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**ADST  
Cold Start Procedures Manual  
for the  
BDS-D  
CVCC 1.0.0**

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## 1.0 Scope

Per DI-MISC-80711, this manual details the BDS-D Combat Vehicle Command and Control (CVCC) 1.0.0 Cold Start Procedures. Distribution instructions, interaction with other simulators, and hardware compatibility notes (as applicable), build instructions as well as a detailed overview of the software release are included in the ADST Version Description Document for the CVCC; document number ADST/WDL/TR--93-003212.

"I Pete Peterson on this date 23 September, 1993, hereby certify that the software release BDS-D CVCC 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 BDS-D CVCC 1.0.0 describes the user's ability to load the application software. This procedure consists of installing and bringing on-line the applications, and configuration files. 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 BDS-D CVCC 1.0.0.

### 2.1 Required Resources

The following sections outline the required hardware and software resources needed to install and bring on-line the BDS-D CVCC 1.0.0.

#### 2.1.1 Hardware Resources

The BDS-D CVCC 1.0.0 requires the following hardware configuration resources to run:

<u>Hardware Item</u>	<u>Description</u>
Sun SPARC	Sun SPARC workstation configured as a BnTOC. This workstation consists of a Sun SPARC (1, 1+, 2, IPC, or IPX) with 48 MB ram, 405 MB disk, 1 ethernet card and 1 (or 2 for dual-headed BnTOC) video head(s) including GX frame buffer(s) and color monitor(s).
Sun SPARC	Sun SPARC workstation configured as an IVIS. This workstation consists of a Sun SPARC (1, 1+, 2, IPC, or IPX) with 48 MB ram, 405 MB disk, 1 ethernet card and 1 video head including GX frame buffer(s) and CMI C6000 13" color monitor. In addition, the IVIS also requires 1 Helographics touch screen, 2 RS-232 connector and 1 Analyx 1200 ADDA card.
150 MB tape drive	A 150 MegaByte tape drive must be installed in the workstations for application installation.

#### 2.1.2 Software Resources

The magnetic media (disks and tapes) prepared and supplied as part of the BDS-D CVCC 1.0.0 are identified below:

<u>Media Type</u>	<u>Label</u>	<u>Description</u>
DC 6150 Tape	CVCC application tape	CVCC application tape

### 2.1.3 Other Required Resources

The BDS-D CVCC 1.0.0 requires the following additional resources to run:

<u>Software Item</u>	<u>Description</u>
Operating System	Sun OS 4.1.1 with loader patches or Sun OS 4.1.2.
X software	OpenWindows 3.0 and ICS Motif 1.1.3. X, Xt and Motif sharable libraries must be in /usr/lib. Motif executables must be in /usr/bin/X11.
Database manager	GNU gdbm 1.5. GNU gdbm sharable libraries must be in /usr/lib.

## 2.2 Cold Start Procedures

The following section outlines the procedure for performing a cold-start on the BDS-D CVCC 1.0.0 system.

### 2.2.1 System Requirements

This section describes the system on which the BDS-D CVCC 1.0.0 release tape will be installed. The BDS-D CVCC 1.0.0 release is to be installed on a Sun SPARC workstation that is already configured to run the previous release of the CVCC software. This configuration is described in paragraph 2.1.

### 2.2.2 Installation of Release

This section describes the installation of the BDS-D CVCC 1.0.0 release tape on to the Sun SPARC computer systems. The installation will be done separately for the Battalion Tactical Operations Center (BnTOC) and the Inter-Vehicular Information System (IVIS) workstations. The installation procedure is identical for both the BnTOC and IVIS workstations. A list of executable files, data files, configuration files, startup and shutdown files and their respective location in the directory tree is shown in Tables 2-1, 2-2, 2-3 and 2-4. These tables allow the user to verify that all the files are copied off the BDS-D CVCC 1.0.0 release tape. The installer must add links as necessary so that the simnet directory is accessible from the root directory. The installer must create the directory /simnet/data/bntoc.

