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★		Rec. of Rev. page iii, Contents vii, 4-9, and Ind-5.	5	Please remove and shred the pages listed at left; this material is Cray Research Proprietary.
	★	Rec. of Rev. page iii, Contents vii, 4-9, 4-31 through 4-36, and Ind-5.	7	This change packet includes a new procedure for using the viewcd utility.

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Record of Revision

Each time this manual is updated with a change packet, a change to part of a text page is indicated by a change bar in the margin directly opposite the change. A change bar in the footer of a text page indicates that most, if not all, of the text is new. A change bar in the footer of a page composed primarily of a table and/or figure may indicate that a change was made to that table/figure or, it could indicate that the entire table/figure is new. Change packets are assigned a numerical designator, which is indicated in the publication number on each page of the change packet.

Each time this manual is fully revised and reprinted, all change packets to the previous version are incorporated into the new version, and the new version is assigned an alphabetical revision level, which is indicated in the publication number on each page of the manual. A revised manual does not usually contain change bars.

REVISION	DESCRIPTION
	June 1991. Original printing.
A	January 1992. Reprint with revision. This manual is revised to reflect technical changes related to the ME1.1 diagnostic release. The "Error Logging System," "Installing and Using AnswerBook," and "System Clear Utility" sections are new. Many other technical changes and additions are incorporated.
A1	February 1992. Change packet including minor technical changes in Section 9, the addition of an Index, and an updated Table of Contents.
B	March 1993. Reprint with revision. This user guide is revised to reflect technical changes related to the ME-Y2.0 and ME-C1.0 diagnostic releases and SunOS 4.1.2. The "EASE Error Logger," and "New WACS User Information" sections are new. Many other technical changes and additions are incorporated.
B1	April 1994. Change packet adds a procedure in Section 4 for using the system utility, viewcd.

4 MAINTENANCE & DIAGNOSTIC ENVIRONMENT (continued)

5 SYSTEM ADMINISTRATION

5 SYSTEM ADMINISTRATION (continued)

6 MWS-E SYSTEM SECURITY

mount_cd

This CRAY Y-MP C90 command mounts compact discs written in High Sierra file system (hsfs) format under the /cdrom directory. This command was created because the mount command requires root access; the mount_cd command allows any user to mount a compact disc (CD). The mount_cd command must be owned by root and have the set uid permission set. The mount_cd -u option unmounts the CD. The CD must be unmounted before you can eject it from the CD-ROM player.

nwacs

This command starts the new WACS software program, which is a point-and-click window that runs under the OpenWindows environment. The new WACS programs are described in Section 11, "New WACS User Information."

pmnotify

The preventive maintenance notification utility notifies an operator using the mws login of scheduled system maintenance activities by sending E-mail messages. The pmnotify utility is described in Section 4, "Preventive Maintenance," of the *MWS-E and OWS-E Hardware Maintenance Manual*, publication number CMM-1122-0B0.

r30net

This program is included for sites that use the Telebit NetBlazer for a remote support connection to a Communication Hub. The program edits operating system networking files and writes configuration information and addresses for your site. This program is described in Appendix B of the *ME-Y2.0 Release Bulletin*.

release

Entering the **release** command displays the release levels of the software installed on your MWS-E. This information is stored in the files in the /cri/lib directory.

simulate

This program is used with the cft0 level 0 CPU function test. It is used to test user-created instruction lists run on the MWS-E and to compare them to the results of the same instructions run on the mainframe CPUs. Refer to the *CRAY Y-MP and CRAY X-MP EA Off-line Diagnostic Reference Manual*, publication number CDM-1116-0B0, for further information.

spares

The spares utility is a menu-driven program that provides a means of mapping the spare DRAM chips in place of faulty DRAM chips on the SSD-E/32i. The SSD-E/32i contains 12 spare DRAM chips that can be remotely programmed by the spares utility. Refer to the *SSDE and JSSD Maintenance Systems User Guide*, publication number CDM-1019-0A0, for detailed information.

ssde and ssdeuser

The `ssde` command invokes the SSD-E Maintenance System (SSDE), which is a diagnostic environment used to troubleshoot the SSD-E. The `ssdeuser` directory stores snaps created while the `ssde` command is run. Refer to the *SSDE and JSSD Maintenance Systems User Guide*, publication number CDM-1019-0A0, for detailed information.

sysclr

This program is used to clear residual or stored data from different areas of the CRI computer system as described in Section 10, "System Clear Utility."

