ADST/WDL/TR--93-003047

ADST
Cold Start Procedures Manual for the BDS-D Digital Message Communications Console 1.0.0 (CSCI 11)

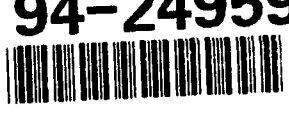
Loral Western Development Labs
Electronic Defense Systems Software Department
Software Engineering Laboratory
3200 Zanker Road
San Jose, California 95161-9041

7 May 1993

Contract No. N61339-91-D-0001
CDRL A00B

Prepared for:

Simulation Training and Instrumentation Command
Naval Training Systems Center
12350 Research Parkway
Orlando, FL 32826-3275



REPORT DOCUMENTATION PAGE

Form approved OMB No. 0704-0188

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	7 May 1993	Cold Start Procedures

4. TITLE AND SUBTITLE
ADST, Cold Start Procedures for the BDS-D Digital Message Communications Console 1.0.0

5. FUNDING NUMBERS
Contract No: N61339-91-D-0001
CDRL A00B

6. AUTHOR(S)
Compiled by: Desmeules, Peter; Aiken, John; Thompson, Lynn; Bright, Rick; Au-Yeung, Anna; Ipsaro, Maria

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
Loral Western Development Labs
Electronic Defense Systems Software Department
3200 Zanker Road
San Jose, California 95161-9041

8. PERFORMING ORGANIZATION REPORT NUMBER
ADST/WDL/TR--93--003047

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
Simulator Training and Instrumentation Command (STRICOM)
Naval Training Systems Center
12350 Research Parkway
Orlando, FL 32826-3275

10. SPONSORING ORGANIZATION REPORT
ADST/WDL/TR--93--003047

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT

12b. DISTRIBUTION CODE
A

13. ABSTRACT (Maximum 200 words)

These cold start procedures outline the start up and shut down procedures for the initial software release of the BDS-D Digital Message Communications Console (DMCC) 1.0.0.

14. SUBJECT TERMS

15. NUMBER OF PAGES
8

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	17. SECURITY CLASSIFICATION OF THIS PAGE	17. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UL

NSN 7540-01-280-5500

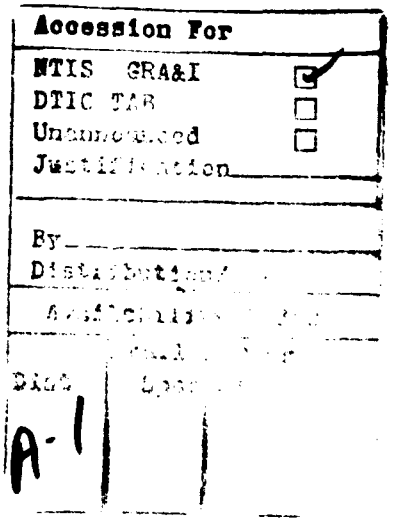
Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std Z39-18
298-102

TABLE OF CONTENTS

1.0	Scope	1
2.0	Cold Start Methodology	2
2.1	Required Equipment	2
2.1.1	Hardware Resources	2
2.1.2	Software Resources	2
2.1.3	COTS Software	2
2.1.4	Other Required Resources	2
2.2	System Preparation	2
2.3	Installation of Release	3
3.0	Cold Start Procedures	3
3.1	Startup Procedures	3
3.2	Release Validation	5
3.2.1	Cold Start Validation.	5
3.2.2	Warm Start Validation	5
3.3	Shutdown Procedure	5
4.0	Notes	7
4.1	Abbreviations/Acronyms	7

LIST OF TABLES

Table 2-1	Required DMCC Target System Files	3
Table 3-1	X-Window System Startup	4
Table 3-2	DMCC Interprocess Communication Startup	4
Table 3-3	DMCC Operator Interface Program Startup	5
Table 3-4	Shutdown Procedure	6



1.0 Scope

Per DI-MISC-80711, this manual details the Digital Message Communications Console (DMCC) Cold Start Procedures specific to the Ft. Rucker, Alabama site. Installation and distribution instructions, interaction with other simulators, and hardware compatibility notes (as applicable), as well as a detailed overview of the software release is included in the ADST Version Description Document for the BDS-D Digital Message Communications Console 1.0.0; document number ADST/WDL/TR--93-003046.

I, Maria E. Ipsaro, on this date, 7 May 1993, hereby certify that the software release BDS-D Digital Message Communications Console 1.0.0 has been built from limited access, controlled baseline. This software is, to the best of my knowledge, free of malicious code intended to subvert its operation.