The following site specific files must be preserved and restored back to their original values at the end of the installation. The files on the installation tape are examples which are to be used to set up new sites. The template for the /simnet/data/cvcc/bntoc\_rt/config\_sim.bntoc file is /simnet/data/cvcc/ccd\_rt/config\_sim. Also, the correct terrain data base needs to be installed before the software will work.

```
/simnet/data/cvcc/cvcc_rt/bsd.network.config
/simnet/data/cvcc/cvcc_rt/bsd.to.config
/simnet/data/cvcc/cvcc_rt/network.config
/simnet/data/cvcc/cvcc_rt/to.config
/simnet/data/cvcc/cvcc_rt/network.config
/simnet/data/cvcc/ccd_rt/config_std
/simnet/data/cvcc/ccd_rt/config_sim
/simnet/data/cvcc/bntoc_rt/config_sim.bntoc
```

Once the software has been installed, then the following must be added to the user's environment:

Set the following environment variables:

```
setenv OPENWINHOME /usr/openwin
setenv CVCC_HOME /simnet/data/cvcc
setenv XAPPLRESDIR /simnet/data/cvcc/cvcc_rt
```

In addition the environment variable SIMLE\_DEVICE must point to the correct ethernet device, the man path must include /usr/local/man and \$OPENWINHOME/man and the search path must include /usr/local/bin, /usr/bin/X11, \$OPENWINHOME/bin \$OPENWINHOME/bin/xview, \$OPENWINHOME/demo and /simnet/bin.

### INSTALLATION PROCEDURE

1. Load the installation tape into the tape drive.	None
2. Log on to the Sun SPARC as root.	The console terminal will display the system prompt: (i.e. SIMLAB13 #)
3. Set to the correct destination directory cd /directory_name	The console terminal will display the system prompt: (i.e. SIMLAB13 #)
4. Read in the installation tape. Enter: tar xvf /dev/device_name	The tape will move, filenames will scroll by on the console terminal.
5. When the tape is fully rewound and the SIMLAB13 # prompt appears, remove the installation tape.	None

**Table 2-1: Executable software**

File name	Description
simnet/bin/CVCC-Listen	CVCC application software
simnet/bin/CVCC-Send	CVCC application software
simnet/bin/ammo	Test software
simnet/bin/bntoc	Logger specific filtering.
simnet/bin/cal-design	CCD calibration software
simnet/bin/cal-touch	CCD calibration software
simnet/bin/ccd	CVCC application software
simnet/bin/check	Test software
simnet/bin/dimen	Test software
simnet/bin/friend	Test software
simnet/bin/grab_console	CVCC application software
simnet/bin/ptrgen	Test software
simnet/bin/shutdown	Test software
simnet/bin/start-cal	CCD calibration software
simnet/bin/start-ccd	CVCC application software
simnet/bin/tocact	CVCC application software
simnet/bin/vap	Test software

**Table 2-2: BnTOC runtime software**

File name	Description
simnet/data/cvcc/bntoc_rt/AnalAreaOpns	BnTOC Form
simnet/data/cvcc/bntoc_rt/Collection	BnTOC Form
simnet/data/cvcc/bntoc_rt/EstSit	BnTOC Form
simnet/data/cvcc/bntoc_rt/IntelEst	BnTOC Form
simnet/data/cvcc/bntoc_rt/OpnSit	BnTOC Form
simnet/data/cvcc/bntoc_rt/OpnsOrd	BnTOC Form
simnet/data/cvcc/bntoc_rt/PerIntel	BnTOC Form
simnet/data/cvcc/bntoc_rt/PerOpnRpt	BnTOC Form
simnet/data/cvcc/bntoc_rt/RoadMvt	BnTOC Form
simnet/data/cvcc/bntoc_rt/fmtmodule.uid	Form description
simnet/data/cvcc/bntoc_rt/fview.uid	Form description
simnet/data/cvcc/bntoc_rt/map.uid	Form description
simnet/data/cvcc/bntoc_rt/mviewer.uid	Form description
simnet/data/cvcc/bntoc_rt/router.uid	Form description
simnet/data/cvcc/bntoc_rt/tooemodule.uid	Form description



**Table 2-3: CCD run time software**

File name	Description
<i>simnet/data/cvcc/ccd_rt/action</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/aggregate</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/color.full</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/color.mono</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/config_sim</i>	Sample simulator configuration file
<i>simnet/data/cvcc/ccd_rt/config_std</i>	Sample standard simulator configuration file
<i>simnet/data/cvcc/ccd_rt/display</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/filelist</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/innotr</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/map</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/map.full</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/map.grid</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/mode.base</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/mode.devl</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/mode.enhc</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/mode.expr</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/navigation</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/receive</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/report</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/rpt_new</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/rpt_show</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/status</i>	Resource file
<i>simnet/data/cvcc/ccd_rt/widget</i>	Resource file