viewcd

This program is used to view Engineering Documentation files on the compact disc (CD) sent to CRAY Y-MP and CRAY C90 series sites. The `viewcd` command will mount the CD if it is not already mounted. Refer to Page 4-32 for instructions on using `viewcd`.

wacs

This program is a server daemon used by the WACS system programs on the MWS-E. Refer to Section 7, "WACS User Information," for further information on WACS programs.

wloop, cond, configc, and makediags

These programs are called by the `config` shell script during the diagnostic configuration process as described in the following pages.

ybug and ysim

These commands are part of the CRAY Y-MP and X-MP EA instruction-level simulator (YSIM). Refer to the *CRAY Y-MP and X-MP EA Simulator User Guide*, publication number CDM-0414-000, for complete information.

Diagnostic Configuration (config)

The `config` shell script is used to configure CRAY Y-MP diagnostics. You must have root privileges to run the `config` shell script.

The `config` command allows you to configure diagnostics to your particular site. When diagnostic tapes are first installed, the installation program loads your diagnostics and initiates the configuration process by running the `config` program; the current diagnostic Site Installation Bulletin lists the procedure for the diagnostic installation. However, at some later time it may be necessary to reconfigure your system; for example, you need to reconfigure it if you need to recable the MWS to different channels.

NOTES: CA = Chanel Adapter
CCA1 = LOSP (Front ends)
DCA 1 = Disk Drives
DCA 2 = Disk Drives
DCA 3 = Disk Drives
HCA 5 = Disk Drives
TCA 1 = Tape Drives
HCA 3 = HIPPI (HISP)
HCA 4 = HIPPI (HISP)
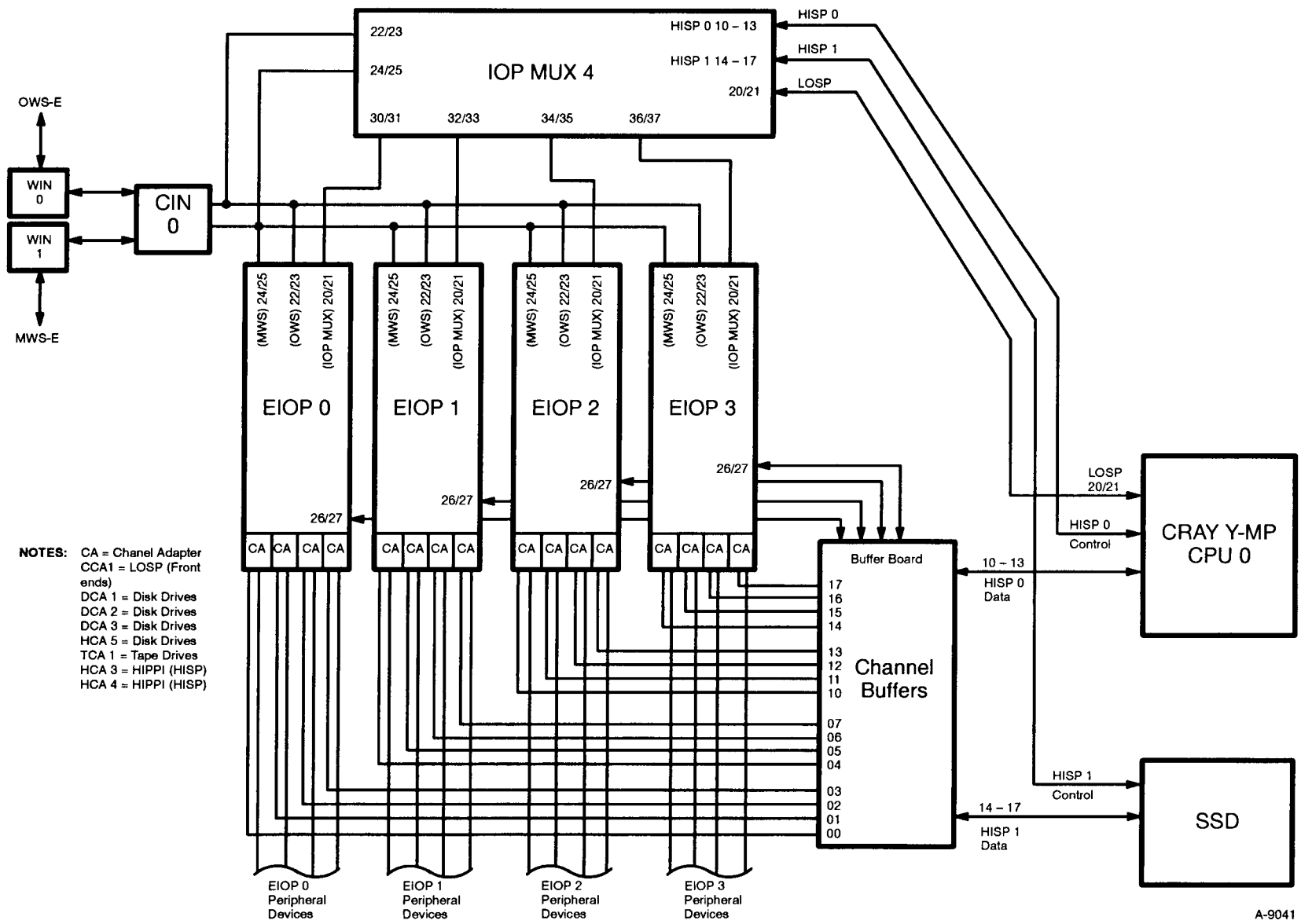
Figure 4-3. Cluster 0 Channel Connections

