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CONTROL DATA

CML/VE REFERENCE

CDC® OPERATING SYSTEMS:
NOS/VE

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Revision F of this manual incorporates changes at system version 1.4.2 level 727. Additions document the HPA/VE quick index/reports menu.

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About This Manual

This manual describes the CONTROL DATA® Concurrent Maintenance Library for the Virtual Environment (CML/VE). Using CML/VE you can use diagnostic programs online under the CDC® Network Operating System/Virtual Environment (NOS/VE).

Audience

This manual is a reference for customer engineers and for site personnel who are authorized to run online maintenance software. It assumes that you understand the System Command Language (SCL) concepts as presented in the SCL Language Definition and SCL System Interface manuals. CML/VE also provides a set of product commands with which an expert user can directly access the maintenance software products.

Conventions

New features, as well as changes, deletions, and additions to this manual, are indicated by vertical bars in the margin.

Technical changes and additions are indicated by change bars and are correlated with the revision of the page on which they occur. Other changes, such as editorial and pagination, are not identified by change bars but may be included as part of a revision.

Related Manuals

The following manuals contain related information.

Publication	Publication Number
HPA/VE Reference	60461930
MALET/VE Reference	60461940
MALET Language Programming	60456020
DVS Usage	60469720
SCL Language Definition Usage	60464013
SCL System Interface Usage	60464014
SCL Object Code Management Usage	60464413
Family Administration for NOS/VE Usage	60464513
CDCNET Network Performance Analyzer Manual	60461510
CDCNET Network Operations Manual	60461520
CDCNET Diagnostic Messages	60461600
CDCNET Troubleshooting Guide	60462630

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Description 1

Introduction to CML/VE

CML/VE provides interactive access to a set of menus that perform maintenance related tasks under the NOS/VE operating system.

CML/VE includes:

- SCL and CYBER Implementation Language (CYBIL) procedures with which you access the following NOS/VE maintenance software products.
  - MALET/VE (Maintenance Application Language for Equipment Testing for the Virtual Environment).
  - HPA/VE (Hardware Performance Analyzer for the Virtual Environment).
  - DVS (Diagnostic Virtual System).
  - NPA (Network Performance Analyzer).
  - CDCNET Utility (CDCNET Online Diagnostics, Status Displays, and device state controls).
- CML/VE utilities with which you observe and control the maintenance aspects of the system's hardware configuration.

Access to the maintenance software products and the utilities is through a set of menus, from which you select tasks. These menus alone are often referred to as CML/VE, because they are the main portion of the product.

In addition, high-level commands enable expert users to manipulate the maintenance software products without using the menus.

CML/VE permits you to prevent, predict, and correct problems for most hardware elements, while the system continues to operate with little or no interruption.

No batch capabilities are provided by CML/VE other than options that may be available from the maintenance software products supported under CML/VE.

Concurrent Maintenance Benefits

System reliability is increased

In concurrent maintenance, performance analysis and confidence testing are ongoing, which decreases the possibility of masked failures and reveals potential problems.

Periodic, routine, confidence-level testing dramatically reduces the time required to detect otherwise unsuspected failures, and reduces user job rerun times owing to these failures.

System availability is increased

Concurrent maintenance allows:

- advance warnings of potential failures,
- more timely detection of actual failures,
- less system-dedicated maintenance, and
- more effective use of scheduled time.

The result is a system that performs its intended customer function at the time that the customer wants it performed.

User confidence is increased

Confidence in the system is increased because routine confidence level tests can be run:

- at intervals more suitable to workloads,
- when a failure is suspected, and
- to verify that a particular element is operational prior to running a given job.

Concurrent Maintenance Principles

Maintenance and production time-share system elements

Most systems can accommodate maintenance activity in which maintenance actions and customer production time-share all or part of a system element.

Alternatively, all or part of a system element can be dedicated to a maintenance state, that is, accessible to maintenance software but not to customer production.

Some user jobs require 100 percent of the available resources, while others require considerably less. The degradation in production capability varies widely, depending on the balance that is achieved in scheduling. Many jobs experience no degradation at all.

Most maintenance is concurrent with production

If an element is not system critical and can be either time-shared by or dedicated to a unique maintenance state, most maintenance activities can be performed concurrent with customer production, including:

- scheduled, routine, confidence-level testing,
- selectable confidence-level testing,
- routine preventive maintenance,
- failure detection,
- failure isolation,
- failure correction,
- repair verification before reinstatement, and
- reinstatement confidence-level testing.

Most failures are predictable

Most failures exhibit signs of degraded performance long before the actual failure occurs.

If a failure is going to occur, it is highly probable that key performance indicators will provide advance warning. Since customer production may be the most stringent test of all, these performance indicators are most effective if they are collected and logged in a system file during customer production.

When failure data is operated on by a performance analyzer, trends are noted, and it may be possible to prevent a failure by performing a repair action before a job or operating system is affected.

For certain classes of devices and certain kinds of actions, maintenance actions are triggered according to predetermined thresholds and performance criteria.

Failures are corrected online

When a failure is detected, it may be possible to perform isolation and correction while customer production continues.

If it is impossible to isolate and resolve the problem on line, it must then be determined whether the system can continue to operate effectively without using all or part of the affected element. If it can, the element can be placed in a deferred maintenance state, waiting for a scheduled maintenance period.

Error log isolates intermittent problems

Information in the error log can be instrumental in isolating problems that give no advance warning or are intermittent in nature.

Main Features of CML/VE

The CML/VE menus manage:

- the hardware maintenance features of NOS/VE, and
- the NOS/VE maintenance software products.

CML/VE does not include any of the maintenance software products themselves. However, it establishes the environment for the maintenance software products, including:

- attaching the proper files,
- setting command lists, and
- initiating the product with either a default set of parameters or a user-defined set of parameters.

CML/VE also:

- provides commonly used procedures for the maintenance software products, and
- provides utilities to display and manage the system maintenance features of NOS/VE.

Main Parts of CML/VE

CML/VE consists of 11 main parts (figure 1-1):

- The user interface with CML/VE
- Menus for accessing MALET/VE
- Menus for accessing HPA/VE
- Menus for accessing DVS
- The Configuration Management Utility and menus for using it
- The Terminal/User Definition Utility and menus for using it
- The Help Facility and menus for accessing it
- Toolbox of site procedures and menus for accessing it
- Menus for accessing NPA
- Menus for accessing CDCNET online diagnostics and status displays
- Menus for other maintenance tools, Mass Storage Test (MST)

How to use the menus is described in chapter 2, *Operation.* Descriptions of the CML/VE utilities and NOS/VE maintenance software products follow in this chapter.

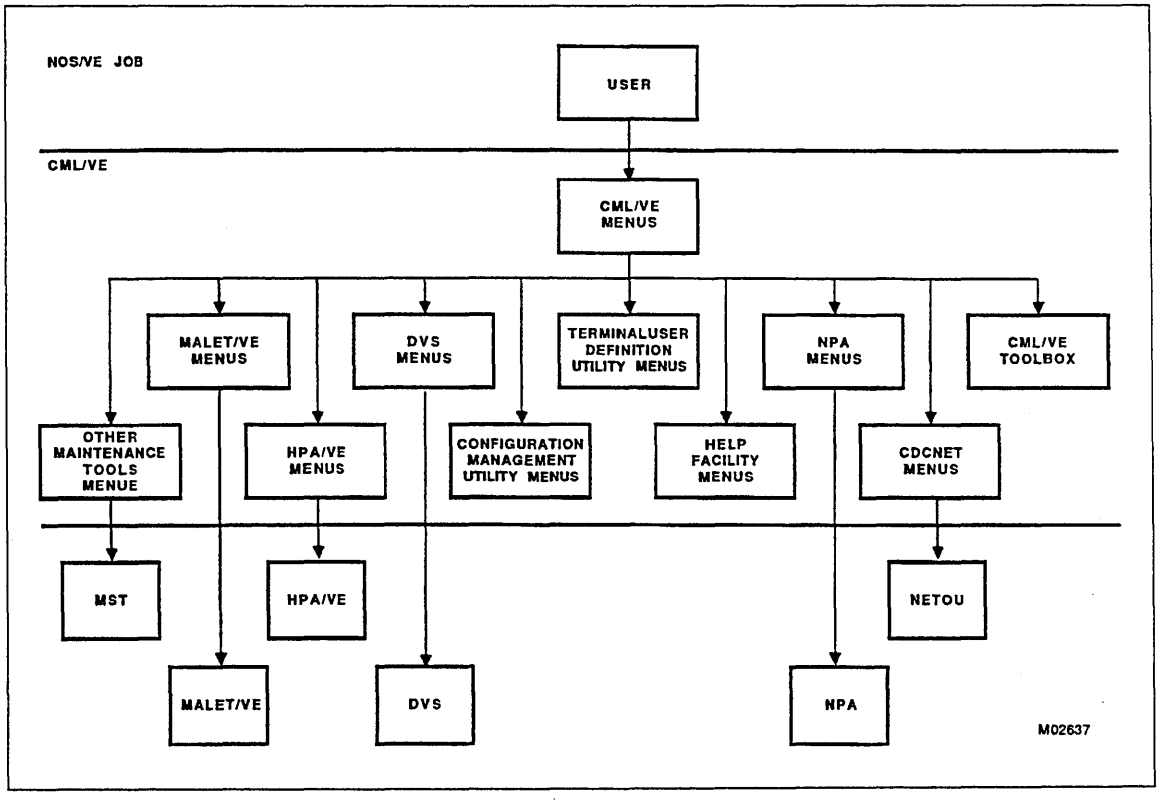

Figure 1-1. CML/VE Environment Diagram

The Configuration Management Utility

The Configuration Management Utility allows you to use:

- the NOS/VE configuration management program interfaces, and
- the NOS/VE configuration management utilities.

Use it to gain knowledge of a particular system's hardware configuration and to place hardware elements in defined maintenance states.

The CML/VE Configuration Management Utility consists of:

- Displays of detailed hardware information.
- Displays of the NOS/VE active logical and physical configuration files. Included are options for displaying all elements, channel elements, controller elements, or storage elements.
- A display depicting the connectivity between channels, controllers, and storage elements for the logical or physical configuration.
- A display of individual element information, including serial number, operating system state, and downward connectivity for the logical or physical configuration.
- A menu for controlling hardware element maintenance states. Element states define how NOS/VE and the maintenance software products use the element. The possibilities are:

State	Description
On	The element can be used in a concurrent mode by both NOS/VE and maintenance software.
Down	The element cannot be used by NOS/VE, but it can be used by maintenance software in both concurrent and dedicated modes.
Off	Neither NOS/VE nor maintenance software can use the element.

You are allowed to make the following state changes.

On to Down
Down to On
Down to Off

NOS/VE may reject any of these state changes based on its current use of the element affected.

The Terminal/User Definition Utility

The Terminal Definition Utility provides:

- a display and control of the characteristics of your terminal,
- a display of the maintenance capabilities for the current user, and
- a family administrator with procedures to validate a user for maintenance activities.

CML/VE displays the currently active terminal definitions. This information is a subset of the information available with the NOS/VE DISPLAY_TERMINAL_ATTRIBUTES command.

The CML/VE Toolbox

The CML/VE Toolbox provides:

- a mechanism to generate and hold site produced SCL procedures, and
- menus to execute and modify CML/VE Toolbox procedures.

The Help Facility

CML/VE contains a Help Facility to assist you in using both CML/VE and the maintenance products that it supports.

The Help Facility is available at any point in the execution of CML/VE except while a maintenance software product is active.

CML/VE Utilities Help

The CML/VE Help Facility provides:

- a description of each CML/VE utility and its major functions in the maintenance software environment, and
- a diagram depicting the tree structure of CML/VE, and your current location in the tree.

Maintenance Software Products Help

The CML/VE Help Facility provides:

- a description of each maintenance software product and its major functions in the maintenance software environment,
- a description of the parameters associated with the product call, and
- a description of the subfunctions (such as tests or diagnostics) associated with the product.