**Table 2-4: CVCC run time software**

File name	Description
<i>simnet/data/cvcc/cvcc_rt/Bntoc</i>	BnTOC resource file
<i>simnet/data/cvcc/cvcc_rt/CCD</i>	CCD resource file
<i>simnet/data/cvcc/cvcc_rt/Mwm</i>	Mwm application resource file
<i>simnet/data/cvcc/cvcc_rt/Xdefaults</i>	X defaults resource file
<i>simnet/data/cvcc/cvcc_rt/bsd.network.config</i>	Sample CVCC configuration file
<i>simnet/data/cvcc/cvcc_rt/bsd.to.config</i>	Sample task organization configuration file
<i>simnet/data/cvcc/cvcc_rt/network.config</i>	Sample CVCC configuration file
<i>simnet/data/cvcc/cvcc_rt/simnet.mac</i>	Simnet data file
<i>simnet/data/cvcc/cvcc_rt/to.config</i>	Sample task organization configuration file
<i>simnet/data/cvcc/cvcc_rt/utm.lisp</i>	UTM conversion file

## 2.3 Warm Start and Shutdown Procedures

The following section outlines the procedure for performing a warm-start and shutdown of the BDS-D CVCC 1.0.0.

### 2.3.1 Startup Procedures

This section describes in detail how to startup the BDS-D CVCC 1.0.0. The full list of command line switches for the start-ccd, ccd and bntoc executables are given in Appendix A.

#### STARTUP PROCEDURES for the BnTOC

CONTROL ACTION	EXPECTED RESULTS
1. Power up the Sun Workstation.	The console terminal will display: login:
2. Log in as cvcc	The console terminal will display a system prompt.(i.e. SIMLAB13 #)
3. Kill open windows Enter: kow	The console terminal will display a system prompt.(i.e. SIMLAB13 #)
4. Start open windows Enter: sow for a single-headed display or Enter sow -2 for a dual headed display.	The console terminal will display a system prompt.(i.e. SIMLAB13 #)
5. Change user to super user Enter: su	The terminal will display a super user prompt.(i.e. #)
6. Change directory to binary executable directory. Enter: cd /simnet/bin	The terminal will display a super user prompt.(i.e. #)
7. Start the BnTOC application Enter: bntoc -chptFile file_name -other_switches See Note.	The IVIS will display the initial CVCC display

Note: See Appendix A for "bntoc" options

**STARTUP PROCEDURES for the IVIS**

<b>CONTROL ACTION</b>	<b>EXPECTED RESULTS</b>
1. Power up the Sun Workstation.	The console terminal will display: login:
2. Remote log in as cvcc	The terminal will display a system prompt.(i.e. SIMLAB13 #)
3. Kill open windows Enter: kow	The terminal will display a system prompt.(i.e. SIMLAB13 #)
4. Start open windows Enter: sow &	The terminal will display a system prompt.(i.e. SIMLAB13 #)
5. Change user to super user Enter: su	The terminal will display a super user prompt.(i.e. #)
6. Change directory to binary executable directory. Enter: cd /simnet/bin	The terminal will display a super user prompt.(i.e. #)
7. Start the IVIS application Enter: start-ccd -map -other_switches See Note.	The IVIS will display the initial CVCC display

**Note: See Appendix A for "start-ccd" options**

**2.3.2 Shutdown Procedure**

The following written set of procedures describe in detail how to shutdown the BDS-D CVCC 1.0.0. This procedure is the same for the BnTOC and the IVIS workstations.

**SHUTDOWN PROCEDURES**

<b>CONTROL ACTION</b>	<b>EXPECTED RESULTS</b>
1. At the SIMLAB13 # prompt, enter: sync sync fasthalt	The message: syncing disks... will appear, then the prompt >>> will be displayed.
2. Power off the workstation	The system will power off.

### **3.0 Release Validations**

#### **3.1 Cold Start Validation**

The following written set of procedures instructs the user on how to validate the success of the cold-start.

##### **Cold-start Validation Instructions:**

The expected results detailed in the System Preparation and Release Installation Procedure sections are indicative of a successful cold-start.

#### **3.2 Warm Start Validation**

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

##### **Warm Start Validation Instructions:**

The expected results detailed in the Startup Procedure section are indicative of a successful warm start.

# Appendix A

**start-ccd, ccd**

Usage:           **ccd [-options ...]** (for a standalone system)  
                   **start-ccd [-options ...]** (for a system in a simulator)