Using viewcd

The viewcd utility is software that allows the user to access documents recorded on a compact disk read-only memory (CD-ROM).
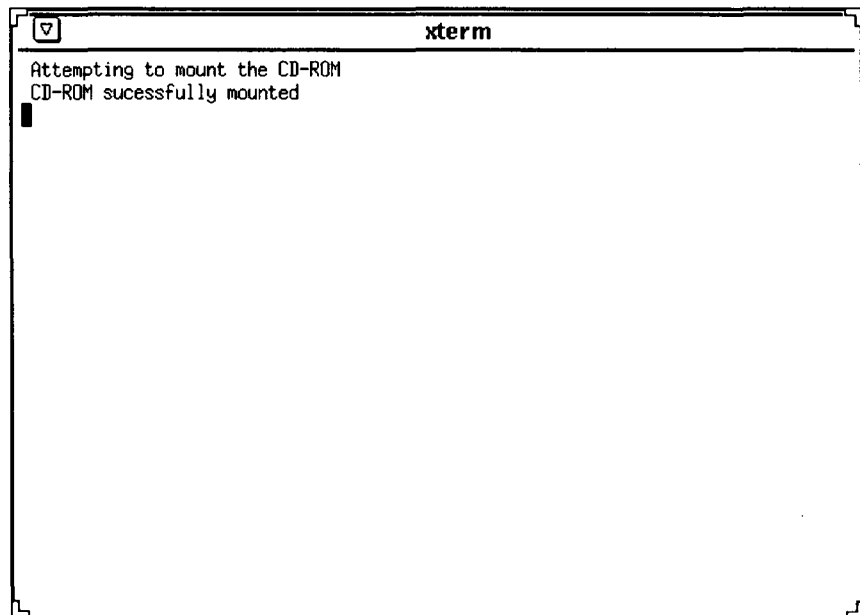
In the following example, each numbered step has a companion xterm window display that illustrates and supplements the text.