Main Tasks Performed

CML/VE and the maintenance software products are used both separately and together to:

- monitor the operational performance of hardware elements,
- perform error detection on hardware elements,
- perform error isolation on hardware elements,
- display and control the states of hardware elements, and
- validate the operational state of the system.

Monitoring and Validating by CML/VE and NOS/VE

CML/VE monitors your use of the commands that change the state of hardware elements. It does so in order to notify the system operator of any changes you leave in effect upon terminating CML/VE.

NOS/VE provides a system maintenance state under the control of the system operator. This maintenance state validates:

- the changes to hardware element states that you request, and
- your maintenance activities, as they relate to the state of the operating system and to the restrictions appropriate to an individual element as a result of its use by NOS/VE.

Installation Parameters

CML/VE is delivered as a part of NOS/VE. No installation parameters exist.

NOS/VE Configuration

NOS/VE configuration information is obtained from NOS/VE by using the commands:

- MANAGE_LOGICAL_CONFIGURATION, and
- MANAGE_PHYSICAL_CONFIGURATION.

The SCL System Interface manual fully describes these commands (ordering information is in About This Manual).

From the configuration information, CML/VE obtains the names of the physical devices, their operational state, and their connectivity characteristics.

Requirements for Initiating CML/VE

The actions needed to validate a maintenance user may be accomplished by the system administrator using menu selection 4 of the terminal/user definition utility (CML_500) or by creating the following capabilities for the maintenance user.

Before you can initiate CML/VE, you must have read and write access to the $SYSTEM.HARDWARE_MAINTENANCE catalog. File and catalog permits for system file must be entered at the system console.

In addition, the individual products (MALET/VE, HPA/VE, and DVS) may require that you execute as a member of the maintenance job_class and have the ENGINEERING_ADMINISTRATION and SYSTEM_DISPLAYS capabilities set to TRUE. These permissions are provided by the system administrator, using the NOS/VE ADMINISTER_VALIDATIONS utility.

In order for you to execute on a NOS/VE dual-state system with a maintenance job class, the site administrator must establish the following validations. The current setting for these values may be displayed, using the CML/VE terminal/user definition utility.

Name	Validation
Job class	Interactive, maintenance, and batch.
Job class defaults	Interactive mode = maintenance Batch mode = maintenance

When you log into the system, the default class (maintenance) is used.

A NOS/VE standalone system uses the same validations. However, the job class defaults setting is optional, because the active job class is selectable during login. An example login command to select the maintenance job class is:

```
USER: username, password,,,MAINTENANCE
```

Your user number, or account number, must have the job class attributes interactive, batch, and maintenance, and the following catalog permits.

Product	Catalog Permits
CML/VE, HPA/VE,	catalog = $SYSTEM.HARDWARE_MAINTENANCE file = $SYSTEM.HARDWARE_MAINTENANCE.CML.TOOLBOX access_mode = (ALL, CONTROL, CYCLE)
MALET/VE, DVS	access_mode = (READ, EXECUTE) share_mode = (READ, EXECUTE)
HPA/VE	catalog = $SYSTEM.HARDWARE_MAINTENANCE.HPA.DATA access_mode = (ALL, CONTROL, CYCLE) share_mode = NONE
DVS	file = $SYSTEM.HARDWARE_MAINTENANCE.DVS.HISTORY access_mode = (READ, WRITE, MODIFY, APPEND, SHORTEN)
NPA	file = $SYSTEM.CDCNET.LOG access_mode = (READ, EXECUTE) file = $SYSTEM.CDCNET.VERSION_INDEPENDENT.COMMAND_LIBRARY access_mode = (READ, EXECUTE) catalog = $SYSTEM.CDCNET.ANALYSIS access_mode = (READ, EXECUTE)

In order to execute CDCNET-related maintenance software products at sites with CDCNET communications hardware, your site administrator must set the validation for the NOS/VE network operation capability to TRUE.

You can initiate MALET/VE, HPA/VE, DVS, NPA, and NETOU independently of CML/VE. Refer to the appropriate reference manual for the procedures for independent initiation of these products (manual ordering information is in About This Manual).

CDCNET and NPA Environments

The CDCNET and NPA environments involve a number of conventions and concepts which the user of CML/VE should be familiar with.

CDCNET System, Device, Line, and Network Names

All actions in the CDCNET Network must reference names of elements of the network. The following definitions apply to the CML/VE use of NETOU.

Name	Description
System_name	The system_name is the name of a device interface (DI). It is derived from the serial number of the DI. This name is needed to address commands to a DI; CML/VE will display the CDCNET defined name for a DI, software defined names for a DI are not used since they may vary from site to site. If the software defined names are known to a user, CML/VE will accept them. Example: `$DI_080025300119`
Device_name	The device_name is the name of an individual board in a DI. It is derived from the board type and card slot it is in. This name is needed to run online diagnostics on a board. Example: `$MCI7`
Line_name	Line_name is a software name defined for a specific connection to a LIM Port. CML/VE will translate a device_name for a LIM port to the line_name needed to change a line state. Example: `$LIM3_PORT1 = LINE31`
Network_name	The network_name is a software defined name for a communications medium (solution) such as a CYBER data channel or an Ethernet. Example: `$NET_network_id or $NET_000002`

CDCNET Device States

A CDCNET device may be in one of the following states:

State	Description
On	Operational; available for use by the communications system.
Down	Not operational; available for diagnostic tests only.
Off	Not operational or not installed; not available for use.

CDCNET Device Status

A CDCNET device may have a status as follows.

Status	Description
Active	Active communications are in progress.
Enabled	Device is configured and available for use.
Configured	Device is configured and prepared for use.
Unconfigured	Device is not configured.

Batch Printer Definitions

The BATCH printer capability in NOS/VE is organized as printer stations in a CDCNET network. There are two types of stations supported.

Station	Description
Public printer	A printer in a CDCNET network which is available to all NOS/VE users.
Private printer	A printer in a CDCNET network which is associated with a single user (station operator). The name of this user must be supplied to access a private printer.

NPA Log and Datafiles Definitions

The Network Performance Analyzer (NPA) has several options for the source of the data to be used to generate performance reports for a network.

Log File

The NOS/VE operating system and the CDCNET software logs CDCNET failure and performance data into a system file named $SYSTEM.CDCNET.LOG. CML/VE processes data from this log and produces NPA reports from it. This data represents the most recent information gathered by NOS/VE and CDCNET since the LOG file was last reset. The contents of the log file are not altered with this feature and the database files generated are discarded after the reports are generated.

Database Files

NPA produces a set of files called database files when processing the main system CDCNET log file (REFCLF Command). These files contain the same data as the log file but the data has been sorted and formatted to facilitate report generation. This data represents the history of the failure and performance data from CDCNET over a period of time. The length of time is dependent upon how an individual site uses the database files. By convention these database files are kept in a system catalog named $SYSTEM.CDCNET.ANALYSIS but a site may choose to put them elsewhere. CML/VE provides a feature to produce NPA reports from these files, either from their default catalog or from a user selectable catalog name. The CDCNET NPA manual fully describes these files (ordering information is in About This Manual).

MALET/VE

MALET/VE is both:

- a set of maintenance software diagnostics and utilities, and
- a maintenance tool for peripheral devices.

You can either execute the provided test modules or construct, compile, and execute your own modules.

MALET/VE executes under NOS/VE. It incorporates a high-level language that can be used to write programs to exercise peripheral devices on CDC CYBER 170, 800 Series, and CDC CYBER 180 Computer Systems after the operating system grants access.

MALET/VE consists of a compiler (written in CYBIL), an executive (written in CYBIL), and a language driver (written in PP COMPASS). NOS/VE interface procedures are also required to run MALET/VE.

Diagnostics are:

- written in the MALET language,
- compiled into executable code by the MALET/VE compiler,
- loaded and linked by the MALET/VE executive, and
- executed by the MALET/VE language driver.

HPA/VE

HPA/VE is a program that maintains error information:

- from detected hardware failures, or
- reported by NOS/VE.

From this information, HPA/VE produces error reports to notify you when a hardware element needs repair due to a solid failure or an excessive recovered-error rate.

HPA/VE consists of four parts:

Interface menus	The menus used by the customer engineer to display and/or print HPA/VE error incident reports and Statistical Quality Control (SQC) error and use data for each hardware element.
Change logs and SQC data base	The mechanism for making modifications to the internal HPA/VE control parameters. These parameters include the definitions for report generation control, error data retention intervals, and size of the error logs.
Process current log utility	Forces the immediate processing of all error and use entries in the currently active system engineering log in NOS/VE.

CML/VE provides access to all four parts.

DVS

DVS is a NOS/VE command utility that controls execution of online diagnostic tests of the CPU and central memory.

DVS programs are enhanced versions of the offline diagnostics related to the CPU and memory. DVS diagnostics employ the same testing, but contain unique code for online interfacing.

DVS can be executed in four ways.

Execution Command	Action
DVS RUN_CPU_ DIAGNOSTIC	Runs CPU diagnostics in batch mode. Functionally, this command creates appropriate command line images for the RUN_DVS procedure and submits them for processing. In addition, it updates a permanent summary file for each job.
DVS RUN_SYSTEM_ DIAGNOSTIC	Runs system diagnostics in batch mode. Functionally, this command creates appropriate command line images for the RUN_DVS procedure and submits them for processing. In addition, it updates a permanent summary file for each job.
DVS_UTILITY	Runs DVS in interactive mode. This command displays a command menu and an input prompt.
RUN_DVS	Runs diagnostics from a batch job. This command starts the DVS utility and begins execution of selected tests.

NPA

NPA is a NOS/VE command utility that constructs error and status reports for the CDCNET communications network.

Performance and error data from individual device interface elements of a CDCNET network are logged to a file named $SYSTEM.CDCNET.LOG in a NOS/VE host system. NPA acts on this data to construct reports for analysis of CDCNET performance.

CML/VE provides the following NPA reports:

NPA Report	Description
MCISRP3	Report of error data for the mainframe channel interface (MCI) board.
ETHRRP2	Report of error data for the Ethernet interface (ESCI) board.
HDLCRP3	Report of error data for high-level data link (HDLC) lines.
TERMRP1	Report of error data for all lines and terminals.
HRDWRP2	Report of all messages for CDCNET hardware.
SFTWRP2	Report of all messages for CDCNET software.
EVNTRP2	Report of all entries in the error log.

CDCNET Utility

CDCNET Utility consists of a set of procedures to test, control, and display status of a CDCNET network. The Network Operator Utility (NETOU) is extensively used by these procedures.

CDCNET Utility consists of five parts:

System, device, line, and network name selection	Allows the user to select a set of CDCNET elements as the target of the CDCNET Utility actions.
Element state management	Allows the user to control the logical states of CDCNET elements.
Status display	Allows the user to display status information of CDCNET elements.
Online diagnostics	Allows the user to execute the available CDCNET online documentation.
Message and alarm management	Allows the user to log messages received from a network and to control alarms.

MST

MST is a CYBIL program designed to create storage test activity on a disk unit in use by NOS/VE. It uses standard NOS/VE program interfaces to create a file in the user's $LOCAL catalog which can be associated with a specific disk. The disk device used must permit residency of temporary files and be in the ON state.

MST performs the following actions in order:

1. Sequential write
2. Sequential read
3. Random read
4. Random write
5. Sequential read

Each read includes data checking and will document any data errors detected. Any recovered errors encountered during MST operation may be reviewed by use of HPA/VE. All messages from MST are sent to JOB_LOG.

MST can be activated as follows:

- Make the object_library containing MST part of the set_command_list by entering the command

  add=$SYSTEM.HARDWARE_MAINTENANCE_CML.CML_INTERFACE

  and enter an MST (parameters) command. If the file_name parameter is used, the users working_catalog must be $LOCAL.

- Use the CML/VE MST command at the CML/VE main_menu.
- Use the CML/VE OTHER_MAINTENANCE_TOOLS menu to select MST parameters and execute MST.

NOTE

Use of MST under CML/VE requires MAINTENANCE_JOB_CLASS.

