hilliard Reese DDNV-XB: 1968 Gilbert Street (Code XB) Norfolk, VA 23512 DSN 646-3460
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1.2 Norfolk Software Installation Procedures

Refer to Appendix B for DSS-ECS Installation Procedure.

1.2.1 Support Materials

None.

1.3 Norfolk Hardware Installation Procedures

1.3.1 Prerequisites

The contractor and DDNV will ensure that all prerequisites as identified and assigned in the ECS/TRIAX Implementation POAM for DDNV have been fulfilled prior to the installation. The prerequisites include:

- a) The installation of the 8-Port DIGI PortServer I (quantity of 1), to include power, in the area of the TRIAX cranes and PLC. This installation should include the LAN drop for the DIGI PortServer I.

- b) Installation of RS-232 null modem cables (quantity of 5) from each crane controller (quantity of 4) and the Allen-Bradley PLC (quantity of 1) to the ports on the 8-Port DIGI concentrator. The connectors for the DIGI end of the cable should be DB25 female. The connectors for the crane and PLC end should conform to what is required by these devices.
- c) Setup the ECS TRIAX subcontroller hardware in the ECS computer room.

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS computer equipment as procured by the DDC. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

DDNV will be responsible for set-up of the ECS computer hardware. DSIO will be responsible for the loading of the Windows and ECS software on the TRIAX subcontroller. DDNV will assist in the loading of the software. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, DSIO will conduct an ECS/MHE Integration Test with the assistance of the user.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the Norfolk TRIAX systems. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Requirements Specification (IRS) that will pass between the ECS and the crane controllers to insure compatibility of transaction length and data and to insure that the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS IRS that will pass between the ECS and the Allen-Bradley PLC to insure compatibility of transaction length and data and to insure that the correct action as directed by ECS was accomplished
- c) Conduct a multi-thread simulation test where transactions generated by DSS are passed to the ECS to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of successfully testing the requirements as identified in 1.5.1.a) & b). Part 2 will be completed several weeks prior to environmental testing and will test the requirement in 1.5.1.c). The exact schedules for both parts are shown on the current DDNV POAM.
- b) Testing will occur Monday - Friday. The option will be available to conduct the test on Saturday and Sunday if required.
- c) Testing will start at 0900 hours daily.
- d) Testing will end at 1700 hours or an agreed upon time between DSIO, the user and the contractor.
- e) Set-up will occur 0800 - 0900 hours.

1.5.3 **Test Procedure**

- a) Establish a test ECS Traffic process on the ECS TRIAX subcontroller.
- b) Communications will be established between the ECS TRIAX subcontroller and the DIGI 8-Port concentrator.
- c) Begin testing as identified in paragraph 1.5.1.
- d) Complete all ECS test workload.

**APPENDIX T ECS ACTIVE ITEM INSTALLATION FOR DDSP-NEW
CUMBERLAND**

**1.0 NEW CUMBERLAND SITE SPECIFIC INFORMATION FOR
SOFTWARE USERS**

1.1 New Cumberland Schedule

The detailed schedule for the New Cumberland implementation can be located in the referenced document ECS/ACTIVE ITEM Implementation POAM for DDSP.

1.1.1 Contact Point

DDSC Implementation POC for	Tom Downs DDSC: DLA/Defense Distribution Center DDC-J6 2001 Mission Drive, Bldg 54-2 New Cumberland, PA 17070-5001 DSN 771-4544 COMM (717) 770-5389
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DDSP DSS POC	Stan Good DDSP-Z Building 2001 New Cumberland, VA 17070-5001 DSN 771-8934
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1.2 New Cumberland Software Installation Procedures

Refer to Appendix B for DSS-ECS Installation Procedure.

1.2.1 Support Materials

None.

1.3 New Cumberland Hardware Installation Procedures

1.3.1 Prerequisites

The contractor and DDSP will ensure that all prerequisites as identified and assigned in the ECS/ACTIVE ITEM Implementation POAM for DDSP have been fulfilled prior to the installation. The prerequisites include:

- a) The installation of the 8-Port DIGI PortServer I (quantity of 1), to include power, in the area of the ACTIVE ITEM PLC. This installation should include the LAN drop for the DIGI PortServer I.

- b) Installation of RS-232 null modem cable (quantity of 1) from the Allen-Bradley PLC (quantity of 1) to the port on the 8-Port DIGI concentrator. The connectors for the DIGI end of the cable should be DB25 female. The connectors for the PLC end should conform to what is required by this device.
- c) Setup the ECS ACTIVE ITEM subcontroller hardware in the ECS computer room to include the installation of the required LAN drop.

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS computer equipment as procured by the DDC. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

DDSP will be responsible for set-up of the ECS computer hardware. DSIO will be responsible for the loading of the Windows and ECS software on the ACTIVE ITEM subcontroller. DDSP will assist in the loading of the software. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, DSIO will conduct an ECS/MHE Integration Test with the assistance of the user.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the New Cumberland ACTIVE ITEM systems. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and the Allen-Bradley PLC to insure compatibility of transaction length and data and to insure that the correct action as directed by ECS was accomplished
- b) Conduct a multi-thread simulation test where transactions generated by DSS are passed to the ECS to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of successfully testing the requirements as identified in 1.5.1.a). Part 2 will be completed several weeks prior to environmental testing and will test the requirement in 1.5.1.b). The exact schedules for both parts are shown on the current DDSP POAM.
- b) Testing will occur Monday - Friday. The option will be available to conduct the test on Saturday and Sunday if required.
- c) Testing will start at 0900 hours daily.
- d) Testing will end at 1700 hours or an agreed upon time between DSIO, the user and the contractor.
- e) Set-up will occur 0800 - 0900 hours.

1.5.3 **Test Procedure**

- a) Establish a test ECS Traffic process on the ECS ACTIVE ITEM subcontroller.
- b) Communications will be established between the ECS ACTIVE ITEM subcontroller and the DIGI 8-Port concentrator.
- c) Begin testing as identified in paragraph 1.5.1.
- d) Complete all ECS test workload.

**APPENDIX U TOTE/PACKAGE CONVEYOR INSTALLATION FOR DDOO-
OKLAHOMA CITY**

**1.0 OKLAHOMA CITY SITE SPECIFIC INFORMATION FOR SOFTWARE
USERS**

1.1 Oklahoma City Schedule

The detailed schedule for the Oklahoma City implementation can be located in the referenced document DSS POAM for DDOO Implementation.