2.0 Cold Start Methodology

The Cold Start procedure for the DMCC describes the user's ability to install the application loads from tape. This procedure consists of installing and bringing on-line the operating system, application, data files, boot files, configuration files and databases. This procedure describes in detail how to install the DMCC release tape and how to verify the build load. Verification of a build load is demonstrated through a series of tests or a checklist. This procedure also provides a detailed list of instructions that allow the user to startup and shutdown the DMCC.

2.1 Required Equipment

The following sections list the required equipment for the Digital Message Communications Console (DMCC).

2.1.1 Hardware Resources

The hardware resources required for operating the DMCC is a Sun Sparc (models 2 or 10) host computer connected via an ethernet interface to 0 - 8 Wyse X-terminals. The host is also connected to a Simnet network via a separate ethernet interface.

2.1.2 Software Resources

The magnetic media (disks and tapes) prepared and supplied as part of the BDS-D Digital Message Communications Console 1.0.0 are identified below.

Media Type	Quantity	Label	Description
DC 6150 Tape	1	BDS-D DMCC 1.0.0	Initial DMCC Release (Source)
DC 6150 Tape	1	BDS-D DMCC 1.0.0	Initial DMCC Release (Application)

2.1.3 COTS Software

The DMCC requires the X-window system of applications, tools and shareable libraries. DMCC is compiled and runs with X-window version 11, revision 5. This must also include the 'desktop manager' called Motif (application name is 'mwm'; version 1.1.3), and the X-Display Manager (application name is 'xdm').

2.1.4 Other Required Resources

No other resources are required for running the DMCC.

2.2 System Preparation

To format the disk and install the SunOS operating system, refer to the Sun Microsystems SPARCsystem software installation guide.

The System Administrator must create two dmcc accounts, one for a user to login and use the X-window operator interface program, and a second account for the system administrator to use to start the dmcc software.

1. Login as root
2. Run 'vipw' to add a user named 'dmcc'. The entry will look like:
   dmcc::201:27:DMCC Operator Account:/all/dmcc:/bin/csh
   Then add a user named 'oper' with root privileges:
   oper::0:26:DMCC Configuration Control Account:/all/dmcc:/bin/csh
3. Create the directory /all/dmcc; it is not important that /all be used, and should be tailored to the site configuration.
4. Add site specific login files (i.e., .login, .cshrc, .Xdefaults); the contents of these are not important to running DMCC.
5. Create the directory ~dmcc/bin. Place the DMCC executables in this directory. Place the files '.xsession' and 'dmcc-ops' in the directory '~dmcc'. It is not important that root own all the files in this directory, but '~dmcc/.xsession' and '~dmcc/bin/dmcc' must have world access read and execute.

2.3 Installation of Release

This section describes the installation of the BDS-D Digital Message Communications Console 1.0.0 release tape on the target machine. A list of executable files, data files, configuration files, startup and shutdown files and their respective location on the directory tree will be shown in Table 2-1. Table 2-1 allows the user to verify that what was copied off the DMCC release tape on to the target machine to run in an operational environment is a complete list of application files and their location in the directory tree.

Table 2-1. REQUIRED DMCC TARGET SYSTEM FILES

DIRECTORY LOCATION	REQUIRED FILES
dmcc/	.xsession
dmcc/	dmcc-ops
dmcc/bin/	dms
dmcc/bin/	dmcc_sim_tx
dmcc/bin/	dmcc_sim_rx
dmcc/bin/	dmcc

3.0 Cold Start Procedures

The following procedure verifies the operation of the cold start and validates the build load as operational.

3.1 Startup Procedures

This section describes in detail how to startup the DMCC.

Table 3-1. X-WINDOW SYSTEM STARTUP

CONTROL ACTION	EXPECTED RESULTS
1. Starting the X-Display Manager. This can be done by either editing /etc/rc.local to start 'xdm' on every boot, or 'xdm' can be started manually from the root account by typing 'xdm'.	Login window will appear.