MST supports the following parameters:

- Intended size of the test file.
  - number_of_4K_records, n, pages, p: integer 100..$max_integer = 100
- Disk volume where the test file is to exist.
  - volume, recorded_vsn, rvsn, v, vsn: name = $optional
- Disk element name where the test file is to exist.
  - element_name, en, e: name = $optional
- Permits test file to overflow to additional devices if the target device becomes full.
  - allow_file_overflow, afo, ao, o: boolean = FALSE
- Test data file in the $LOCAL catalog.
  - file_name, fn, f: name = $optional

NOTE

The volume_name and element_name may not both be specified together. The pages parameter only represents actual pages when the NOS/VE page size is 4K. If one of these parameters is specified and the parameter name is also specified, the user must have the $LOCAL catalog selected as the working catalog to execute MST directly (not under CML) and name calling MST. If the CML menus are used, CML will mask this requirement.

Product Calls

Product calls describe the data structures and parameters CML/VE uses to initiate the execution of the maintenance software products.

Establishing MALET/VE Environment

To establish the MALET/VE environment, CML/VE sets the NOS/VE command lists to:

```
$SYSTEM.HARDWARE_MAINTENANCE.MALET.COMMAND_LIBRARY
```

Establishing HPA/VE Environment

To establish the HPA/VE environment, CML/VE sets the NOS/VE command lists to:

```
$SYSTEM.HARDWARE_MAINTENANCE.HPA.COMMAND_LIBRARY
```

Establishing DVS Environment

To establish the DVS environment, CML/VE sets the NOS/VE command lists to:

```
$SYSTEM.HARDWARE_MAINTENANCE.DVS.DVS_COMMAND_LIBRARY
```

Establishing NPA Environment

To establish the NPA environment, CML/VE sets the NOS/VE command lists to:

```
$SYSTEM.CDCNET.VERSION_INDEPENDENT.COMMAND_LIBRARY
```

Establishing MST Environment

To establish the MST environment, CML/VE sets the NOS/VE command lists to:

```
$SYSTEM.HARDWARE_MAINTENANCE.CML.CML_INTERFACE
```

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Operation 2

CML/VE's major function is to provide you with access to:

- MALET/VE, HPA/VE, and DVS (the NOS/VE maintenance software products), and
- CML/VE utilities.

The main way in which it does this is through a set of menus, from which you select maintenance actions and call maintenance software products.

CML/VE also provides a set of product commands with which an expert user can directly access the maintenance software products.

CML/VE will not execute as a batch job.

Initiating CML/VE

As an interactive NOS/VE user, you initiate CML/VE by typing:

CML *status = status variable*

The status parameter is an optional status variable name to receive the completion status of the command.

Using the Menus

The parts of a typical menu are defined in figure 2-1.

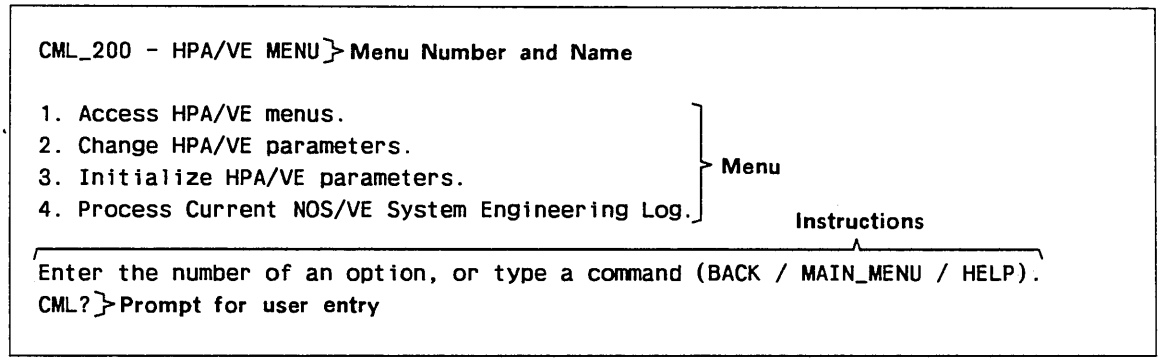

Figure 2-1. Typical Menu

You interact with CML/VE menus by:

- selecting maintenance actions from a menu list of options,
- entering menu management commands either to move through the menu tree or obtain information about the NOS/VE maintenance software, and
- entering hardware element names when CML/VE requests them.

Selecting Maintenance Actions

Each CML/VE menu presents you with a numbered list of possible actions, for example:

```
1.  Execute HPA/VE in Expert (command) mode.
2.  Access HPA/VE menus.
3.  Change HPA/VE parameters.
4.  Process Current NOS/VE System Engineering Log.
5.  Access HPA/VE Quick Index/Reports menu.
```

CML/VE then displays the prompt:

```
CML?
```

To select a menu option:

1. Enter the option number after the prompt.
2. Press your terminal's line termination key (for example, NEXT, RETURN, or ENTER).

Selecting the menu option executes the action indicated on the display. Possible actions include selection of other menus, construction of informational displays, execution of diagnostic procedures, and interactions with NOS/VE.

Entering Menu Management Commands

When CML/VE displays the prompt:

```
CML?
```

you can type in any one of the following commands.

Command Format	Action
HELP or **HEL** or **H** (HELP key on CDC 721)	Accesses the CML/VE Help Facility, which provides information about the NOS/VE maintenance software products.
BACK or **BAC** or **B** (BACK key on CDC 721)	Moves you back one level in the menu tree.
MAIN_MENU or **MAIN** or **M** (shifted BACK key on CDC 721)	Takes you either: • from any place in CML/VE back to the Main Menu, or • from the Help Facility back to the menu from which you entered HELP.
QUIT or **QUI** or **Q** or **END** (STOP or F6 key on CDC 721)	Terminates execution of CML/VE (this command is available from all CML/VE menus).

Entering Hardware Element Names

Several of the CML/VE menus require that you enter an element name for use in an interface to NOS/VE.

A hardware element name is an SCL name. The SCL Language Definition manual contains more information on element names (ordering information is in About This Manual).

To display the set of element names currently valid within NOS/VE, use the CML/VE Configuration Management Utility.

Using the Product Call Commands

The expert can use the product call commands to access the maintenance software products directly. The command formats are identical in structure and parameters to the SCL commands. They execute the product without CML/VE.

Product call commands are available only when you are at the CML/VE Main Menu display. Type them after the prompt:

```
CML?
```

When any display other than the Main Menu is present, these commands are rejected as illegal entries.

Brief descriptions of the product call commands follow.

MALET Command

The MALET command calls the MALET/VE product into execution. The MALET/VE Reference manual fully describes this command and its parameters (ordering information about this manual is in About This Manual).

CML/VE establishes the environment for MALET/VE and passes the MALET command to NOS/VE.

HPA Commands

The HPA commands call the HPA/VE product into execution. There are four commands to call the HPA/VE product, depending on the action.

Command	Description
HPA_UTILITY, HPAU, HPU	Enters the HPA/VE utility
ACCESS_HPA, ACCH, HPA	Accesses HPA reports.
CHANGE_HPA, CHAH	Changes the internal HPA/VE parameters.
PROCESS_CURRENT_LOG, PROCL	Immediately processes the NOS/VE engineering log.

The HPA/VE Reference manual fully describes the four calling methods (ordering information is in About This Manual).

CML/VE establishes the environment for HPA/VE and passes the commands to NOS/VE.

MST Command

The MST command calls the MST disk test into execution. This test causes disk activity through normal operating system interfaces. Refer to section 1 of this manual for a description of MST parameters.

Command	Description
MST, MSTVE, MST_VE	Start execution of the MST disk test.

DVS Commands

The DVS commands call the DVS product into execution. There are two commands to call DVS depending on the desired mode of execution (interactive or batch).

Command	Description
DVS_UTILITY, DVS	Initiates DVS in interactive mode.
RUN_DVS	Initiates DVS in batch mode.

The DVS manual fully describes these commands and their parameters (ordering information is in About This Manual).

CML/VE establishes the environment for DVS and passes the indicated command to NOS/VE.

NOS/VE Commands

NOS/VE provides two keyboard entries, which are always active.

Entry	Description
Pause break	Causes a break in the CML/VE processing to allow direct user interaction with NOS/VE. You can reverse the effect of this entry by entering NOS/VE RESUME_COMMAND. The SCL System Interface manual contains additional information (ordering information is in About This Manual).
Terminate break	Terminates CML/VE. Avoid using this entry as it may cause unpredictable results. The SCL System Interface manual contains additional information (ordering information is in About This Manual).

NPA Command

The NPA command calls the Network Performance Analyzer into execution. The CDCNET Network Performance Analyzer manual fully describes this command and its parameters (ordering information is in About This Manual).

Command	Description
NETWORK_ PERFORMANCE_ ANALYZER, NPA	Calls NPA into execution

NETOU Command

The NETOU command calls the Network Operator Utility into execution. The CDCNET Network Operations manual fully describes this command and its parameters (ordering information is in About This Manual).

Command	Description
NETWORK_OPERATOR_ UTILITY, NETOU	Calls NETOU into execution.

Error Messages

Error messages alert you to all detected user errors.

Menu Errors

When CML/VE encounters a menu-related error, you receive the message:

```
Input not understood, please retry or use HELP.

Type a command (BACK / MAIN_MENU / HELP).
CML?
```

Maintenance Software Product Errors

When an error is encountered in establishing the environment for a maintenance software product, you receive:

- an error message from NOS/VE or the product itself, and
- the following CML/VE error message.

```
{name of maintenance software product} aborted or was not available.

Type a command (BACK / MAIN_MENU / HELP).
CML?
```

CML/VE Structure Diagram

A display of the CML/VE menu tree is available through the Help Facility (figure 2-2). The menu from which you accessed the Help Facility appears at the bottom of this display as the current frame.