1.1.1 Contact Point

DDC Implementation POC for
DDOO:

Tom Downs
DLA/Defense Distribution Center
DDC-J6
M Avenue, Bldg 54-2
New Cumberland, PA 17070-5001
DSN 771-4544
COMM (717) 770-4544

DDOO DSS POC

Joyce Nickell
DDOO-XS
DSN 339-7263

1.2 Oklahoma City Software Installation Procedures

Refer to Appendix B for DSS-ECS Installation Procedure.

1.2.1 Support Materials

The user will be required to provide four Blackbox ABC switches. The following is the detailed description for this requirement:

Blackbox ABC Switch Part #SWL025A

1.3 Oklahoma City Hardware Installation Procedures

1.3.1 Prerequisites

The support agencies and the user will ensure that all prerequisites as identified have been fulfilled prior to the installation. The prerequisites include:

- a) The following actions need to be taken in the existing DAWS room:
 - Construct and mount a shelf on the east wall above the door for 8-Port DIGI Controller (quantity of 1).

- If required, install a 4-plex-outlet box on the east wall for the DIGI Controller (quantity of 1), and provide 110/115 VAC at the box.
 - Install/relocate one (1) LAN drops to the 8-Port DIGI controller to be located on the east wall in the DAWS area.
 - Insure that the contractor responsible for the installation of the two new DAWS provides one each RS232 null modem cables of sufficient length to run from the DIGI controller on the east wall of the DAWS room to each of the new DAWS.
- b) The following actions need to be taken in the PLC cabinet located in Building 506 at poll R31 (i.e. PPP&M area):
- Coordinate with the contractor responsible for the PLC for mounting of 8-Port DIGI controller (quantity of 1) in the PLC cabinet.
 - Coordinate with the contractor responsible for the PLC to provide 110/115 VAC power to the 8-Port DIGI controller (quantity of 1) in the PLC cabinet.
 - Install one (1) LAN drop to the 8-Port DIGI controller located in the PLC cabinet at poll R31 in Building 506.
 - Insure the contractor responsible for the scanner and PLC installation in this area provides all necessary RS232 null modem cables to the DIGI controller.
- c) The following actions need to be taken at the ACCU-SORT scanner located in Building 506 between polls J7, J9, L7 and L9 (i.e. Shipping area):
- Construct and mount a shelf/bracket on the scanner support structure for 4-Port DIGI Controller (quantity of 1) and two Blackbox ABC switches.
 - If required, install a 4-plex-outlet box on the scanner support structure for the DIGI Controller (quantity of 1), and provide 110/115 VAC at the box.
 - Install one (1) LAN drop to the 4-Port DIGI controller located on the scanner support structure.

- Provide and install a RS232 null modem cable of sufficient length to run from one of the Blackbox ABC switches to the TI PLC. Also, provide and install a RS232 null modem cable of sufficient length to run between the two Blackbox ABC switches.
 - Take all necessary actions to modify the ACCU-SORT scanner to read the DSS Code 39 barcode labels.
- d) The following actions need to be taken by the contractor in the PLC cabinet located in Building 506 at poll KK32.5 (i.e. Receiving area):
- Insure the contractor provides a shelf/bracket, the 8-Port DIGI controller (quantity of 1) and two Blackbox ABC switches in the PLC cabinet.
 - If required, insure the contractor installs a 4-plex-outlet box in the PLC cabinet for the DIGI Controller (quantity of 1), and provide 110/115 VAC at the box.
 - Install one (1) LAN drop to the 8-Port DIGI controller located in the PLC cabinet at poll KK32.5 in Building 506.
 - Insure the contractor provides and installs a RS232 null modem cable of sufficient length to run from one of the Blackbox ABC switches to the Allen-Bradley PLC. Also, that the contractor provides and installs a RS232 null modem cable of sufficient length to run between the two Blackbox ABC switches.
- e) The following actions need to be taken in the PLC cabinet installed by McCombs-Wall in Building 416 (i.e. Storage area):
- Coordinate with the contractor responsible for the PLC for mounting of 8-Port DIGI controller (quantity of 1) and two Blackbox ABC switches in the PLC cabinet.
 - Coordinate with the contractor responsible for the PLC to provide 110/115 VAC power to the 8-Port DIGI controller (quantity of 1) in the PLC cabinet.
 - Provide and install a RS232 null modem cable of sufficient length to run from one of the Blackbox ABC switches to the Allen-Bradley PLC. Also, provide and install a RS232 null modem cable of sufficient length to run between the two Blackbox ABC switches.

- Install one (1) LAN drop to the 8-Port DIGI controller located in the PLC cabinet in Building 416 (i.e. Storage area).

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS computer equipment as procured by the project sponsor. All ECS equipment will need to be transferred into the ECS computer room. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

The developer will be responsible for set-up of the ECS computer equipment. The designated DDOO ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, the developer will conduct an ECS/MHE Integration Test with the assistance of the user and contractors responsible for PLC code development.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the Oklahoma City DAWS and Tote/Package Conveyor systems. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action that is generated by the scanners and PLC's to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and a PLC to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where SMM transactions generated by the Upper Tier (DSS) are passed to ECS to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of successfully testing the requirements as identified in 1.5.1. Part 2 will be completed several weeks prior to environmental testing. The exact schedule for both parts are shown on the current DDOO POAM.

- b) Testing will occur on Saturday and Sunday. An option will be to test after normal operations on Monday through Friday. This option is discretionary based on the workload at DDOO.
- c) Testing will start at 0900 hours daily. The developer will be responsible for switching from the production environment to the testing environment
- d) Testing will end at 1700 hours or an agreed upon time between the developer and the user.
- e) Set-up will occur 0800 - 0900 hours.

1.5.3

Test Procedure

- a) Complete all workload for in the Building 506/416 mechanized area and switch all PLC's to ECS control.
- b) Communications will be established between the DSS upper tier and the ECS lower tier by connecting the LU6.2 cable to the A/B 2-port switch that is connected to the Attachmate board in the Traffic Controller PC.
- c) Communications will be established between the ECS lower tier and the PLC's by switching the Blackbox ABC switches to the appropriate setting for ECS control.
- d) Begin testing as identified in paragraph 1.5.1.
- e) Complete all ECS test workload.
- f) Communications will be returned to production by switching the Blackbox ABC switches off of ECS control.
- g) Resume normal operation.