1. Start viewcd by entering **viewcd** in an xterm window.

```
▽                              xterm
bugs$ viewcd█
```
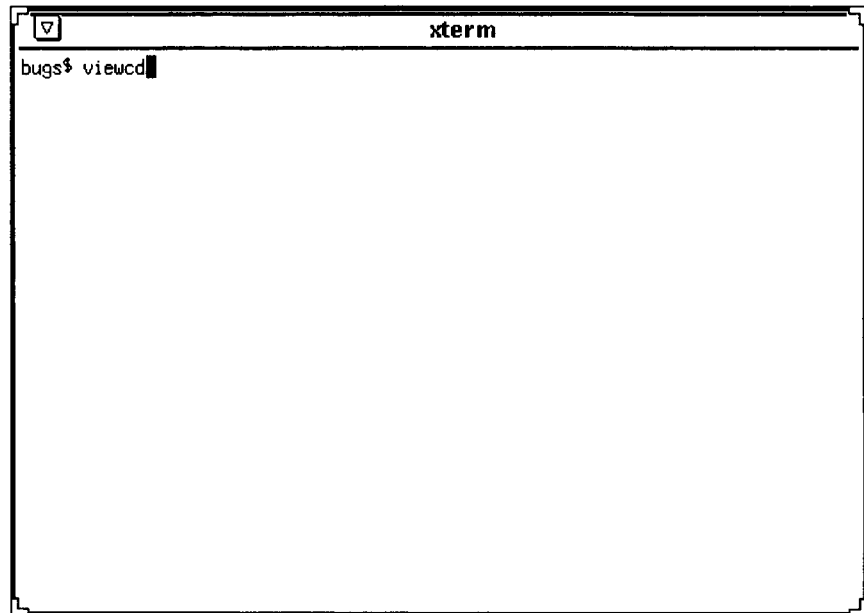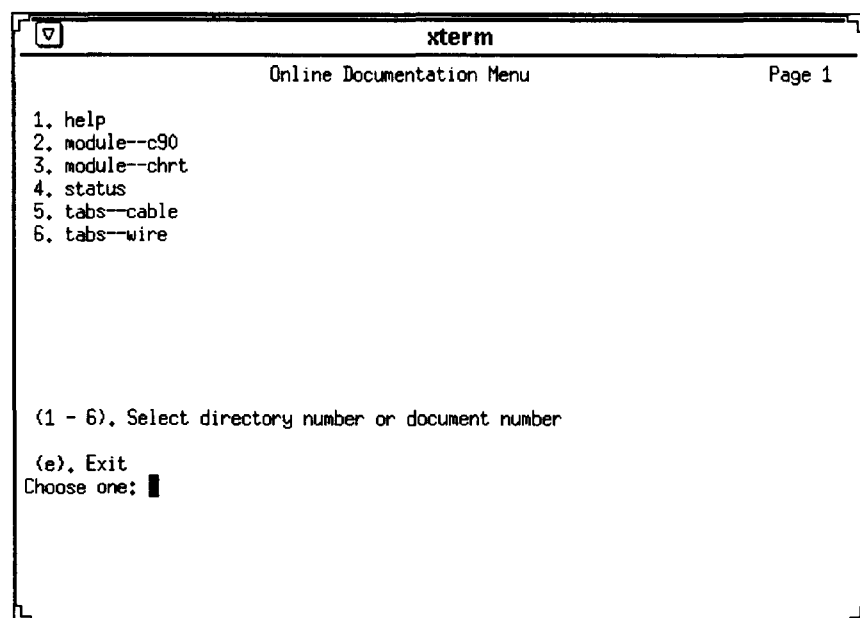
2. A display appears that indicates the CD-ROM is being mounted.

    When the CD-ROM is ready to use, you are notified with a status
    message.

```
┌─────────────────────────────────────────────────────────────┐
│ [▽]                          xterm                           │
├─────────────────────────────────────────────────────────────┤
│ Attempting to mount the CD-ROM                               │
│ CD-ROM sucessfully mounted                                   │
│ ▋                                                            │
│                                                              │
│                                                              │
│                                                              │
│                                                              │
│                                                              │
│                                                              │
│                                                              │
│                                                              │
│                                                              │
│                                                              │
│                                                              │
└─────────────────────────────────────────────────────────────┘
```

3. The main menu appears automatically and displays the contents of
    your CD-ROM. To continue this example, enter 1, the help
    selection.

```
┌─────────────────────────────────────────────────────────────┐
│ [▽]                          xterm                           │
├─────────────────────────────────────────────────────────────┤
│                  Online Documentation Menu          Page 1   │
│                                                              │
│  1. help                                                     │
│  2. module--c90                                              │
│  3. module--chrt                                             │
│  4. status                                                   │
│  5. tabs--cable                                              │
│  6. tabs--wire                                               │
│                                                              │
│                                                              │
│                                                              │
│                                                              │
│  (1 - 6). Select directory number or document number         │
│                                                              │
│  (e). Exit                                                   │
│  Choose one: ▋                                               │
│                                                              │
│                                                              │
└─────────────────────────────────────────────────────────────┘
```