**GENERIC CVCC OPTIONS:**

- |                                     |   |
|-------------------------------------|---|
| <b>-callSign &lt;callsign&gt;</b>   | Overrides the call sign specified in the network config file.     |
| <b>-chptFile &lt;filename&gt;</b>   | Use specified checkpoint file for startup.                        |
| <b>-chptHome &lt;path&gt;</b>       | Use this directory to find checkpoint files.                      |
| <b>config &lt;filename&gt;</b>      | Use specified file for the network config.                        |
| <b>-cpradius &lt;dist&gt;</b>       | Set radius for selecting conc pts to dist.                        |
| <b>-debug &lt;flags&gt;</b>         | Run with the specified debug flags.                               |
| <b>-develop</b>                     | Run in development mode.  |
| <b>-dutyPosition &lt;dp&gt;</b>     | Overrides the duty position specified in the network.config file. |
| <b>-exercise &lt;exerciseID&gt;</b> | Exercise ID this system is participating in.                      |
| <b>-fresh:</b>                      | Use the a fresh state as the startup state.                       |
| <b>-nice &lt;num&gt;</b>            | Use this to lower the process priority. (Don't use it!)           |
| <b>-normal</b>                      | Run the CCD/IVIS in experimental mode.                            |
| <b>-processPriority &lt;num&gt;</b> | Use this to increase BnTOC priority.                              |
| <b>-recover</b>                     | Use the last run state as the startup state.                      |
| <b>-root &lt;directory path&gt;</b> | Root of the BnTOC directory system.                               |
| <b>-same</b>                        | Display the ccd and training on same screen                       |
| <b>-swap</b>                        | Swap the ccd and training screens.                                |
| <b>-tooeFile</b>                    | Use specified file for task organization.                         |
| <b>-version</b>                     | Print the current version number and exit.                        |

## CCD-SPECIFIC OPTIONS:

-attached	Operate with vehicle simulator
-baseline	Operate in baseline mode
-color	Present a full-color display
-communication <mode>	Use specified communication mode
-confine	Confine pointer to CCD/IVIS
-driverport	Driver Port exists
-enhanced	Operate in enhanced baseline mode
-experimental	Operate in experimental mode
-grid:	No map features in the map display
-handle	Pointing device is comander's handle
-innovate	Innovative training exercise
-isolate	Prevent reception from Co networks
-loopback	Loop messages back to IVIS
-map	Display map features in the map display
-memory	Use memory allocator to find memory leaks.
-monochrome	Present a monochrome (amber) display
-mouse	Pointing device is mouse
-notdb	No map features in the map display
-standalone	Operate without vehicle simulator
-touch	Pointing device is touch screen

**bntoc**Usage: **bntoc [-options ...]****GENERIC CVCC OPTIONS:**

- |                                     |   |
|-------------------------------------|---|
| <b>-callSign &lt;callsign&gt;</b>   | Overrides the call sign specified in the network config file.     |
| <b>-chptFile &lt;filename&gt;</b>   | Use specified checkpoint file for startup.                        |
| <b>-chptHome &lt;path&gt;</b>       | Use this directory to find checkpoint files.                      |
| <b>-config &lt;filename&gt;</b>     | Use specified file for the network config.                        |
| <b>-cpradius &lt;dist&gt;</b>       | Set radius for selecting conc pts to dist.                        |
| <b>-debug &lt;flags&gt;</b>         | Run with the specified debug flags.                               |
| <b>-develop</b>                     | Run in development mode.  |
| <b>-dutyPosition &lt;dp&gt;</b>     | Overrides the duty position specified in the network config file. |
| <b>-exercise &lt;exerciseID&gt;</b> | Exercise ID this system is participating in.                      |
| <b>-fresh</b>                       | Use the a fresh state as the startup state.                       |
| <b>-nice &lt;num&gt;</b>            | Use this to lower the process priority. (Don't use it!)           |
| <b>-normal</b>                      | Run the BnTOC in normal mode.                                     |
| <b>-processPriority &lt;num&gt;</b> | Use this to increase BnTOC priority.                              |
| <b>-recover</b>                     | Use the last run state as the startup state.                      |
| <b>-root &lt;directory path&gt;</b> | Root of the BnTOC directory system.                               |
| <b>-same</b>                        | Run the map and tools on the same screen.                         |
| <b>-swap</b>                        | Swap the map display and tools screens.                           |
| <b>-tooeFile:</b>                   | Use specified file for task organization.                         |
| <b>-version:</b>                    | Print the current version number and exit.                        |



**BnTOC SPECIFIC OPTIONS:**

- |                                 |   |
|---------------------------------|---|
| <b>-bridge &lt;hostname&gt;</b> | Host name of the communications bridge.     |
| <b>-coordinator</b>             | Use this W/S as the checkpoint coordinator. |
| <b>-memory:</b>                 | Use memory allocator to find memory leaks.  |
| <b>-nobridge</b>                | Send messages to SELF without using bridge. |
| <b>-nofmt</b>                   | Run without the format module.              |
| <b>-notooe</b>                  | Run without the TO/OE module.               |
| <b>-nomap</b>                   | Run without the map module.                 |
| <b>-nomsg</b>                   | Run without the message module.             |
| <b>-notools</b>                 | Run without the tools.                      |
| <b>-notdb</b>                   | Run without the terrain.                    |