APPENDIX V ECS Y109 INSTALLATION FOR DDNV-NORFOLK

1.0 NORFOLK SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 Norfolk Schedule

The detailed schedule for the Norfolk implementation can be located in the referenced document ECS/Y109 Implementation POAM for DDNV.

1.1.1 Contact Point

DDC Implementation POC for
DDNV:

Tom Downs
DLA Distribution Center
DDC-J6
2001 Mission Drive, Bldg 54-2
New Cumberland, PA 17070-5001
DSN 771-4544
COMM (717) 770-4544

DDNV DSS POC

Shirley McGill
DDNV-XB
1968 Gilbert Street (Code XB)
Norfolk, VA 23512
DSN 646-3499

1.2 Norfolk Software Installation Procedures

Refer to Appendix B for DSS-ECS Installation Procedure.

1.2.1 Support Materials

None.

1.3 Norfolk Hardware Installation Procedures

1.3.1 Prerequisites

The contractor and DDNV will ensure that all prerequisites as identified and assigned in the ECS/Y109 Implementation POAM for DDNV have been fulfilled prior to the installation. The prerequisites include:

- a) The installation of the 8-Port DIGI PortServer I (quantity of 1), to include power, in the area of the Y109 PLC. This installation should include the LAN drop for the DIGI PortServer I.

- b) Installation of RS-232 null modem cables (quantity of 1) from the Allen-Bradley PLC to the port on the 8-Port DIGI concentrator. The connectors for the DIGI end of the cable should be DB25 female. The connectors for the PLC end should conform to what is required by these devices.
- c) Setup the ECS Y109 subcontroller PC in the ECS computer room.

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS computer equipment as procured by the contractor. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

DDNV will be responsible for set-up of the ECS computer hardware. DSIO will be responsible for the loading of the Windows and ECS software on the Y109 subcontroller. DDNV will assist in the loading of the software. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, DSIO will conduct an ECS/MHE Integration Test with the assistance of the user.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the Norfolk Y109 systems. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and the PLC to insure compatibility of transaction length and data and to insure that the correct action as directed by ECS was accomplished.
- b) Conduct a multi-thread simulation test where transactions generated by DSS are passed to the ECS to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of successfully testing the requirements as identified in 1.5.1.a) . Part 2 will be completed several weeks prior to environmental testing and will test the requirement in 1.5.1.b). The exact schedules for both parts are shown on the current DDNV POAM.
- b) Testing will occur Monday - Friday. The option will be available to conduct the test on Saturday and Sunday if required.
- c) Testing will start at 0900 hours daily.
- d) Testing will end at 1700 hours or an agreed upon time between DSIO, the user and the contractor.
- e) Set-up will occur 0800 - 0900 hours.

1.5.3 **Test Procedure**

- a) Establish a test ECS Traffic process on the ECS Y109 subcontroller.
- b) Communications will be established between the ECS Y109 subcontroller and the DIGI 8-Port concentrator.
- c) Begin testing as identified in paragraph 1.5.1.
- d) Complete all ECS test workload.

**APPENDIX W PS TOTE/PACKAGE CONVEYOR INSTALLATION FOR DDPW-
PUGET SOUND**

**1.0 PUGET SOUND SITE SPECIFIC INFORMATION FOR SOFTWARE
USERS**

1.1 Puget Sound Schedule

The detailed schedule for the Puget Sound implementation can be located in the referenced document DSS POAM for DDPW Implementation.

1.1.1 Contact Point

DDC Implementation POC for
DDPW:

Tom Downs
DLA/Defense Distribution Center
DDC-J6
M Avenue, Bldg 54-2
New Cumberland, PA 17070-5001
DSN 771-4544
COMM (717) 770-4544

DDPW DSS POC

Mike O'Brian
DDPW-XS
DSN 339-7263

1.2 Puget Sound Software Installation Procedures

Refer to Appendix B for DSS-ECS Installation Procedure.

1.2.1 Support Materials

N/A

1.3 Puget Sound Hardware Installation Procedures

1.3.1 Prerequisites

The support agencies and the user will ensure that all prerequisites as identified have been fulfilled prior to the installation. The prerequisites include:

- a) The following actions need to be taken in the new Computer room:
 - If required, install a 4-plex-outlet box on the wall for the Dell Cluster and PC's, and provide 110/115 VAC at the box.
 - Install/relocate four (4) LAN drops to the area where the ECS PC's will be located.

- Install/relocate the RS422 cable for the current Carousel Subsystem in the new computer room.
 - Allocate six (6) IP addresses for use by the ECS cluster and subcontrollers.
 - Allocate six (6) computer names for the ECS cluster and subcontrollers. Four (4) of the names will be for the servers and two (2) of the names will be for the workstations. These names should conform to the current naming convention for all servers and workstations utilized on the installation LAN.
 - Define and provide the DNS names for the two ECS servers to DECC-Ogden and DSIO-UBB. These names are required for the installation of IBM MQSeries.
 - Insure that the local Firewall is set to allow the ECS servers to send and receive MQSeries data from/to 'mull.ogden.disa.mil' on TCP/IP Port #1414.
- b) The following actions need to be taken in the PLC cabinet located in Building 467:
- Coordinate with the contractor responsible for the PLC for mounting of 8-Port DIGI controller (quantity of 1) in the PLC cabinet.
 - Coordinate with the contractor responsible for the PLC to provide 110/115 VAC power to the 8-Port DIGI controller (quantity of 1) in the PLC cabinet.
 - Install one (1) LAN drop to the 8-Port DIGI controller located in the PLC cabinet.
 - Allocate one (1) IP address for use by the DIGI controller.

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS computer equipment as procured by the project sponsor. All ECS equipment will need to be transferred into the ECS computer room. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

The developer will be responsible for set-up of the ECS computer equipment. The designated DDPW ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, the developer will conduct an ECS/MHE Integration Test with the assistance of the user and contractors responsible for PLC code development.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the Puget Sound Tote Conveyor system. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action that is generated by the scanners and PLC's to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and a PLC to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where SMM transactions generated by the Upper Tier (DSS) are passed to ECS to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of successfully testing the requirements as identified in 1.5.1.a) & b). Part 2 will be completed several weeks prior to environmental testing. The exact schedule for both parts is shown on the current DDPW POAM.
- b) Testing will occur on Saturday and Sunday. An option will be to test after normal operations on Monday through Friday. This option is discretionary based on the workload at DDPW.
- c) Testing will start at 0900 hours daily. The developer will be responsible for switching from the production environment to the testing environment
- d) Testing will end at 1700 hours or an agreed upon time between the developer and the user.