4. In a few seconds, a Text Editor window opens and displays the contents of the help file. Normal Text Editor commands are applicable. (The xterm window that contains the menu remains available, allowing you to create multiple Text Editor windows if you wish.) Text Editor windows remain open until the end of the session unless you close them.

```
┌─────────────────────────────────────────────────────────────────────────────┐
│ ▽  Text Editor V3 [bugs] – help (read only), dir; /cdrom/cdrom          ▤    │
│ ( File ▽ ) ( View ▽ ) ( Edit ▽ ) ( Find ▽ )                                  │
│                     Y-MP C90                                            ▲    │
│                 SN4005 and ABOVE                                       ▲     │
│                                                                        ▼     │
│                 ****************                                              │
│                 ****************                                              │
│                 **  /cdrom    **                                             │
│                 ****************                                              │
│                 ****************                                              │
│                 ||||||||||                                                   │
│                 |||||||||| _ help                                            │
│                 ||||||||||                                                   │
│                 ||||||||                                                      │
│            _____|||||_____    |          |                 │
│           |     |||||                        |  |          |                 │
│           |     ||                 |         |  |          |                 │
│        ********* ********* ******** ******* ******** *********                │
│        */cpu4 *  *       * */clk2 * */shr * */tabs.* */tabs. *                │
│        ********* ********* *      * *     * * cable* * wire  *                │
│        */cpu3 *** */rev4 *** ******** ******* ******** *********              │
│        ********* * ********* *   |         |        |        |                │
│        */cpu2 *** */rev3 *** |-/bool  |-/bool  |-/hisp*  |-/sn4001            │
│        ********* * ********* * |        |        |      |  |                  │
│        */cpu1 *** */mem1.*** |-/pctab. |-/pctab. |-/losp* | |-slt01 -> slt34  │
└─────────────────────────────────────────────────────────────────────────────┘
```
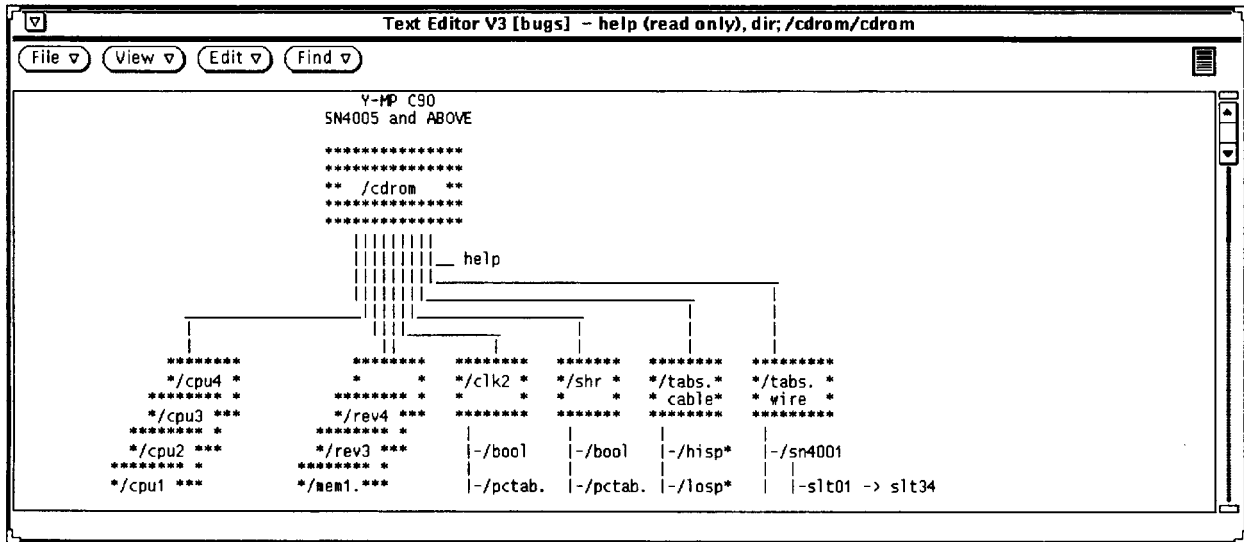
5. The menu structure in viewcd is hierarchical. If you had entered 2 at the main menu in Step 3, the second-level menu shown below would have appeared, offering 14 CRAY C90 module choices. The following display screen defines program navigation options p, m, and e. To continue, enter 1.

```
┌─────────────────────────────────────────────────────────────────────────────┐
│ ▽                              xterm                                         │
│                       Online Documentation Menu                 Page 1       │
│                                                                              │
│    1. clk2              13. shr                                               │
│    2. clk3              14. status                                            │
│    3. cpu1                                                                    │
│    4. cpu2                                                                    │
│    5. cpu3                                                                    │
│    6. cpu4                                                                    │
│    7. cpu5                                                                    │
│    8. help                                                                    │
│    9. hm4m                                                                    │
│   10. mem1--rev2                                                              │
│   11. mem1--rev3                                                              │
│   12. mem1--rev4                                                              │
│                                                                              │
│   (1 - 14). Select directory number or document number                       │
│                                                                              │
│   (p). Previous directory                                                    │
│   (m). Go back to main menu                                                  │
│   (e). Exit                                                                  │
│   Choose one: █                                                              │
└─────────────────────────────────────────────────────────────────────────────┘
```
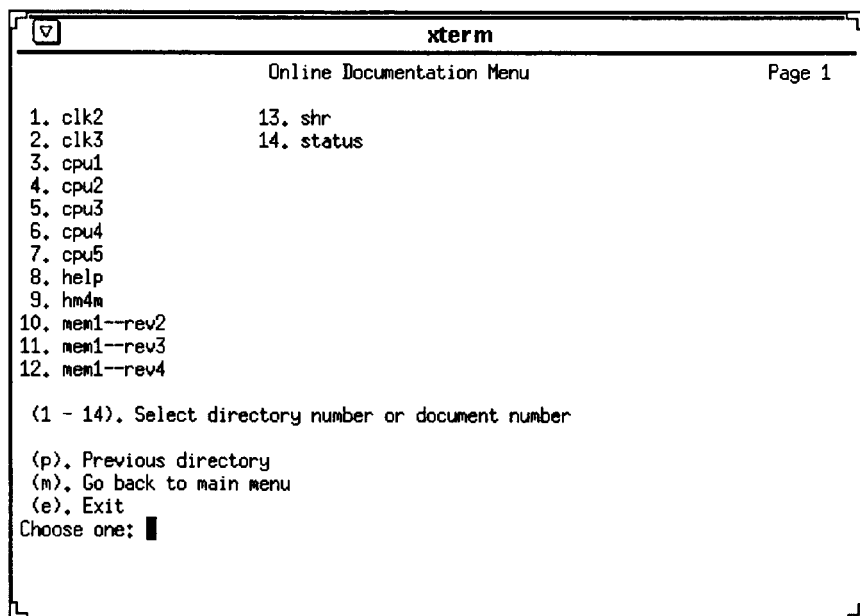
6.   Entering 1 in the previous step results in a third-level menu that
     offers you a choice of viewing the clk2 selection in either
     Boolean or wiretab format. Enter 1 again to select boolean.

```
┌─────────────────────────────────────────────────────────────────┐
│ ▽                              xterm                              │
├─────────────────────────────────────────────────────────────────┤
│                    Online Documentation Menu            Page 1    │
│                                                                   │
│  1. boolean                                                       │
│  2. pctabs                                                        │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│  (1 - 2). Select directory number or document number             │
│                                                                   │
│  (p). Previous directory                                          │
│  (m). Go back to main menu                                        │
│  (e). Exit                                                        │
│ Choose one: █                                                     │
│                                                                   │
└─────────────────────────────────────────────────────────────────┘
```