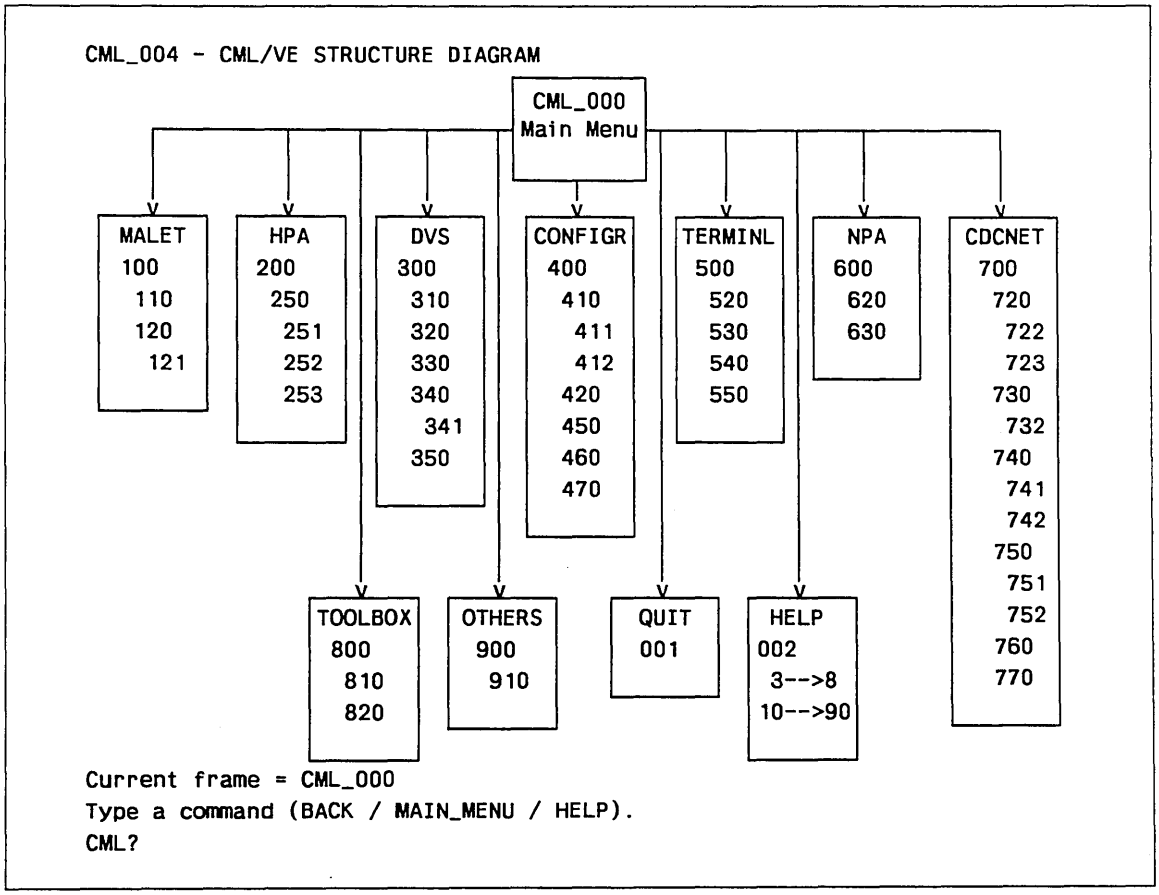

Figure 2-2. CML/VE Structure Diagram

Help Facility Menu

You can obtain the Help Facility Menu (figure 2-3) from any menu in CML/VE. You cannot obtain the menu while a maintenance software product is executing.

```
CML_002 -  CML/VE HELP FACILITY MENU

CML/VE is a utility which provides an environment for the NOS/VE maintenance
user to perform tasks related to the maintenance of the CYBER 180 hardware
and to cause execution of various maintenance software programs and procedures.

 1. MALET/VE Help. . . . . . Peripheral Diagnostics
 2. HPA/VE Help. . . . . . Hardware Error Reports
 3. DVS Help . . . . . Mainframe Diagnostics
 4. Configuration Help . . . . . NOS/VE Configuration Utility
 5. Terminal/User Help . . . . . Terminal/User Definition Utility
 6. NPA . . . . . Network Performance Reports
 7. CDCNET Utility . . . . . CDCNET Diagnostics and Status Display
 8. CML/VE Toolbox . . . . . Site Generated SCL Procedures
 9. Other Tools. . . . . Other Maintenance Related Tools
10. CML/VE Help. . . . . CML/VE Features and Commands

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-3. CML/VE Help Facility Menu

Menu Choice	Action
1	Displays the MALET/VE help menu.
2	Displays the HPA/VE help menu.
3	Displays the DVS help menu.
4	Displays the NOS/VE Configuration Utility help menu.
5	Displays the Terminal/User Definition Utility help menu.
6	Displays the NPA help menu.
7	Displays the CDCNET Utility help menu.
8	Displays the site generated SCL procedures.
9	Displays the Other Tools help menu.
10	Displays the CML/VE help menu.

CML/VE Main Menu

The CML/VE Main Menu (figure 2-4) is the highest level of the CML/VE menu tree and provides the path to the maintenance software products and the CML/VE utility functions.

When this menu is displayed, the expert user can enter the commands to directly call a maintenance software product. *Using the Product Call Commands*, in this chapter, briefly describes these commands.

```
CML_000 - CML/VE MAIN MENU - Version xx[1]

 1. MALET/VE (Peripheral Diagnostics)
 2. HPA/VE (Hardware Error Reports)
 3. DVS (Mainframe Diagnostics)
 4. Configuration Utility (Display Hardware/Software Configuration Data)
 5. Terminal/User Definition Utility (Display/Alter Terminal/User Definition)
 6. NPA (Network Performance Analyzer)
 7. CDCNET Utility (Online Diagnostics and Status Displays)
 8. CML/VE Toolbox (Site/Local Generated Maintenance Procdures)
 9. Other Maintenance Tools (MST Disk Test)
10. QUIT/END (Exit CML/VE)

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-4. CML/VE Main Menu

Menu Choice	Action
1	Displays MALET/VE menus.
2	Displays HPA/VE menus.
3	Displays DVS menus.
4	Displays menus from which you manage the NOS/VE hardware configuration.
5	Displays menus from which you can determine the current attributes of your terminal and set new attributes (for example, page width and output device).
6	Displays NPA menus.
7	Displays CDCNET Utility menus.
8	Displays the CML/VE Toolbox menu.
9	Displays the Other Maintenance Tools menu.
10	Exits CML/VE.

1. xx is the version number of the release being used.

Accessing MALET/VE

The MALET/VE Menu (figure 2-5) provides access to MALET/VE on two levels.

Level	Description
Procedure	CML/VE provides predefined maintenance procedures for common maintenance tasks.
Expert or command	CML/VE makes the command set of MALET/VE available to the expert user.

```
CML_100 - MALET/VE MENU

1. Execute MALET in expert (command) mode.
2. Execute a MALET diagnostic or utility on a NOS/VE device.
3. Execute a MALET diagnostic or utility on an unconfigured device.
4. Verify MALET/VE installed.

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-5. MALET/VE Menu

Menu Choice	Action
1	Displays the MALET/VE Parameter Menu.
2	Displays the MALET Diagnostics Menu of procedures provided by CML/VE for NOS/VE configured devices.
3	Displays the MALET diagnostic menu of procedures provided by CML/VE for unconfigured devices (uses Menu CML_120 for diagnostic selection and Menu CML_121 for path selection).
4	Executes a procedure to verify that MALET/VE is installed.

Only the displays that are part of CML/VE are presented in this manual. The displays that are part of MALET/VE are documented in the MALET/VE Reference manual (ordering information is in About This Manual).

MALET/VE Parameter Menu

The MALET/VE Parameter Menu (figure 2-6) allows the expert user to specify the execution parameters for MALET/VE.

```
CML_110 - MALET/VE PARAMETER MENU

Parameter:              Value:
1. INPUT              = COMMAND
2. OUTPUT             = $OUTPUT
3. SCRATCH            = $LOCAL.MAF$SCRATCH
4. USER               = FALSE
5. CATALOG            = $SYSTEM.HARDWARE_MAINTENANCE.MALET.DIAGNOSTICS.SCRATCH
6. SOURCE_LIBRARY     = $LOCAL.MAF$SOURCE LIBRARY
7. OBJECT_LIBRARY     = $LOCAL.MAF$OBJECT LIBRARY

8. Start MALET Execution.

Parameter values may be changed by selecting the appropriate menu number.
Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-6. MALET/VE Parameter Menu

Menu Choice	Action
1 - 7	Displays a prompt to enter a new value for the named parameter.
8	Initiates MALET/VE with the set of parameters currently displayed.

MALET Diagnostics Menu

The MALET Diagnostics Menu (figure 2-7) allows you to select a specific diagnostic to be executed by CML/VE using MALET/VE. The CML/VE procedure presets all MALET/VE commands; you interact directly with MALET/VE only in the case of a diagnostic-detected error.

```
CML_120 - MALET DIAGNOSTICS MENU    (Element Configured = TRUE)

 1. ATC-7021 Controller Diagnostic      12. FMC-7155 A/B Controller Diagnostic
 2. BCX-7154 Controller Diagnostic      13. FSD-7255/834/836 Disk Subsys Utility
 3. CCM-7165 (CCC) Coupler Memory Diag  14. IDT-9836/9853/CM3 Data Path Test
 4. CLM-7165 (CCC) Coupler Utility      15. ISW-639/9639 Tape Drive Diagnostic
 5. D44-7154/7155/844 Confidence Test   16. ITW-7221/639/9639 Tape Subsys Utility
 6. DL8-7155/885/LS Confidence Test     17. 19X-5698/IPI Tape Diagnostic
 7. DM8 CCC/895 Disk Subsystem Utility  18. MSD-7040/5380 ESM II/STORNET Diag
 8. DTC-7155/844 Drive Diagnostic       19. MSM-7040/5380 ESM II/STORNET Diag
 9. DTI-834/836/895 Data Path Test      20. MY8-7154 Controller Diagnostic
10. FHC-7155-C Controller Diagnostic    21. SSD-7040/5380 ESM II/STORNET Diag
11. FLD-885/LS Disk Drive Diagnostic    22. SSM-7040/5380 ESM II/STORNET Diag
                                        23. T7X-67X/698 Tape Drive Diagnostic
Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-7. MALET Diagnostics Menu

NOTE

Element configured = True if menu CML_100 option 2 is selected.
Element configured = False if menu CML_100 option 3 is selected.

Menu Choice	Action
1 - 23	Executes the named diagnostic using MALET/VE. The procedure prompts you for required parameter data and the element name of the device to be tested. If the device is a NOS/VE configured device, the element name that you give must be a legal SCL name and must be the name of a device in the operating system's active logical configuration. You can obtain a display of the contents of the active logical configuration from the CML/VE Configuration Utility, which is accessible from the CML/VE Main Menu. If you need help in providing a name during a terminal session, call the Help Facility.

MALET Unconfigured Path Menu

The MALET Unconfigured Path Menu (figure 2-8) permits the designation of the path description to a device to be tested which is not in the NOS/VE active logical configuration.

```
CML_121 HARDWARE PATH MENU FOR UNCONFIGURED DEVICE.

The following path data will be used for ATC execution.
                  (All numbers are in octal)

1. IOU name (IOU0 or IOU1)                = IOU0
2. CHANNEL number (Integer)               = 12
3. CHANNEL port (NONE, PORT_A or PORT_B   = NONE
4. CONCURRENT CHANNEL (TRUE or FALSE)     = FALSE
5. DMA CHANNEL (TRUE or FALSE)            = FALSE
6. EQUIPMENT number (Integer)             = 0
7. UNIT number (Integer or NONE           = 0

8. Start Diagnostic Execution.

Enter a menu selection to change a path value, start the diagnostic, or
type a command (BACK / MAIN_MENU / HELP.

CML?
```

Figure 2-8. MALET Unconfigured Path Menu

Menu Choice	Action
1	Select the IOU name to which the device to be tested is connected.
2	Select the channel number to which the device to be tested is connected.
3	Select the channel port to which the device to be tested is connected.
4	Select a value for the type (concurrent or nonconcurrent) of channel to which the device to be tested is connected.
5	Select a value for the type (DMA or non DMA) of channel to which the device to be tested is connected.
6	Select the equipment number of the device to be tested.
7	Select the unit number of the device to be tested.
8	Start the execution of the test on the defined path.

Accessing HPA/VE

The HPA/VE Menu (figure 2-9) allows you to:

- execute HPA/VE in expert (command mode),
- access the HPA/VE menus and error reports,
- change the HPA/VE execution parameters,
- process the system engineering log.
- access the HPA/VE quick index/reports menu.

```
CML_200 - HPA/VE MENU

1. Execute HPA/VE in Expert (command) mode.
2. Access HPA/VE menus.
3. Change HPA/VE parameters.
4. Process Current NOS/VE System Engineering Log.
5. Access HPA/VE Quick Index/Reports menu.

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-9. HPA/VE Menu

Menu Choice	Action
1	Enters the HPA/VE utility and displays the utility prompt.
2	Initiates HPA/VE to allow you to use the HPA/VE menus.
3	Initiates HPA/VE to allow you to change the internal HPA/VE execution parameters.
4	Causes HPA/VE to immediately process the error and usage entries in the currently active system engineering log in NOS/VE.
5	Displays the HPA/VE quick index/reports menu.

The displays that are part of HPA/VE are documented in the HPA/VE Reference manual (ordering information is in About This Manual).

HPA/VE Quick Index/Reports Menu

The HPA/VE Quick Index/Reports Menu (figure 2-10) allows you to select indexes of reports and to print reports. Figure 2-11 is a sample of a quick index/reports display.

```
CML_250 - HPA/VE QUICK INDEX/REPORTS MENU

   Choosing a "display index" option will lead to an index of HPA/VE
   reports.  From this index, report numbers may be selected for display.
   To scan down or up through the index, use the "+" and "-" inputs.

1. Display Index of Reports for last 1 day.
2. Display Index of Reports for last 3 days.
3. Display Index of Reports for last 7 days.
4. Display Index of Reports for last 30 days.
5. Display Index of All Reports.
6. Print Reports.

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-10. HPA/VE Quick Index/Reports Menu

Menu Choice	Action
1 - 5	Displays selected index of reports.
6	Enters a display with prompts for a report number or a list of range of report numbers to print. An example of a valid list of range or report numbers might be: 5593..5996, 5749, 6001..6004.