- e) Set-up will occur 0800 - 0900 hours.

1.5.3 **Test Procedure**

- a) Complete all workload for in the Building 467 mechanized area and switch all PLC's to ECS control.
- b) Communications will be established between the DSS upper tier and the ECS lower tier by changing the necessary parameters on DSS to utilize IBM MQSeries.
- c) Communications will be established between the ECS lower tier and the PLC's via the installation LAN.
- d) Begin testing as identified in paragraph 1.5.1.
- e) Complete all ECS test workload.
- f) Communications will be returned to production by changing the necessary parameters on DSS to utilize Microsoft SNA Manager.
- g) Resume normal operation.

APPENDIX X STACKMAN INSTALLATION FOR DDDC-SAN DIEGO

1.0 SAN DIEGO SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 San Diego Schedule

The detailed schedule for the San Diego implementation can be located in the referenced document DSS POAM for DDDC Implementation.

1.1.1 Contact Point

DDC Implementation POC for
DDDC:

Tom Downs
DLA/Defense Distribution Center
DDC-J6
M Avenue, Bldg 54-2
New Cumberland, PA 17070-5001
DSN 771-4544
COMM (717) 770-4544

DDDC DSS POC

Ashley White
DDDC-DXM
COMM 619-556-8532

1.2 San Diego Software Installation Procedures

Refer to Appendix B for DSS-ECS Installation Procedure.

1.2.1 Support Materials

N/A

1.3 San Diego Hardware Installation Procedures

1.3.1 Prerequisites

The support agencies and the user will ensure that all prerequisites as identified have been fulfilled prior to the installation. The prerequisites include:

- a) The following actions need to be taken in the ECS Computer room:
 - If required, install three (3) 4-plex-outlet boxes in the vicinity of the Dell Cluster and PC's, and provide 110/115 VAC at the boxes.
 - Install/relocate three (3) LAN drops to the area where the new ECS PC's will be located.

- Allocate five (5) IP addresses for use by the ECS cluster and the new Stackman subcontroller.
 - Allocate five (5) computer names for the ECS cluster and the new Stackman subcontroller. Four (4) of the names will be for the servers and one (1) of the names will be for the workstation. These names should conform to the current naming convention for all servers and workstations utilized on the installation LAN.
 - Define and provide the DNS names for the two ECS servers to DECC-Ogden and DSIO-UBB. These names are required for the installation of IBM MQSeries.
 - Insure that the local Firewall is set to allow the ECS servers to send and receive MQSeries data from/to 'mua1.ogden.disa.mil' on TCP/IP Port #1414.
- b) The following actions need to be taken in the PLC cabinet located in the Stackman building:
- Coordinate with the contractor responsible for the PLC for mounting of the 2-Port DIGI controller (quantity of 1) in the PLC cabinet.
 - Coordinate with the contractor responsible for the PLC to provide 110/115 VAC power to the 2-Port DIGI controller (quantity of 1) in the PLC cabinet.
 - Install one (1) LAN drop to the 2-Port DIGI controller located in the PLC cabinet.
 - Allocate one (1) IP address for use by the DIGI controller.

1.3.2 **Delivery**

The user will be responsible for accepting delivery of the ECS computer equipment as procured by the project sponsor. All ECS equipment will need to be transferred into the ECS computer room. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

The developer will be responsible for set-up of the ECS computer equipment. The designated DDDC ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, the developer will conduct an ECS/MHE Integration Test with the assistance of the user and contractors responsible for PLC code development.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the San Diego Stackman system. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action that is generated by the scanners and PLC's to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and a PLC to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where SMM transactions generated by the Upper Tier (DSS) are passed to ECS to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of successfully testing the requirements as identified in 1.5.1.a) & b). Part 2 consists of successfully testing the requirements as identified in 1.5.1.c). The exact schedule for both parts is shown on the current DDDC POAM.
- b) Testing will occur on Monday through Friday. An option will be to test after normal operations on Monday through Friday or on Saturday and Sunday. These options are discretionary based on the workload at DDDC.
- c) Testing will start at 0900 hours daily.
- d) Testing will end at 1700 hours or an agreed upon time between the developer and the user.
- e) Set-up will occur 0800 - 0900 hours.

1.5.3

Test Procedure

- a) Communications will be established between the ECS lower tier and the PLC's via the installation LAN.
- b) Begin testing as identified in paragraph 1.5.1.
- c) Complete all ECS test workload.

APPENDIX Y ECS SORTER INSTALLATION FOR DDJC-TRACY

1.0 TRACY SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 Tracy Schedule

The detailed schedule for the Tracy implementation can be located in SCR DSS-JC3-008.

1.1.1 Contact Point

DDC Implementation POC for
DDJC:

Tom Downs
DLA/Defense Distribution Center
DDC-J6
Bldg 54-2
New Cumberland, PA 17070-5001
DSN 771-4544
COMM (717) 770-4544

DDJC DSS POC

Mike Ruth
DDJC-XS
DSN 462-9162

1.2 Tracy Software Installation Procedures

Refer to Appendix B for DSS-ECS Installation Procedure.

1.2.1 Support Materials

DDJC will be required to provide 7 DB25 cables in sufficient length to run from the ECS Mission Sorter Subcontroller located in Building 16 to the two PLC's for the Mission Sorter. Five (5) of the cables should be in a null modem configuration. Two (2) of the cables should be in a straight through configuration. Four (4) of the null modem cables will run from the ECS DIGI Connector Box to the PLC for the main Mission Sorter. One (1) null modem cable will run from the ECS DIGI Connector Box to the ECS Blackbox Serial Line Booster. One (1) straight through cable will run from the ECS Blackbox Serial Line Booster to the PLC for the secondary Mission Sorter. One (1) straight through cable will run from the ECS Blackbox Serial Line Booster for the hand scanner on the secondary Mission Sorter to the ECS DIGI Connector Box.