7.   A fourth-level menu appears. After you have selected one of the
     six choices (modules) from the fourth-level menu shown below, a
     Text Editor window appears (not shown here) that displays
     the dl module Boolean you requested.

```
┌─────────────────────────────────────────────────────────────────┐
│ ▽                              xterm                              │
├─────────────────────────────────────────────────────────────────┤
│                    Online Documentation Menu            Page 1    │
│  1. dl                                                            │
│  2. dm                                                            │
│  3. dn                                                            │
│  4. ta                                                            │
│  5. tb                                                            │
│  6. tc                                                            │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│  (1 - 6). Select directory number or document number             │
│                                                                   │
│  (p). Previous directory                                          │
│  (m). Go back to main menu                                        │
│  (e). Exit                                                        │
│ Choose one: █                                                     │
│                                                                   │
└─────────────────────────────────────────────────────────────────┘
```

8. Finally, when you are ready to end the session, enter **e**. The
    `viewcd` utility automatically closes any `Text Editor`
    windows that are open, unmounts the CD-ROM, and returns to the
    system prompt.

```
┌─────────────────────────────────────────────────────────┐
│ ▽                              xterm                      │
│                    Online Documentation Menu      Page 1  │
│  1. help                                                  │
│  2. module--c90                                           │
│  3. module--chrt                                          │
│  4. status                                                │
│  5. tabs--cable                                           │
│  6. tabs--wire                                            │
│                                                           │
│                                                           │
│                                                           │
│  (1 - 6). Select directory number or document number      │
│                                                           │
│  (e). Exit                                                │
│  Choose one: e                                            │
│  Killing all Textedit windows                             │
│  CD-ROM sucessfully unmounted                             │
│  bugs$ ▊                                                  │
└─────────────────────────────────────────────────────────┘
```

T

U

V

W

X

Y