```
CML_254 - HPA/VE Reports                                    Page 2 of 2

NUMBER TYPE  STATUS DATE     PROD_ID              S/N ELEMENT_NAME
005749 ERROR OPEN   88-10-23 CP1_32               209 CP1
005755 ERROR OPEN   88-10-25 9853_1               2552 GREEN_9853_7
005951 ERROR OPEN   88-10-28 FA7B5_A               741 GREEN_FA7B5_4
005951 ERROR OPEN   88-10-28 887_1                 260 GREEN_887_1
005952 ERROR OPEN   88-11-03 HPA_VE                    HPA_VE
005993 ERROR OPEN   88-11-03 ODISK_1               132 CM_3
005994 ERROR OPEN   88-11-03 CP0_41                235 CP0
005995 ERROR OPEN   88-11-03 CP0_41                235 CP0
005996 ERROR OPEN   88-11-03 CP0_41                235 CP0
005997 ERROR OPEN   88-11-03 CP0_41                235 CP0
005998 ERROR OPEN   88-11-03 CP0_41                235 CP0
005999 ERROR OPEN   88-11-03 CP0_41                235 CP0
006000 ERROR OPEN   88-11-03 CP0_41                235 CP0
006001 ERROR OPEN   88-11-03 CP0_41                235 CP0
006002 ERROR OPEN   88-11-03 CP0_41                235 CP0
006003 ERROR OPEN   88-11-03 IOU0_40               288 IOU0

Enter a report number to display, or type ( + / - / BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-11. Partial 30 Day Index Sample

The Quick Index/Reports menu selects displays of indexes of HPA/VE reports. The index will include information from reports created in the last 1, 3, 7, 30 or all days, depending on the option selected.

If the current interaction style is screen, a selected report is displayed in the full screen editor. Leaving the editor will return control to the report index menu.

When the interaction style is not set to screen, reports are displayed using interactive paging controls. The characters "+" and "-" are used for paging forward and backward. The standard CML/VE options BACK, QUIT, MAIN_MENU, and HELP are available during the report display.

Accessing DVS

CML/VE provides access to DVS on two levels.

Level	Description
Procedure	CML/VE provides predefined maintenance procedures for common maintenance tasks.
Expert or command	CML/VE makes the command set of DVS available to the expert user.

The DVS Menu (figure 2-12) allows you to select the mode of DVS execution.

```
CML_300 - DVS MENU

1. Execute a CPU Diagnostic.
2. Execute a System Diagnostic.
3. Execute DVS in Expert (Command) Interactive mode.
4. Execute DVS in Expert (Command) Batch mode.
5. Manage DVS History File.
6. Access the DVS Online Manual.

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-12. DVS Menu

Menu Choice	Action
1	Displays a menu of the DVS CPU diagnostics for which CML/VE provides procedures.
2	Displays a menu of the DVS System Diagnostics (confidence tests) for which CML/VE provides procedures.
3	Displays the Interactive Parameter Menu, from which the expert user can set parameters for executing DVS in interactive mode.
4	Displays the Batch Parameter Menu, from which the expert user can set parameters for executing DVS in batch mode.
5	Displays a set of menus for managing the DVS history file.
6	Displays the DVS online manual.

Only the DVS displays that are part of CML/VE are presented here. The displays that are part of DVS are documented in the DVS manual listed in About This Manual.

DVS CPU Diagnostics Menu

The DVS CPU Diagnostics Menu (figure 2-13) allows you to select a CPU test for DVS to execute.

```
CML_310 - DVS CPU DIAGNOSTICS MENU

 1. BIMM (BDP Immediate Test)          11. HIMM (Half Word Immediate Test)
 2. BRCH (Float. Point Branch Test)    12. KYPT (Keypoint End-Case Test) *
 3. BYTE (Byte End-Case Test) *        13. NUMB (BDP Numeric Test) *
 4. DBUG (Debug Test) *                14. RCT1 (Random Command Test 1)
 5. DOBL (Dbl. Prec. FP Test)          15. RCT1 (Random Command Test 2)
 6. EDIT (BDP End-Case Test) *         16. RFST (Random Fast/Slow Test
 7. FCT3 (Fixed Command Test 3)        17. SNGL (Sgl. Prec. FP Test)
 8. FIMM (Full Word Immediate Test)    18. VINT (Vector Integer Test)
 9. FINT (Full Word Integer Test)      19. VCMP (Vector Compare Test)
10. HINT (Half Word Integer Test)      20. VGTH (Vector Gather/Scatter Test)
                    21. Run all tests except * in sequence.
Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-13. DVS CPU Diagnostics Menu

Menu Choice	Action
1 - 20	Executes the indicated CPU diagnostic with preset parameter values.
21	Executes all the CPU diagnostics in the displayed sequence.

NOTE

Selections 18, 19, and 20 execute only if the CPU is a CYBER 180, Model 990.

If the mainframe being used has multiple CPUs, you receive the prompt:

```
Enter the number of the CPU to be tested (0 or 1).
CML?
```

When the diagnostic begins execution, the parameters it uses are displayed, followed by the message:

```
Executing DVS CPU diagnostic {diagnostic name} in CPU {number}.
Enter a pause-break to terminated execution prior to normal completion.
This will take approximately 5 minutes or less, Please Wait....
```

DVS System Diagnostics Menu

The DVS System Diagnostics Menu (figure 2-14) allows you to select a system test for DVS to execute.

```
CML_320 - DVS SYSTEM DIAGNOSTICS MENU

1. CMEM (Central Memory Test)
2. DISK (Disk Subsystem Validation Test)
3. TAPE (Tape Subsystem Validation Test) - (Tape labelled DVS will be required)
4. COMCT (CDCNET Communications Confidence Test)

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-14. DVS System Diagnostics Menu

Menu Choice	Action
1	Executes the central memory test.
2	Executes the disk confidence test.
3	Executes the tape confidence test. **NOTE** Choosing option 3 causes CML/VE to ask the system operator for a tape with the external VSN = DVS. This must be a labelled tape.
4	Executes the CDCNET communications confidence test. Choosing this option results in the following prompt: `Please enter the name of the CDCNET echo system, or type a command (BACK / MAIN_MENU / HELP) CML?` To continue, enter the name of a system in CDCNET to echo messages. You can display the currently available system names by: 1. going to the System Element Configuration Utility Menu (CML_400), and 2. choosing option 4.

When the diagnostic begins execution, the parameters it uses are displayed, followed by the message:

```
Executing DVS diagnostic {diagnostic name}.
Enter a pause-break to terminated execution prior to normal completion.
This will take approximately 5 minutes or less, Please Wait....
```

DVS Interactive Parameter Menu

The DVS Interactive Parameter Menu (figure 2-15) allows the expert to set the DVS call parameters for interactive use.

```
CML_330 - DVS INTERACTIVE PARAMETER MENU

Parameter:              Value:
1. INPUT              = COMMAND
2. USER               = FALSE
3. SELECT_PROCESSOR   = 0
4. SUBCATALOG         = $SYSTEM.HARDWARE_MAINTENANCE.DVS
5. OUTPUT             = $OUTPUT
6. MENU_MODE          = TRUE

7. Start DVS execution.

Parameters may be changed by selecting the appropriate menu number.
Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-15. DVS Interactive Parameter Menu

Menu Choice	Action
1 - 6	Prompts you to enter a new value for the named parameter.
7	Initiates DVS in interactive mode with the set of parameters currently displayed.

DVS Batch Parameter Menu

The DVS Batch Parameter Menu (figure 2-16) allows you to set the DVS call parameters for batch use.

```
CML_340 - DVS BATCH PARAMETER MENU

 1. Test_Name                    = ALL
 2. Selected_Utility_Processor   = 0
 3. Selected_Test_Processor      = 0
 4. Job_Name                     = DVS
 5. Job_Class                    = MAINTENANCE
 6. Reduce_Task_Priority         = FALSE
 7. Test_Copies                  = 1
 8. Job_Copies                   = 1
 9. Active_Tasks                 = 9
10. Hours                        = 0
11. Minutes                      = 1
12. Abort_On_Error               = TRUE
13. User                         = FALSE
14. Load_Map                     = FALSE
15. Output_File                  = $SYSTEM.HARDWARE_MAINTENANCE.DVS.HISTORY
16. Multiprocessing Option       = FALSE
17. Discard_Standard_Output      = FALSE
18. Display Test Parameters
19. Start DVS execution
Parameter values may be changed by selecting the appropriate menu number.
Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-16. DVS Batch Parameter Menu

Menu Choice	Action
1 - 17	Prompts you to enter a new value for the named parameter.
18	Displays a set of parameter menus from which you can choose the diagnostics available with the DVS batch mode.
19	Initiates the DVS batch jobs, with the set of parameters currently displayed, and any test parameters that you selected with menu item 16.

DVS Batch Test Parameter Menu

The DVS Batch Test Parameter Menu allows you to set the parameters for the diagnostics supported by DVS batch mode. It is divided into four screens (figures 2-17 through 2-20).

```
CML_341 - DVS BATCH TEST PARAMETER MENU

 1. RCT1RC     = 10000
 2. RCT1PV     = 7FFFFFFF
 3. RCT1PC     = 0
 4. RCT1IC     = 0
 5. RCT1SPC    = 0
 6. RCT2RC     = 5000
 7. RCT2PV     = 7FFFFFFF
 8. RCT2SPC    = 0
 9. RFSTRC     = 1
10. RFSTPV     = 7FFFFFFF

41. Display more test parameters.
42. Display DVS parameters.
43. Start DVS execution.

Parameter values may be changed by selecting the appropriate menu number.
Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-17. DVS Batch Test Parameter Menu (First Screen)

Menu Choice	Action
1 - 10	Prompts you to enter a new value for the named parameter.
41	Displays the next screen of the menu with additional test parameters.
42	Returns you to the DVS Batch Parameter Menu.
43	Initiates the DVS batch jobs with the currently selected values for the DVS and test parameters.

```
CML_341 - DVS BATCH TEST PARAMETER MENU

11. RFSTPC     = 0
12. RFSTSPC    = 0
13. RFSTDB     = FALSE
14. FCT3RC     = 1
15. FCT3DB     = FALSE
16. MIGDSRC    = 1
17. MIGDSPV    = 7FFFFFFF
18. MIGDSSPC   = 0
19. MIGDSVQL   = FALSE
20. CMEMRC     = 2
21. CMEMSFS    = 1048576

41. Display more test parameters.
42. Display DVS parameters.
43. Start DVS execution.

 Parameter values may be changed by selecting the appropriate menu number.
 Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
 CML?
```

Figure 2-18. DVS Batch Test Parameter Menu (Second Screen)

Menu Choice	Action
11 - 21	Prompts you to enter a new value for the named parameter.
41	Displays the next screen of the menu with additional parameters.
42	Returns you to the DVS Batch Parameter Menu.
43	Initiates the DVS batch jobs with the currently selected values for the DVS and test parameters.

NOTE

Item 17 is displayed only for a Model 990 CPU. For any other CPU type, it is not used.

```
CML_341 - DVS BATCH TEST PARAMETER MENU

22. CMGMEN     = NONE
23. DBUGRC     = 1
24. DBUGPV     = 7FFFFFFF
25. DEBUGSPC   = 0
26. DBUGDB     = FALSE
27. DISKRC     = 1
28. DISKREC    = 512
29. DISKRS     = 2048
30. DISKEN     = NONE
31. TAPERC     = 1

41. Display more test parameters.
42. Display DVS parameters.
43. Start DVS execution.

 Parameter values may be changed by selecting the appropriate menu number.
 Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
 CML?
```

Figure 2-19. DVS Batch Test Parameter Menu (Third Screen)

Menu Choice	Action
22 - 31	Prompts you to enter a new value for the named parameter.
41	Displays the next screen of the menu with additional test parameters.
42	Returns you to the DVS Batch Parameter Menu.
43	Initiates the DVS batch jobs with the currently selected values for the DVS and test parameters.

```
CML_341 - DVS BATCH TEST PARAMETER MENU

32. TAPEREC    = 512
33. TAPERS     = 2048
34. TAPED      = 1600
35. COMCTRC    = 100
36. COMCTSN    = NONE
37. COMCTNI    = 0
38. COMCTSI    = 0
39. KYPTRC     = 1
40. KYPTPV     = 7FFFFFFF

41. Display more test parameters.
42. Display DVS parameters.
43. Start DVS execution.

 Parameter values may be changed by selecting the appropriate menu number.
 Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
 CML?
```

Figure 2-20. DVS Batch Test Parameter Menu (Last Screen)

Menu Choice	Action
32 - 40	Prompts you to enter a new value for the named parameter.
41	Returns you to the first screen of the menu.
42	Returns you to the DVS Batch Parameter Menu.
43	Executes the DVS batch jobs with the currently selected values for the DVS and test parameters.