1.3 **Tracy Hardware Installation Procedures**

1.3.1 **Prerequisites**

The support agencies and DDJC will ensure that all prerequisites as identified below and assigned in the DDJC SCR have been fulfilled prior to the installation. The DDJC prerequisites for ECS include:

- a) Run RS-232 shielded null modem cable (quantity of 4) from the main Mission Sorter PLC to the ports on the ECS DIGI Connector Box. Run RS-232 shielded straight through cable (quantity of 1) from the ECS DIGI Connector Box to the ECS Serial Line Booster for the hand scanner on the secondary Mission Sorter. Run RS-232 shielded straight through cable (quantity of one) from the ECS DIGI Connector box to the ECS Serial Line Booster for the secondary Mission Sorter PLC. Run RS-232 shielded null modem cable (quantity of one) from the ECS Serial Line Booster for the secondary Mission Sorter PLC to the PLC the secondary Mission Sorter PLC. Existing cables will be utilized for all other Mission Sorter devices (i.e. overhead and hand scanners).
- b) Insure that the Mission Sorter and CCP Sorter scanning devices can support the 7 digit control numbers utilized by DSS.
- c) TELCO/Communication/Data lines:
 - One (1) LAN drop is required in Building 16 to accommodate the ECS Mission Sorter Subcontroller. The LAN drop should be located near the existing main Mission Sorter PLC. Insure that there is sufficient power available in the vicinity of the main Mission Sorter to accommodate the ECS Mission Sorter Subcontroller. It is recommended that a suitable enclosure be provided to house the ECS Mission Sorter Subcontroller.
 - One (1) LAN drop is required in Building 30 to accommodate the ECS CCP Sorter Subcontroller. The LAN drop should be located near existing CCP Sorter Controller PC. Insure that there is sufficient power available in the vicinity of the CCP Sorter Controller PC to accommodate the ECS CCP Sorter Subcontroller. It is recommended that a suitable enclosure be provided to house the ECS CCP Sorter Subcontroller

1.3.2 **Delivery**

DDJC will be responsible for accepting delivery of the ECS computer equipment as procured by DDJC. All ECS equipment will need to be transferred to the appropriate locations in Building 16 and 30. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

DSIO-UBB in conjunction with DDJC will be responsible for set-up of the ECS computer equipment. The designated DDJC ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, DSIO-UBB will conduct an ECS/MHE Integration Test with the assistance of DDJC.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the Tracy Sorter systems. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action that is generated by the two sorter systems to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and the sorter PLC and between the sorter devices (i.e. overhead and hand scanners) and ECS to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where M02 transactions generated by ECS are passed to the Upper Tier (DSS) to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of successfully testing the requirements as identified in 1.5.1.a) & b). Part 2 will be completed several weeks prior to environmental testing and will cover the requirement identified in paragraph 1.5.1.c) above. The exact schedules for both parts are shown on the current DDJC implementation SCR.
- b) Testing will occur Monday - Friday. The option will be available to conduct the test on Saturday and Sunday if required.

- c) Testing will not start any earlier than 0900 hours daily. The user will make a sorter available at a predetermined time daily. The developer will be responsible for switching the sorter devices from the production environment to the testing environment. DDJC will be responsible for modifying all scanning devices to read a 7-character barcode. If a sorter cannot be made available, testing will be conducted at the end of the sites workday as determined by the user. The workday's activity will determine the availability of starting earlier.
- d) Testing will end at 1700 hours or an agreed upon time between the developer and the user.
- e) Set-up will occur 1 hour prior to testing. Switching back to the production environment will occur 1 hour prior to the end of testing.

1.5.3

Test Procedure

- a) Complete all workload for a sorter and then switch the sorter devices to ECS control. Modify all scanning devices for the sorter to read a 7-character barcode.
- b) Communications will be established between the DSS upper tier and the ECS lower tier by switching the testing ECS Traffic machine to the designated Environmental Test (ET) CICS region. IBM MQSeries will be used for communications with DSS.
- c) Communications will be established between the ECS lower tier and the sorter devices by disconnecting the data lines from the existing sorter PLC and connecting the cables to the ECS DIGI Connector Box and ECS Serial Line Booster.
- d) Begin testing as identified in paragraph 1.5.1.
- e) Complete all ECS test workload.
- f) Communications will be reestablished between the sorter PLC and the sorter devices by disconnecting the data lines from the ECS DIGI Connector Box and the ECS Serial Line Booster and connecting them directly to the sorter PLC.
- g) Resume normal operation.

APPENDIX Z AWOS INSTALLATION FOR DDMA-RICHMOND

1.0 DDMA SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 DDMA Schedule

The detailed schedule for the DDMA implementation can be located in the referenced document DSS POAM for DDMA Implementation.

1.1.1 Contact Point

DDC Implementation POC for
DDMA:

Tom Downs
DLA/Defense Distribution Center
DDC-J6
M Avenue, Bldg 54-2
New Cumberland, PA 17070-5001
DSN 977-4544
COMM (717) 770-4544

DDMA DSS POC

Tim Jeffery
DDMA-PSI
DSN 695-6994

1.2 DDMA Software Installation Procedures

Refer to Appendix B for DSS-ECS Installation Procedure.

1.2.1 Support Materials

N/A

1.3 DDMA Hardware Installation Procedures

1.3.1 Prerequisites

The support agencies and DDMA will ensure that all prerequisites as identified have been fulfilled prior to the installation. The prerequisites include:

- a) The following actions need to be taken in the ECS Computer room:
 - If required, install three (3) 4-plex-outlet boxes in the vicinity of the Dell Cluster and PC's, and provide 110/115 VAC at the boxes.
 - Install three (3) LAN drops to the area where the new ECS PC's will be located.

- Provide one (1) RJ45 crossover cable 4-ft in length to be used with the ECS Windows Cluster.
 - Allocate five (5) IP addresses for use by the ECS cluster and the new AWOS subcontroller.
 - Allocate five (5) computer names for the ECS cluster and the new AWOS subcontroller. Four (4) of the names will be for the servers and one (1) of the names will be for the AWOS workstation. These names should conform to the current naming convention for all servers and workstations utilized on the installation LAN.
 - Define and provide the DNS names for the two ECS servers to DECC-Mechanicsburg and DSIO-UBB. These names are required for the installation of IBM MQSeries.
 - Insure that the local Firewall is set to allow the ECS servers to send and receive MQSeries data from/to 'mzy.mech.disa.mil' on TCP/IP Port #1414.
- b) The following actions need to be taken in the PLC cabinet located in the AWOS building:
- Coordinate with the contractor responsible for the PLC for mounting of the 2-Port DIGI controller (quantity of 1) in the PLC cabinet.
 - Coordinate with the contractor responsible for the PLC to provide 110/115 VAC power to the 2-Port DIGI controller (quantity of 1) in the PLC cabinet.
 - Install one (1) LAN drop to the 2-Port DIGI controller located in the PLC cabinet.
 - Allocate one (1) IP address for use by the DIGI controller.