2. Make sure, before starting 'xdm', that /usr/lib/X11/Xsession (this file can also be in the dir /usr/local/X.V11R5/lib/X11/xdm) starts 'mwm' in the background, and then starts an x-term, NOT in the background. The last process started in the Xsession file must not be run in the background.	N/A
3. If desired, put a site-specific Xsession file in the root directory for the root account (e.g., to start other x-window applications).	N/A

Table 3-2. DMCC INTERPROCESS COMMUNICATION STARTUP

CONTROL ACTION	EXPECTED RESULTS
1. To start the DMCC software, do the following (these applications are the message server 'dms', and the network interface programs 'dmcc_sim_tx' and 'dmcc_sim_rx':	N/A
2. In the 'xdm' login window, enter the username 'oper', and hit return. There is no password on this captive account, so hit enter again to get past the password prompt. This login then runs the script ~dmcc/dmcc-ops, which first displays a menu of options.	X-terminal window appears; a menu of options appears in the window.
3. The menu presented allows you to start and stop the DMCC software, or change Zulu timezone offset, or st the Simnet interface card name (either le0 or le1, on the Sparc host, usually the le0 interface is for Simnet, and le1 is for the X-Terms). Enter the number '2' at the prompt to start the software. Any 'dmcc' software still running from a previous session will be stopped by the script. When the prompt reappears, enter '1' to terminate the configuration control script and the 'xdm' login window reappears.	A message indicating each program has started; no error messages. xdm login window appears.
4. Note that the script ~dmcc/dmcc-ops can also be run stand-alone from any root account.	N/A

Table 3-3. DMCC OPERATOR INTERFACE PROGRAM STARTUP

CONTROL ACTION	EXPECTED RESULTS
1. In the 'xdm/ login window, enter the username 'oper', and hit return. There is no password on this captive account, so hit enter again to get past the password prompt.	xdm login prompt is visible.
2. The 'dmcc' operator program immediately starts and displays the logon window. Proceed as in Section 6 of the DMCC Operations Manual.	DMCC logon window appears
3. If any of the DMCC software (the message server and the network interface programs) are not running or have failed, a small window will appear telling of the problem. Advise the System Administrator of this problem. Hit the button 'okay' in the message window, and you will be logged out.	A small message window indicating one of the DMCC programs is not running.

3.2 Release Validation

3.2.1 Cold Start Validation

The following written set of procedures instructs the user on how to validate the new release to see if the load is operational.

Refer to the DMCC Operations Manual for instructions on how to logon and send a message using the DMCC. Then, log on and send a message to yourself. Receipt of this message will verify and validate the complete functional thread, including outgoing message queueing, PDU builder, ethernet transmit and receive processes, digital message server, and DMCC X-windows/Motif user interface.

3.2.2 Warm Start Validation

The following written set of procedures instructs the user on how to validate the load once it is operational.

Refer to the DMCC Operations Manual for instructions on how to logon and send a message using the DMCC. Then, log on and send a message to yourself. Receipt of this message will verify and validate the complete functional thread, including outgoing message queueing, PDU builder, ethernet transmit and receive processes, digital message server, and DMCC X-windows/Motif user interface.

3.3 Shutdown Procedure

The following written set of procedures describe in detail how to shutdown the DMCC.

Table 3-4. SHUTDOWN PROCEDURE

CONTROL ACTION	EXPECTED RESULTS
1. In the 'xdm' window, enter the user name 'dmcc' and hit return. There is no password on this captive account, so hit enter again to get past the password prompt.	xdm login prompt is visible. An X-terminal window appears; a menu of options appears in the window.
2. Enter the number '3' at the prompt to stop the software. All DMCC software will be stopped. When the prompt reappears, enter '1' to terminate the configuration control script and the 'xdm' login window reappears.	A message indicating the DMCC programs have stopped.

4 Notes

4.1 Abbreviations/Acronyms

The following is a list of acronyms used in this document.

ADST	Advanced Distributed Simulation Technology
AIRNET	AIRcraft simulation NETwork
BDS-D	Battlefield Distributed Simulation-Developmental
CSP	Cold Start Procedure
CDRL	Contract Data Requirements List
CMP	Configuration Management Plan
CSCI	Computer Software Configuration Item
DID	Data Item Description
DO	Delivery Order
DOD-STD	Department of Defense Standard
DMCC	Digital Message Communications Console
DMS	Digital Message Server
GMT	Greenwich Mean Time
GUI	Graphic User Interface
ICD	Interface Control Document
MCC	Management, Command and Control
PDU	Protocol Data Unit
RWA	Rotarty Wing Aircraft
RCS	Revision Control System
SIMNET	Simulation Network
SP/CR	Software Problem Change Report
UNIX	Unix Operating System
VDD	Version Description Document
WDL	Western Development Lab
XDM	X-Windows Display Manager
ZULU	Another acronym for GMT