Manage DVS History File Menu

The Manage DVS History File Menu (figure 2-21) allows you to display and manage the DVS history file. The data in this file is constructed by DVS batch jobs to document the results of their execution.

```
CML_350 - MANAGE DVS HISTORY FILE MENU

The DVS history file contains the results of the execution of diagnostics
by the DS Batch jobs created by one of the DVS commands.

1. Clear the history file.
2. Display the history file.
3. Monitor history file for diagnostic results.

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-21. Manage DVS History File Menu

Menu Choice	Action
1	Deletes the current contents of the history file.
2	Displays the current contents of the history file.

3	Starts a CML/VE procedure to periodically examine the DVS history file for entries. You receive the following message during this process.
	
	`Waiting for history file entry, enter a pause break to exit.`
	
	`Please Wait....`
	
	If the file is empty, CML/VE waits approximately 10 seconds and then checks the file contents again. If it finds an entry in the file, it displays the contents of the file and returns control to you. If CML/VE finds no entry in the file, it continues to repeat the process until either:
	
	• it finds an entry, or
	
	• you interrupt the process by entering a pause break character to NOS/VE.

Menu Choice	Action

CML/VE also displays the following messages.

- `No outstanding batch job found, monitoring terminated.`

  `Enter a RETURN/NEXT to continue, or type a command (BACK / MAIN_MENU / HELP) CML?`

  Comment: Since no batch job exists, no entries to the history file would be expected.

- `History file currently contains data. Please clear the history file before attempting to monitor it.`

  `Enter a RETURN/NEXT to continue, or type a command (BACK / MAIN_MENU / HELP) CML?`

  Comment: You must clear the data currently contained in the history file in order for CML/VE to detect when new data is entered.

Using the Configuration Management Utility

Accessing the Configuration Management Utility from the Main Menu causes the System Element Configuration Utility Menu to be displayed.

System Element Configuration Utility Menu

The System Element Configuration Utility Menu (figure 2-22) gives you access to the NOS/VE hardware configuration information and provides commands for changing the state of a hardware element.

```
CML_400 - SYSTEM ELEMENT CONFIGURATION UTILITY MENU

1. Display hardware configuration information.
2. Display detailed system hardware element configuration information.
3. Display CDCNET system names.
4. Display CDCNET configuration.
5. Display Level/Version of maintenance related software products.
6. Change Element States.
7. Manage the MALET/VE diagnostic files.

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-22. System Element Configuration Utility Menu

Menu Choice	Action
1	Selects a display depicting the interconnection of the hardware elements in the NOS/VE logical configuration. While CML/VE constructs this display, you receive the following message: `Generating configuration display, please wait.....`
2	Displays a menu of NOS/VE hardware configuration information.
3	Displays the names of systems connected to your mainframe through CDCNET.
4	Displays the installed network configuration.
5	Displays the level/version of maintenance related software products.
6	Selects a menu: • to display the configuration information associated with a specific hardware element, and • to control the state of that element.
7	Manages MALET diagnostic files for devices which are not included in the systems active logical configuration.

Hardware Connections Display

The Hardware Connections Display (figure 2-23) is a summary of the hardware configuration information oriented to depict the interconnections of the elements.

Figures 2-24 and 2-25 show continuations of channel/controller listings.

```
   CML_410 - NOS/VE HARDWARE CONFIGURATION MENU.  (IOU0)*

Processor 0  type = CYBER 855 855 Class  State = On  Serial_Number = 109
Processor 1  type = CYBER 870 855 Class  State = On  Serial_Number = 209

1. Display the system channel configuration.
2. Display detailed information for a channel.
3. Print all configuration data.
4. Enter the name of an IOU (i.e. IOU0)*

Enter a menu selection for expanded Channel information or,
type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-23. NOS/VE Hardware Configuration Menu (Page 1)

Menu Choice	Action
1	Displays a menu of the channels and controllers defined by NOS/VE.
2	Displays a prompt for a channel name to select a detailed display of the equipment on a channel.
3	Print all configuration data on the site default printer.
4	Enter the name of the IOU for which the configuration data will be displayed.

NOTE

The * indicates that the IOU information and menu item 4 are only displayed on a system with multiple IOUs.

```
CML_411 -  NOS/VE CHANNELS/CONTROLLERS MENU.  (IOU0)*

Channel   Channel   Product     Serial   Eq    Device   Logical  (All values
Name      Type      Id          Number   Num.  State    Name     are decimal)

CH1       C170      $7155_13    001127   0     OFF      GREEN_7155_7
CH2       C170      $2620_210   000381   0     ON       GREEN_DI_300119
CH3       C170      $7155_12    002363   0     OFF      GREEN_7155_1
CH4       C170      $7155_12    002688   0     ON       GREEN_7155_2
CH7       C170      $7155_12    002986   0     OFF      GREEN_7155_3
CH9       C170      $7165_22    000628   0     ON       GREEN_7165_1
CH11      C170      $7021_32    002021   0     ON       GREEN_7021_1
CH17      C170      $7155_13    001126   0     OFF      GREEN_7155_8
CH19      C170      $7155_12    002488   0     ON       GREEN_7155_4
CH20      C170      $7155_12    002473   0     OFF      GREEN_7155_5
CH21      C170      $7155_12    005007   0     ON       GREEN_7155_6
CH26      C170      $7021_32    001032   0     ON       GREEN_7021_2
CH27      C170      $7165_22    000629   0     ON       GREEN_7165_1
CH30      C170      $7165_22    006289   1     OFF      GREEN_7165_2

Enter the name of a Channel or,
type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-24. NOS/VE Channels/Controllers Menu (Page 2)

NOTE

The * indicates that the IOU information is only displayed on a system with multiple IOUs.

```
CML_412 - NOS/VE CHANNEL DETAIL DISPLAY  (IOU0)*

Channel Name = CH9      Channel_Type = 170

Product          Serial    Un.    Device    Logical   (All values are Decimal)
Id               Number    Num.   State     Name

$7165_22           0628      0     ON        GREEN_7165_1
 $895_2            1372      0     ON        GREEN_895_0
 $895_2            1372      2     ON        GREEN_895_2
 $895_2            1372      1     ON        GREEN_895_1

Enter a RETURN/NEXT to continue, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-25. NOS/VE Channel Detail Display

NOTE

The * indicates that the IOU information is only displayed on a system with multiple IOUs.

Menu Choice	Action
CHANNEL_NAME	Selects the named channel to provide a detailed display of the equipment on that channel.

System Hardware Configuration Information Menu

Using the System Hardware Configuration Information Menu (figure 2-26), you select the class of hardware device for which configuration information will be displayed.

```
CML_420 - SYSTEM HARDWARE CONFIGURATION INFORMATION MENU

                LOGICAL CONFIGURATION OPTIONS

1. Display all system element configuration information.
2. Display channel configuration information.
3. Display controller configuration information.
4. Display storage device configuration information.
5. Display information for a specific element.

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-26. System Hardware Information Menu

Maintenance Related Software Version/Level Display

The Maintenance Related Software Version/Level display (figure 2-27) is a summary of the current revision of maintenance related software products available.

```
CML_450 - MAINTENANCE RELATED SOFTWARE VERSION/LEVEL DISPLAY.

  NOS/VE          =    NOS/VE L716
  CML/VE          =    1.4.1
  DVS             =    DVS Version 1.4.1 - Level 716
  MALET/VE        =    V1.5 L716
  CDCNET          =    3304
  HPA/VE          =    02.29
  CTI             =    Version/Level information not available
  CMSE            =    Version/Level information not available

Enter a Return/Next to continue, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-27. Maintenance Related Software Version/Level Display

Change Element State Menu

The Change Element State Menu (figures 2-28 and 2-29) gives you:

- detailed information for a hardware element that you select, and
- a menu for changing the state of that element.

The first display that you see is shown in figure 2-26.

```
CML_460 - CHANGE ELEMENT STATE MENU

This menu provides a display of detailed information for a hardware
element known to the NOS/VE system.  Use menu item 1 to specify the
name of the element for which information is required.  The menu also
allows changes to be made to the state (ON, DOWN, or OFF) of the element
that has been specified with menu item 1.

            STATE CHANGE MENU

1. Select an element for display/control.
2. Set the element state to ON.
3. Set the element state to DOWN.
4. Set the element state to OFF.

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-28. Change Element State Menu (First Screen)

Menu Choice	Action

1	Causes the following prompt to appear:
	
	`Please enter the name of the element about which you want information, -`
	`or`
	`Type a command (BACK / MAIN_MENU / HELP).`
	`CML?`
	
	If you enter an element name that is not in the active logical configuration, the following message appears.
	
	`--ERROR--Element {name you entered} is not in the active logical configuration.`
	
	After you enter an acceptable element name, the detailed information for that element is displayed. Figure 2-29 is an example.

```
CML_460 - CHANGE ELEMENT STATE MENU

 CONTROLLER ELEMENT: RED_DISK_CONTROLLER
     PRODUCT IDENTIFICATION:  $7155_1
     SERIAL NUMBER: 2473
     EQUIPMENT NUMBER:      0(10)
     PERIPHERAL DRIVER NAME: D5A
     STATE: ON
     CHANNEL CONNECTIONS:   CHANNEL20
     STORAGE DEVICE CONNECTIONS:   RED00  RED01  RED02  RED03

          STATE CHANGE MENU

1. Select an element for display/control.
2. Set the element state to ON.
3. Set the element state to DOWN.
4. Set the element state to OFF.

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-29. Change Element State Menu (Second Screen)

Menu Choice	Action
2 - 4	Changes the state of the element you selected with option 1. The states define how NOS/VE and the maintenance software products can use the element. The possibilities are:

State	Description
On	The element can be used in a concurrent mode by both NOS/VE and maintenance software.
Down	The element cannot be used by NOS/VE, but it can be used by maintenance software in both concurrent and dedicated modes.
Off	Neither NOS/VE nor maintenance software can use the element.

If the element state change is successful, you receive the message:

```
{element name} state set to {state you selected}.

Type a command (BACK / MAIN_MENU / HELP).
CML?
```

Menu Choice	Action

If the element state change is illegal, you receive the message:

```
The requested state change was illegal.  The permitted state changes ar-
e:

            ON to DOWN
            DOWN to ON
            DOWN to OFF

All other state changes are restricted to a system operator.
Enter the number of an option, or type a command (BACK / MAIN_MENU / HE-
LP).
CML?
```

If NOS/VE denies the element state change, you receive the message:

```
NOS/VE will not permit the requested state change at this time.

Type a command (BACK / MAIN_MENU / HELP).
CML?
```

If you have not selected an element name, you receive the message:

```
An element name has not been selected. Use menu item 1
to define a name an element name.
Type a command (BACK / MAIN_MENU / HELP).
CML?
```

If the element you selected is not in the NOS/VE logical configuration, you receive the message:

```
The element currently selected is not in the logical
configuration.  Elements in the physical configuration but not
in the logical configuration do not have a state attribute.

Type a command (BACK / MAIN_MENU / HELP).
CML?
```

Hardware Maintenance File Reduction Menu

The menu shown in figure 2-30 provides a method for the user to delete all unused (due to the absence of specific hardware products at a site) MALET diagnostic files. To use this menu, the user must have ALL, CYCLE, and CONTROL permissions to the $SYSTEM.HARDWARE_MAINTENANCE MALET catalog.