1.3.2 **Delivery**

DDMA will be responsible for accepting delivery of the ECS computer equipment as procured by the project sponsor. All ECS equipment will need to be transferred into the ECS computer room. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

DSIO-UBB will be responsible for set-up of the ECS computer equipment. The designated DDMA ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, DSIO-UBB will conduct an ECS/MHE Integration Test with the assistance of DDMA and the contractors responsible for PLC code development.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the DDMA AWOS system. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action that is generated by the scanners and PLC's to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and a PLC to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where SMM transactions generated by the Upper Tier (DSS) are passed to ECS to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of successfully testing the requirements as identified in 1.5.1.a) & b). Part 2 consists of successfully testing the requirements as identified in 1.5.1.c). The exact schedule for both parts is shown on the current DDMA POAM.
- b) Testing will occur on Monday through Friday. An option will be to test after normal operations on Monday through Friday or on Saturday and Sunday. These options are discretionary based on the workload at DDMA.
- c) Testing will start at 0900 hours daily.
- d) Testing will end at 1700 hours or an agreed upon time between DSIO-UBB and DDMA.

- e) Set-up will occur 0800 - 0900 hours.

1.5.3 **Test Procedure**

- a) Communications will be established between the ECS lower tier and the PLC's via the installation LAN.
- b) Begin testing as identified in paragraph 1.5.1.
- c) Complete all ECS test workload.

APPENDIX AA AWOS INSTALLATION FOR DDDE-GERMERSHEIM, GERMANY

1.0 DDDE SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 DDDE Schedule

The detailed schedule for the DDDE implementation can be located in the referenced document DSS POAM for DDDE Implementation.

1.1.1 Contact Point

DDC Implementation POC for
DDDE:

Tom Downs
DLA/Defense Distribution Center
DDC-J6
M Avenue, Bldg 54-2
New Cumberland, PA 17070-5001
DSN 977-4544
COMM (717) 770-4544

DDDE DSS POC

Hilliard Reese
DDDE
DSN 314-328-5125 or 5123

1.2 DDDE Software Installation Procedures

Refer to Appendix B for DSS-ECS Installation Procedure.

1.2.1 Support Materials

N/A

1.3 DDDE Hardware Installation Procedures

1.3.1 Prerequisites

The support agencies and DDDE will ensure that all prerequisites as identified have been fulfilled prior to the installation. The prerequisites include:

- a) The following actions need to be taken in the ECS Computer room:
 - If required, install three (3) 4-plex-outlet boxes in the vicinity of the ECS Cluster and PC's, and provide 220 VAC at the boxes.
 - Install three (3) LAN drops to the area where the new ECS PC's will be located.

- Provide one (1) RJ45 crossover cable 4-ft in length to be used with the ECS Windows Cluster.
 - Allocate five (5) IP addresses for use by the ECS cluster and the new AWOS/Conveyor subcontroller.
 - Allocate five (5) computer names for the ECS cluster and the new AWOS/Conveyor subcontroller. Four (4) of the names will be for the servers and one (1) of the names will be for the AWOS/Conveyor workstation. These names should conform to the current naming convention for all servers and workstations utilized on the installation LAN.
 - Define and provide the DNS names for the two ECS servers to DECC-Mechanicsburg and DSIO-UBB. These names are required for the installation of IBM MQSeries.
 - Insure that the local Firewall is set to allow the ECS servers to send and receive MQSeries data from/to 'mzy.mech.disa.mil' on TCP/IP Port #1414.
- b) The following actions need to be taken for the Steeplechase PC located in the AWOS/Conveyor building:
- Coordinate with the contractor responsible for the Steeplechase PC for mounting of the 4-Port DIGI controller (quantity of 1).
 - Coordinate with the contractor responsible for the Steeplechase PC to provide 220 VAC power to the 4-Port DIGI controller (quantity of 1).
 - Install two (2) LAN drops for the 4-Port DIGI controller located with the Steeplechase PC.
 - Allocate one (1) IP address for use by the 4-port DIGI controller.

1.3.2

Delivery

DDDE will be responsible for procuring and accepting delivery of the ECS computer equipment. All ECS equipment will need to be transferred into the ECS computer room. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

DSIO-UBB will be responsible for set-up of the ECS computer equipment. The designated DDDE ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, DSIO-UBB will conduct an ECS/MHE Integration Test with the assistance of DDDE and the contractors responsible for PLC code development.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the DDDE AWOS/Conveyor system. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action that is generated by the Steeplechase PC to insure the correct action as directed by ECS was accomplished.
- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and the Steeplechase PC to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where SMM transactions generated by the Upper Tier (DSS) are passed to ECS to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of successfully testing the requirements as identified in 1.5.1.a) & b). Part 2 consists of successfully testing the requirements as identified in 1.5.1.c). The exact schedule for both parts is shown on the current DDDE POAM.
- b) Testing will occur on Monday through Friday. An option will be to test after normal operations on Monday through Friday or on Saturday and Sunday. These options are discretionary based on the workload at DDDE.
- c) Testing will start at 0900 hours daily.
- d) Testing will end at 1700 hours or an agreed upon time between DSIO-UBB and DDDE.

- e) Set-up will occur 0800 - 0900 hours.

1.5.3 **Test Procedure**

- a) Communications will be established between the ECS lower tier and the Steeplechase PC via the installation LAN and the DIGI PortServer.
- b) Begin testing as identified in paragraph 1.5.1.
- c) Complete all ECS test workload.

APPENDIX BB HK STACKER INSTALLATION FOR DDMA-RICHMOND

1.0 DDMA SITE SPECIFIC INFORMATION FOR SOFTWARE USERS

1.1 DDMA Schedule

The detailed schedule for the DDMA implementation can be located in the referenced document DSS POAM for DDMA Implementation.

1.1.1 Contact Point

DDC Implementation POC for
DDMA:

Tom Downs
DLA/Defense Distribution Center
DDC-J6
M Avenue, Bldg 54-2
New Cumberland, PA 17070-5001
DSN 977-4544
COMM (717) 770-4544

DDMA POC

Dennis Birtwhistle
DDMA
DSN 695-6846

1.2 DDMA Software Installation Procedures

Refer to Appendix B for DSS-ECS Installation Procedure.

1.2.1 Support Materials

N/A

1.3 DDMA Hardware Installation Procedures

1.3.1 Prerequisites

The support agencies and DDMA will ensure that all prerequisites as identified have been fulfilled prior to the installation. The prerequisites include:

- a) The following actions need to be taken in the ECS Computer room:
 - Install one (1) LAN drop to the area where the new ECS PC will be located.
 - Allocate one (1) IP address for use by the ECS HK Stacker subcontroller.

- Allocate one (1) computer name for the ECS HK Stacker subcontroller. The name should conform to the current naming convention for all workstations utilized on the installation LAN.
- b) The following actions need to be taken near or in the cabinet for the HK Stacker control system:
- Coordinate with the contractor responsible for the HK Stacker for mounting of the 2-Port DIGI controller (quantity of 1) in the PLC cabinet.
 - Coordinate with the contractor responsible for the HK Stacker to provide 110/115 VAC power to the 2-Port DIGI controller (quantity of 1) in the PLC cabinet.
 - Install one (1) LAN drop to the 2-Port DIGI controller located in the PLC cabinet.
 - Allocate one (1) IP address for use by the DIGI controller.

1.3.2 **Delivery**

DDMA will be responsible for accepting delivery of the ECS computer equipment as procured by the project contractor. All ECS equipment will need to be transferred into the ECS computer room. Equipment will need to have the serial #'s recorded and barcodes applied as applicable by the user.

1.4 **Set-up**

DSIO-UBB will be responsible for set-up of the ECS computer equipment. The designated DDMA ECS Systems Administrators will assist in the set-up. Support agencies will oversee the operation.

1.5 **ECS/MHE Integration Test**

After the completion of the ECS hardware set-up and software installation, DSIO-UBB will conduct an ECS/MHE Integration Test with the assistance of DDMA and the contractors responsible for the HK Stacker code development.

1.5.1 **Purpose**

The purpose of the Integration Test is to validate that the ECS software developed at the development activity in New Cumberland, Pa, and tested on development hardware at that location, is compatible and can be integrated with the DDMA HK Stacker system. The objectives of the test will be as follows:

- a) Conduct a single-thread test of each material action that is generated by the stacker to insure the correct action as directed by ECS was accomplished.

- b) Conduct a single-thread test of each transaction as identified in Chapter 3 of the ECS Interface Design Description that will pass between the ECS and the HK Stacker to insure compatibility of transaction length and data.
- c) Conduct a multi-thread test where SMM transactions generated by the Upper Tier (DSS) are passed to ECS to validate compatibility throughout the entire hierarchy.

1.5.2 **Test Schedule**

- a) The test will be conducted in two parts. Part 1 consists of successfully testing the requirements as identified in 1.5.1.a) & b). Part 2 consists of successfully testing the requirements as identified in 1.5.1.c). The exact schedule for both parts is shown on the current DDMA POAM.
- b) Testing will occur on Monday through Friday. An option will be to test after normal operations on Monday through Friday or on Saturday and Sunday. These options are discretionary based on the workload at DDMA.
- c) Testing will start at 0900 hours daily.
- d) Testing will end at 1700 hours or an agreed upon time between DSIO-UBB and DDMA.
- e) Set-up will occur 0800 - 0900 hours.

1.5.3 **Test Procedure**

- a) Communications will be established between the ECS lower tier and the HK Stacker via the installation LAN.
- b) Begin testing as identified in paragraph 1.5.1.
- c) Complete all ECS test workload.

LIST OF EFFECTIVE PAGES
Software Installation Plan

Replace with latest document. Destroy superseded documents.

Date of issue for revision and changed document is:

Revision 0/Change 4.....02/22/99
Revision 0/Change 5.....10/01/99
Revision 0/Change 6.....01/25/00
Revision 0/Change 7.....10/26/00
Revision 0/Change 8.....01/26/01

Note: Total number of pages in this revision is the entire document, consisting of the following changes:

PAGE NO.	REV. NO.	REASON FOR CHANGE
COVER	0/Change 8	Changed Revision/Change number and the date.
I	0/Change 8	Update Table of Contents to reflect additional Appendix references.
1-2	0/Change 8	Update to paragraph 1.3 Document Overview to reflect correct Appendix reference numbers.
4-2	0/Change 8	Update to paragraph 4.1 Site Specific Information to reflect correct Appendix reference numbers.
APPENDIX R	0/Change 8	Added APPENDIX R - DSS-ECS INSTALLATION FOR DDRT - RED RIVER

LIST OF EFFECTIVE PAGES
Software Installation Plan

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Date of issue for revision and changed document is:

Revision 0/Change 9.....05/09/01

Note: Total number of pages in this revision is the entire document, consisting of the following changes:

PAGE NO.	REV. NO.	REASON FOR CHANGE
COVER	0/Change 9	Changed Revision/Change number and the date.
I	0/Change 9	Update Table of Contents to reflect additional Appendix references.
1-2	0/Change 9	Update to paragraph 1.3 Document Overview to reflect correct Appendix reference numbers.
4-2	0/Change 9	Update to paragraph 4.1 Site Specific Information to reflect correct Appendix reference numbers.
APPENDIX S	0/Change 9	Added APPENDIX S - ECS TRIAX INSTALLATION FOR DDNV - NORFOLK in association with SCR DSS-RE0-088

LIST OF EFFECTIVE PAGES
Software Installation Plan

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Date of issue for revision and changed document is:

Revision 0/Change 10.....06/08/01

Note: Total number of pages in this revision is the entire document, consisting of the following changes:

PAGE NO.	REV. NO.	REASON FOR CHANGE
COVER	0/Change 10	Changed Revision/Change number and the date.
I	0/Change 10	Update Table of Contents to reflect additional Appendix references.
1-2	0/Change 10	Update to section 1.2 System Overview, adding Radio Frequency to second paragraph. Update to section 1.3 Document Overview to reflect correct Appendix reference numbers. Update to section 1.4 to reflect correct organization acronyms.
3-1	0/Change 10	Updated section 3.2 Contact Point to reflect correct DDC POC.
4-2	0/Change 10	Update to section 4.1 Site Specific Information to reflect correct appendix reference numbers.
A-1	0/Change 10	Updated APPENDIX A DSS-ECS SITES to reflect correct ECS Sites.
B-1 through B-3	0/Change 10	Updated section 1.1.1 System Requirements, list item 1., sublist item c., and list item 2., sublist item a. and b.
APPENDIX T	0/Change 10	Added APPENDIX T - ECS ACTIVE ITEM INSTALLATION FOR DDSP-NEW CUMBERLAND in association with SCR DSS-NC0-158

LIST OF EFFECTIVE PAGES

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Date of issue for revision and changed document is:

Revision 0/Change 11.....12/14/01

NOTE: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT, CONSISTING OF THE FOLLOWING CHANGES:

PAGE NO.	REV. NO.	REASON FOR CHANGE
COVER	0/Change 11	Changed Revision/Change number and the date. In association with SCR DSS-000-106
i	0/Change 11	Changed Revision/Change number and the date
1-1	0/Change 11	Update to section 1.3 Document Overview to reflect correct
Appendix U	0/Change 11	Added Appendix U to include Tote/Package Conveyor Subcontroller at DDOO in association with SCR DSS-000-106

LIST OF EFFECTIVE PAGES

Software Installation Plan

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Date of issue for revision and changed document is:

Revision 0/Change 12.....05/22/02

NOTE: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT,
CONSISTING OF THE FOLLOWING CHANGES:

PAGE NO.	REV. NO.	REASON FOR CHANGE
COVER	0/Change 12	Changed Revision/Change number and the date. In association with SCR DSS-RE2-016 and DSS-RE2-017
i	0/Change 12	Changed Revision/Change number and the date
1-1	0/Change 12	Update to section 1.3 Document Overview to reflect additional appendix.
Appendix V	0/Change 12	Added Appendix V in association with SCR DSS-RE2-016 and DSS-RE2-017

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Revision 0/Change 13.....07/12/02

NOTE: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT,
CONSISTING OF THE FOLLOWING CHANGES:

PAGE NO.	REV. NO.	REASON FOR CHANGE
COVER	0/Change 13	Changed Revision/Change number and the date.
i	0/Change 13	Changed table of contents.
1-1	0/Change 13	Updated section 1.3 adding reference to Appendix W.
2-1	0/Change 13	Updated entire section 2.0 Referenced Documents.
W-1 through W-4	0/Change 13	Added Appendix W in association with SCR# DSS-PW0-131

LIST OF EFFECTIVE PAGES

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Date of issue for revision and changed document is:

Revision 0/Change 14.....09/20/02

NOTE: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT,
CONSISTING OF THE FOLLOWING CHANGES:

PAGE NO.	REV. NO.	REASON FOR CHANGE
COVER	0/Change 14	Changed Revision/Change number and the date.
i	0/Change 14	Changed table of contents.
Appendix X	0/Change 14	Updated Appendix W in association with SCR# DSS-RE2-107 and DSS-NC0-104

LIST OF EFFECTIVE PAGES

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Date of issue for revision and changed document is:

Revision 0/Change 15.....02/05/03

NOTE: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT,
CONSISTING OF THE FOLLOWING CHANGES:

PAGE NO.	REV. NO.	REASON FOR CHANGE
COVER	0/Change 15	Changed Revision/Change number and the date.
i	0/Change 15	Changed table of contents.
Appendix X	0/Change 15	Added Appendix X in association with SCR# DSS-DC0-996

LIST OF EFFECTIVE PAGES

Software Installation Plan

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Date of issue for revision and changed document is:

Revision 0/Change 16.....06/20/03

NOTE: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT,
CONSISTING OF THE FOLLOWING CHANGES:

PAGE NO.	REV. NO.	REASON FOR CHANGE
COVER	0/Change 16	Changed Revision/Change number and the date.
i	0/Change 16	Changed table of contents.
Appendix Y	0/Change 16	Added Appendix Y. Additions are in association with SCR# DSS-RE3-089.

LIST OF EFFECTIVE PAGES

Software Installation Plan

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Date of issue for revision and changed document is:

Revision 0/Change 17.....07/15/03

NOTE: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT,
CONSISTING OF THE FOLLOWING CHANGES:

PAGE NO.	REV. NO.	REASON FOR CHANGE
COVER	0/Change 17	Changed Revision/Change number and the date.
1-3	0/Change 17	Corrected error in paragraph 1.3
2-1	0/Change 17	Updated section 2.0 in association with SCR# DSS-JC3-008.
Throughout document	0/Change 17	Updated POC names, DSN numbers and email addresses.

LIST OF EFFECTIVE PAGES

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Revision 0/Change 18.....08/29/03

NOTE: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT,
CONSISTING OF THE FOLLOWING CHANGES:

PAGE NO.	REV. NO.	REASON FOR CHANGE
COVER	0/Change 18	Changed Revision/Change number and the date.
1-3	0/Change 18	Corrected error in paragraph 1.3
2-1	0/Change 18	Updated section 2.0 in association with SCR# DSS-MA2-116.
Z-1	0/Change 18	Added Appendix Z in association with SCR# DSS-MA2-116.

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Software Installation Plan

Replace with latest document. Destroy superseded documents.

Date of issue for revision and changed document is:

Revision 0/Change 19.....10/22/03

NOTE: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT,
CONSISTING OF THE FOLLOWING CHANGES:

PAGE NO.	REV. NO.	REASON FOR CHANGE
COVER	0/Change 19	Changed Revision/Change number and the date.
1-3	0/Change 19	Corrected error in paragraph 1.3
2-1	0/Change 19	Updated section 2.0 in association with SCR# DSS-RE2-132.
AA-1	0/Change 19	Added Appendix AA in association with SCR# DSS-RE2-132.

LIST OF EFFECTIVE PAGES

Software Installation Plan

Replace with latest document. Destroy superseded documents.

Date of issue for revision and changed document is:

Revision 0/Change 20.....11/19/03

NOTE: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT,
CONSISTING OF THE FOLLOWING CHANGES:

PAGE NO.	REV. NO.	REASON FOR CHANGE
COVER	0/Change 20	Changed Revision/Change number and the date. Changes following PDR/CDR.
1-3	0/Change 20	Added DSN number for DDDE DSS POC.
AA-1 thru AA-2	0/Change 20	Appendix AA, paragraph 1.3.1, changed 110/115 VAC to 220 VAC.

LIST OF EFFECTIVE PAGES

Software Installation Plan

Replace with latest document. Destroy superseded documents.

Date of issue for revision and changed document is:

Revision 0/Change 21.....08/20/04

NOTE: TOTAL NUMBER OF PAGES IN THIS REVISION IS THE ENTIRE DOCUMENT,
CONSISTING OF THE FOLLOWING CHANGES:

PAGE NO.	REV. NO.	REASON FOR CHANGE
COVER	0/Change 21	Changed Revision/Change number and the date.
1-3	0/Change 21	Added cross reference for Appendix BB
APPENDIX BB	0/Change 21	Added APPENDIX BB HK STACKER INSTALLATION FOR DDMA-RICHMOND