```
CML_470 - Hardware Maintenance File Reduction Procedure.
  The following hardware products are defined in the configuration
  for this system.  This procedure will delete the maintenance
  files for all hardware products not displayed in this list.
    Product     Associated MALET diagnostics

    _______     ____________________________________________________

    $885_12     FLD         DL8         FMU
    $885_2      DTI         DM8         DFU
    $7155_12    FMC         FHC
    $7155_13    FMC         FHC
    $7155_14    FMC         FHC
    $7165_22    CCM         CLM
    $380_170
    $2620_210
    $679_7      T7X
    $7021_32    ATC

1. Enter additional hardware product names to support.
2. Remove a supported product from the names to support.
3. Display a list of all supported hardware products.
4. Delete maintenance files for all unused hardware products.

Enter a menu selection or, type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-30. Hardware Maintenance File Reduction Menu

Menu Choice	Action
1	Additional hardware product names are added to the list of products for which MALET diagnostics are retained.
2	Hardware product names are deleted from the list of products for which MALET diagnostics are retained.
3	A list of all supported hardware products is displayed.
4	All MALET diagnostic files for hardware products not included in the displayed list are deleted. A final GO or DROP option is given.

Using the Terminal/User Definition Utility

The Terminal/User Definition Utility (figure 2-31) provides options to allow the user to display and alter the characteristics NOS/VE associates with the terminal being used. It also allows the site administrator to validate an existing NOS/VE user as a maintenance user.

```
CML_500 - TERMINAL/USER DEFINITION UTILITY MENU

       Current Job_Class = INTERACTIVE

1. Display/Alter terminal characteristics.
2. Display current user capabilities for: SITE_CE
3. Display maintenance catalog/file permits for: SITE_CE
4. Validate a user for maintenance (may only be executed from SYSTEM console).

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-31. Terminal/User Definition Utility Menu

Menu Choice	Action
1	Displays the user's current terminal characteristics and provides menu selections to alter the terminal characteristics.
2	Displays the current NOS/VE capabilities for the user (Job_Class, Network_Operator, Remote_File_Reference, and so forth)
3	Displays the user's current file and catalog permissions for maintenance related products.
4	Displays a menu to validate a user for maintenance activities (may only be executed from system console).

Terminal Definition Menu

The Terminal Definition Menu (figure 2-32) displays the current characterisctics that NOS/VE associates with the user's terminal. It also provides selections to alter these characteristics.

```
CML_510 - TERMINAL DEFINITION MENU

Terminal_Class                  : c721
Terminal_Model                  : CDC721
Page_Length                     : 30
Page_Width                      : 80
Hold_Page                       : on
Network_Command_Character       : '%'
Parity                          : even

If the current values are incorrect, you may enter new values for:

1. Enter a new terminal class.  (Not used for CDCNET)
2. Enter a new terminal model.
3. Enter a new page length.
4. Enter a new page width.

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-32. Terminal Definition Menu

Menu Choice	Action
1	Prompts the user to a new terminal_class. Refer to the NOS/VE SCL System Interface Manual for allowed values. This option is not active if using CDCNET.
2	Prompts the user to enter a new terminal model. Refer to the NOS/VE SCL System Interface Manual for allowed values.
3	Prompts the user to enter the page length for the terminal in use.
4	Prompts the user to enter the page width of the terminal in use.

Current User Capabilities Display

The Current User Capabilities display (figure 2-33) depicts the NOS/VE validations for the user.

```
CML_520 - CURRENT USER CAPABILITIES
SITE_CE
  CAPABILITIES
    Value:  (ENGINEERING_ADMINISTRATION ..
             EXPLICIT_REMOTE_FILE ..
             IMPLICIT_REMOTE_FILE ..
             NETWORK_OPERATION ..
             READ_UNLABELLED_TAPES ..
             TIMESHARING ..
             WRITE_UNLABELLED_TAPES ..
  JOB_CLASS
    Job classes:  (BATCH ..
                   INTERACTIVE ..
                   SYSTEM_DEFAULT ..
                   FILE_TRANSFER ..
                   MAINTENANCE)
    Interactive default: MAINTENANCE
    Batch default: MAINTENANCE

Enter a RETURN/NEXT to continue, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-33. Current User Capabilities Display

Current User Maintenance Catalog/File Permits Display

The Current User Maintenance Catalog/File Permits display (figure 2-34) depicts the maintenance related system files which are available to the user.

```
CML_530 - MAINTENANCE CATALOG/FILE PERMITS FOR USER: NDP

                                                    |    | R | A | M | S | E | C | C |
$SYSTEM.                                            |TYPE| D | P | D | H | X | Y | O |
-------------------------------------------------------------------------------------
HARDWARE_MAINTENANCE.CML.COMMAND_LIBRARY            |file| * |   |   |   | * |   |   |
HARDWARE_MAINTENANCE.CML.TOOLBOX                    |file| * | * | * | * | * | * | * |
HARDWARE_MAINTENANCE.CML.CML_INTERFACE              |file| * | * | * | * | * | * | * |
HARDWARE_MAINTENANCE.DVS                            |cat | * |   |   |   | * |   |   |
HARDWARE_MAINTENANCE.DVS.HISTORY                    |file| * | * | * | * | * | * | * |
HARDWARE_MAINTENANCE.HPA                            |cat | * |   |   |   | * |   |   |
HARDWARE_MAINTENANCE.MALET                          |cat | * |   |   |   | * |   |   |
HARDWARE_MAINTENANCE.HPA.DATA                       |cat | * | * | * | * | * | * | * |
CDCNET.VERSION_INDEPENDENT.COMMAND_LIBRARY          |file| * |   |   |   | * |   |   |
CDCNET.VERSION_INDEPENDENT.CDCNET_VERSION           |file| * |   |   |   | * |   |   |
CDCNET.ANALYSIS                                     |cat | * |   |   |   | * |   |   |
CDCNET.LOG                                          |file| * |   |   |   | * |   |   |
-------------------------------------------------------------------------------------
 RD=read  AP=append  MD=modify  SH=shorten  EX=execute  CY=cycle  CO=control
                    ( * = Permission is present )

Enter a RETURN/NEXT to continue, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-34. Current User Maintenance Catalog/File Permits Display

Maintenance User Validation Menu

The Maintenance User File/Catalog Permits Menu (figure 2-35) provides selections for setting file and catalog permits to the maintenance related system files and catalogs for a NOS/VE user. This menu can only be used from the system console.

```
CML_540 - MAINTENANCE USER VALIDATION MENU

The features of this menu may only be used from the SYSTEM Console.  It will
create the appropriate FILE and CATALOG permits for a maintenance user.  To
validate a maintenance user for the appropriate JOB_CLASS and CAPABILITIES.

        Current FAMILY_NAME = NVE
        Current USER_NAME   = SITE_CE

1. Select a USER and FAMILY to validate for maintenance activities.
   These names will be used by menu items 2 through 11.

          Validate the USER for:
2. CML/VE (Menus)                    7. NPA (Network Performance Analyzer).
3. CDCNET (Communications)           8. Validate for ALL maintenance products.
4. DVS    (CPU Diagnostics)          9. Delete all maintenance related permits.
5. HPA/VE (Error Analysis)          10. Display maintenance cat/file permits.
6. MALET/VE (Periph Diagnostics)    11. Display user validations.


Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-35. Maintenance User Validation Menu

Menu Choice	Action
1 - 8	Create permits to the appropriate files and catalogs and set the appropriate validations to support execution of the indicated maintenance related product.
9	Deletes maintenance related files and catalog permits and validations.
10	Displays maintenance catalog and file permits for the site customer engineer.
11	Display job_class and validations for the site customer engineer.

Accessing NPA

The NPA Menu allows you to:

- Access NPA in Expert mode
- Build and display NPA reports
- Get help information about CDCNET log messages

NPA Menu

The NPA Menu (figure 2-36) allows you to select the source of the log data to be used in producing reports. Also provided is a selection to display text data that explains a CDCNET log message.

```
CML_600 - NPA MENU

1. Execute NPA in expert (command) mode.
2. Build and display individual NPA reports from $SYSTEM logfile.
3. Build and display individual NPA reports from existing NPA DATA_FILES.
4. Explain CDCNET log message.

Enter the numaber of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-36. NPA Menu

NOTE

If CML_600 option 2 is selected, the file used by NPA to generate reports is $SYSTEM.CDCNET.LOG., and menu option 10 of next menu will not be displayed. A REFORMAT_CDCNET_LOG_FILE NPA command is performed to extract data from this file.

If CML_600 Menu option 3 is selected, the $SYSTEM.CDCNET.ANALYSIS DATA_ FILES are used to generate reports, and menu option 10 of next menu is displayed to allow redefinition of the file names for the location of the data_files.

Menu Choice	Action
1	Initiate NPA in expert (command) mode.
2	Displays a menu of NPA reports which can be built from the $SYSTEM log files.
3	Displays a menu of NPA reports which can be built from the NPA DATA_ FILES.
4	Displays a prompt for a CDCNET log message number for which a description is desired.

NPA Report Menu

The NPA Report Menu (figure 2-37) allows you to build and display statistics reports.

```
CML_630 - NPA REPORT MENU
      NPA will use files in $SYSTEM.CDCNET.ANALYSIS to generate reports.

1.  Build and display MCI statistic report (MCISRP3).
2.  Build and display ESCI statistic report (ETHRRP2).
3.  Build and display HDLC statistic report (HDLCRP3).
4.  Build and display line statistic report (TERMRP1).
5.  Build and display hardware error report (HRDWRP2).
6.  Build and display software error report (SFTWRP2).
7.  Build and display Event_Log report for today only EVNTRP2).
8.  Print all reports previously built.
9.  Build and print all CML/VE supported NPA reports (except EVNTRP2).
10. Set LOG_CATALOG value for database files location.

Enter the name of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-37. NPA Report Menu

Menu Choice	Action
1	Builds and displays a report of error data for the mainframe channel interface (MCI) board.
2	Builds and displays a report of error data for the Ethernet interface (ESCI) board.
3	Builds and displays a report of error data for HDLC lines.
4	Builds and displays a report of error data for all terminals.
5	Builds and displays a report of all messages for CDCNET hardware.
6	Builds and displays a report of all messages for CDCNET software.
7	Builds and displays a report of all entries in the error log.
8	Routes all generated reports to the site default printer.
9	Builds and prints reports for items 1 through 6.
10	Selects a catalog value for the location of the CDCNET log files. (Available only when menu item 3 is selected on menu CML_600).

Using the CDCNET Utility

The following command is available at all CDCNET UTILITY menus. It can be used to directly set the current system, device, or network name that the utility is sending commands.

Command Format	Action
SET_NAME or SETN	Sets the CDCNET_Utility current name for the device indicated by the command parameters.
SYSTEM = name DEVICE = name NETWORK = name	

Parameter Format	Action
SYSTEM or S	Sets the name of the current CDCNET system (DI)
DEVICE or D	Sets the name of the current device (large board, LIM, or port)
NETWORK or N	Sets the name of the current network

All parameters are optional. If the command is entered with no parameters, the system, device, and network names are set to None Selected.

The CDCNET Menu (figure 2-38) allows you to manage logic states of devices and lines, display status, and run online diagnostics on CDCNET devices.

```
  CML_700 - CDCNET MENU

Many of the menu selections in the CDCNET utility require a DI system name.
You may supply this name with the SET_NAME command (SETN n..n where n..n is
a valid DI name) or use menu item 2 for a menu of name selection options.

Menu items 3-7 use the following (Current) CDCNET System and Device Names.
        System Name: $DI_080025300119
        Device Name: $MCI7
        Network Name: ETHERNET_LL

  1. Execute NETOU in expert (command) mode.
  2. Select system/device/line/network names.
  3. Manage CDCNET network, device, and line states.
  4. Execute CDCNET online Diagnostics.
  5. View CDCNET status displays.
  6. Manage message logging and alarms.
  7. Interactively enter commands to the current CDCNET system (DI).

  Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
  CML?
```

Figure 2-38. CDCNET Menu

Menu Choice	Action
1	Initiates the Network Operator Utility (NETOU) in expert (command) mode. To exit NETOU, use the QUIT command. This will take you to the CML/VE main menu.
2	Displays a menu allowing selection of CDCNET names for system, device, line, and network names.
3	Displays a menu for management of the states of CDCNET elements.
4	Displays a menu of CDCNET online diagnostics.
5	Displays a menu of CDCNET status displays.
6	Displays a menu of options for management of CDCNET log messages and NETOU alarms.
7	Displays a prompt for a command to be sent to the currently selected DI. This prompting will continue until you enter a BACK, MAIN_MENU, or HELP command.

CDCNET Names Selection Menu

The CDCNET Names Selection Menu (figure 2-39) allows you to select a set of names (system, device, network, line) to use with the CML/VE CDCNET Utility procedures.

```
CML_720 - CDCNET NAMES SELECTION MENU

Menu item 1-7 select new values for the following names.
     System Name: $DI_080025300119
     Device Name: $MCI7
     Network Name: ETHERNET_LL

1. Select a DI connected to this host for system/device name.
2. Display/select available CDCNET system names.
3. Display/select available device names.
4. Select a specific CDCNET system name.
5. Select a specific device name.
6. Select a specific network name.
7. Select a device by line name.
8. Print CDCNET network configuration data.

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-39. CDCNET Names Selection Menu

Menu Choice	Action
1	Selects the name of a DI directly attached to this host as the current system name. A MCI board will be selected for the current device name.
2	Generates a menu of currently available system names in the network.
3	Generates a menu of devices in the current system.
4	Displays a prompt to allow direct entry of a system name.
5	Displays a prompt to allow direct entry of a device name.
6	Displays a prompt to allow direct entry of a network name.
7	Displays a prompt to allow direct entry of a line name. CML/VE will translate the line name to a LIM and port number to use as a device name.
8	Prints CDCNET network configuration data on a site default printer.

CDCNET System Names Currently Available Menu

This menu (figure 2-40) displays the names of all CDCNET DIs currently available on the network and allows you to select one for use.

```
CML_722 - CDCNET System Names Currently Available

 1. $DI_0800253000A0          2. $DI_0800253000A4          3. $DI_0800253000CA
 4. $DI_0800253000D9          5. $DI_0800253000DA          6. $DI_0800253000DC
 7. $DI_0800253000EF          8. $DI_0800253000F1          9. $DI_080025300103
10. $DI_080025300105         11. $DI_080025100108         12. $DI_080025300109
13. $DI_08002530010D         14. $DI_080025300110         15. $DI_080025300111
16. $DI_080025300112         17. $DI_080025300113         18. $DI_080025300114
19. $DI_080025300115         20. $DI_080025100117         21. $DI_080025300118

Enter the number of a CDCNET system name to use,
or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-40. CDCNET System Names Currently Available Menu

Menu Choice	Action
All	Selects the indicated system name as the current system name for use by CML/VE.

CDCNET Device Names Currently Available Menu

This menu (figure 2-41) displays the name of all devices on the currently selected system (DI) and allows the user to select one for use.

```
CML_723 - CDCNET Device Names Currently Available

1.  $MPB0
2.  $PMM1
3.  $SMM2
4.  $SMM3
5.  $MCI4
6.  $ESCI5
7.  $ESCI6
8.  $MCI7

Enter the number of a CDCNET device name to use,
or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-41. CDCNET Device Names Currently Available Menu

Menu Choice	Action
All	Selects the indicated device as the current device name for use by CML/VE.

CDCNET Subdevice Names Currently Available Menu

This menu (shown in figure 2-42) displays any ports (if appropriate) on the current device and allows the user to select either the device itself or one of the ports as the current device name.

```
CML_723 - CDCNET Subdevice Names Currently Available

1.  $LIM7
2.  $LIM7_PORT0
3.  $LIM7_PORT1
4.  $LIM7_PORT2
5.  $LIM7_PORT3

Enter the number of a CDCNET device name to use,
or type a command (BACK/ MAIN_MENU / HELP).
CML?
```

Figure 2-42. CDCNET Subdevice Names Currently Available Menu

Menu Choice	Action
All	Selects the indicated device as the current device name for use by CML/VE.

CDCNET Device/Line State Menu

The Device/Line State Menu (figure 2-43) provides you with options to manage the logical states of elements of a device interface.

```
CML_730 - CDCNET DEVICE/LINE STATE MENU

The menu items 2-13 use the following (current) CDCNET System and Device Names.
      System Name: $DI_080025300119
      Device Name: $MCI7
      Network Name: ETHERNET_LL

1.  Select system/device/line/network names.      10.  Stop a network.
2.  Display status of an individual line/port.    11.  Start a network.
3.  Stop a line.                                  12.  Stop_NP_Interface.
4.  Start a line.                                 13.  Start_NP_Interface.
5.  Change element state to ON.                   14.  Manage multiple lines.
6.  Change element state to DOWN.                 15.  Display_Hardware_Status.
7.  Change element state to OFF.
8.  Cancel a line.
9.  Define a line.


Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-43. CDCNET Device/Line State Menu

Menu Choice	Action
1	Displays a menu of name selection options.
2	Displays status information about a line referenced by the current device name.
3	Stops CDCNET use of a line referenced by the current device name.
4	Makes a line available for CDCNET use.
5	Changes the state of the device referenced by the current device name to ON.
6	Changes the state of the device referenced by the current device name to DOWN.
7	Changes the state of the device referenced by the current device name to OFF.
8	Deletes the definition of a line.
9	Defines a line for use by CDCNET.
10	Stop CDCNET use of a network referenced by the current network name. This requires NOS/VE operator privilege.
11	Start CDCNET use of a network referenced by the current network name. This requires NOS/VE operator privilege.
12	Stop a network products interface for the device (MCI) currently selected.
13	Start a network products interface for the device (MCI) currently selected.
14	Displays a menu of options to manage multiple lines.
15	Displays the hardware status of the DI.

CDCNET Multiple Line Management Menu

The CDCNET Multiple Line Management Menu (figure 2-44) provides selections to change the operational characteristics of multiple lines with one selection.

```
  CML_732 - CDCNET MULTIPLE LINE MANAGEMENT MENU

Menu items 2-6 use the following (Current) CDCNET System and Device Names.
     System Name:  $DI_080025300119
     Device Name:  $MCI7
     Network Name:  ETHERNET_LL

  1. Select system/device/line/network names.
  2. STOP all lines except ACTIVE lines.
  3. DOWN all STOPPED,CONFIGURED, and UNCONFIGURED lines.
  4. STOP and DOWN all lines except active lines.
  5. STOP and DOWN all lines.  (Warning, this includes lines currently in use).
  6. Set all PORTS to ON state and START all CONFIGURED lines.
  7. Set all LIMs to DOWN state.
  8. Set all LIMs to ON state.
  9. Display_Hardware_Status.

  If a CIM or LIM is selected for the Current Device name, only LINES for that
  device will be affected by these menu selections.  If no CIM or LIM is
  selected, all LINES will be affected.  URI LIMs are not affected.

  Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
  CML?
```

Figure 2-44. CDCNET Multiple Line Management Menu

Menu Choice	Action
1	Displays a menu of names selections options.
2	Stops all lines that are currently available for use by CDCNET, but are not being used.
3	Downs all ports that are not available for use.
4	Stops and downs all lines that are not in use or are not available for use.
5	Stops and downs all lines. This stops currently active lines. A warning message is sent to the users of currently active lines.
6	Set all ports to on and start all configured lines.
7	Set all LIMs to down.
8	Set all LIMS to on.
9	Displays the hardware status of the DI.

CDCNET Diagnostics Menu

The CDCNET Diagnostic Menu (figure 2-45) provides access to the available online diagnostics for a CDCNET network and its elements.

```
CML_740 - CDCNET DIAGNOSTICS MENU

Items 2-9, 12, 13 and 16 use the following (current) system and device names.
      System Name:  $DI_080025300119
      Device Name:  $MCI7
      Network Name: ETHERNET_LL

1.  Select a system/dev/port/network name.  10.  Perform DI conflict testing.
2.  Run CIM test.                           11.  Perform LIM/PORT conflict testing.
3.  Run ESCI test.                          12.  Run COMCT (host CDCNET echo test).
4.  Run LIM test.                           13.  Execute a Terminal/Line echo test.
5.  Run MCI inline test.                    14.  Send test file to public printer.
6.  Run MCI online test.                    15.  Send test file to private printer.
7.  Run PORT test (internal loopback).      16.  Send message to terminal/LIM port.
8.  Run PORT test (ext modem loopback).     17.  Manage CDCNET element states.
9.  Run URI test.                           18.  View CDCNET status displays.

 Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
 CML?
```

Figure 2-45. CDCNET Diagnostics Menu

Menu Choice	Action
1	Displays a menu of name selection options.
2	Starts the online test for a CIM board for the current device name.
3	Starts the online test for a ESCI board for the current device name.
4	Starts the online test for a LIM board for the current device name.
5	Starts the inline test for MCI board for the current device name.
6	Starts the online test for MCI board for the current device name.
7	Starts the online test for a LIM port for the current device name using internal loopback.
8	Starts the online test for a LIM port for the current device name using external or modem loopback.
9	Starts the online test for a URI LIM board for the current device name.

Menu Choice	Action
10	Starts the appropriate online diagnostic on all large boards (MCI, CIM, ESCI) in the DI that are not on.
11	Starts the PORT online diagnostic with internal loopback on all ports, except URI ports, in the DI that are not on.
12	Executes the system communications confidence test using the current system name as a loopback location.
13	Executes a data echo test to a terminal. The user at the terminal is prompted to enter a response.
14	Displays a menu of options for printing a test listing at a public batch printer (see sample output listing in figure 2-48).
15	Displays a menu of options for printing a test listing at a private batch printer (see sample output listing in figure 2-48).
16	Sends a test message to the port defined by the current device name.
17	Displays a menu for management of the states of CDCNET elements.
18	Displays a menu of CDCNET status displays.

CML/VE Public Printer Test Menu

The CML/VE Public Printer Test Menu (figure 2-46) provides selections for the names that control the routing of a test print file for a public printer.

```
CML_741 - PUBLIC PRINTER TEST

The parameters which determine the printer to be the target of this test are:

    Station:    AUTOMATIC
    Device:     AUTOMATIC
    Forms_Code: NORMAL

1. Select a station name.
2. Select a device name.
3. Select a Forms_Code.
4. Execute the printer test.

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-46. CML/VE Public Printer Test Menu

Menu Choice	Action
1	Displays a prompt to enter a station name.
2	Displays a prompt to enter a printer device name.
3	Displays a prompt to enter a forms code.
4	Execute the printer test.

CML/VE Private Printer Test Menu

The CML/VE Private Printer Test Menu (figure 2-47) provides selections for the names that control the routing of a test print file for private printers.

```
CML_742 - CML/VE PRIVATE PRINTER TEST

The parameters which determine the printer to be the target of this test are:

    Station:          AUTOMATIC
    Device:           AUTOMATIC
    Forms-Code:       NORMAL
    Station_Operator: None_Assigned

1. Select a station name.
2. Select a device name.
3. Select a Forms_Code.
4. Select a Station_Operator name.
5. Execute the printer test.

Enter the number of an option, or type a command (BACK/ MAIN_MENU / HELP).
CML?
```

Figure 2-47. CML/VE Private Printer Test Menu

Menu Choice	Action
1	Displays a prompt to enter a station name.
2	Displays a prompt to enter a printer device name.
3	Displays a prompt to enter a forms code.
4	Routes a test listing to the printer defined by the current station and printer device name.
5	Executes the printer test.

Figure 2-48 is an example of a printer test.

```
CML/VE Printer Test.
Station: VE_PRINTER_109   Device: PRINTER_3   Forms_Code: NORMAL

         1         2         3         4         5         6         7         8
12345678901234567890123456789012345678901234567890123456789012345678901234567890

0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~
123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~
23456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !
3456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"
456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#
56789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$
6789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%
789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&
89:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'
9:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'(
:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()
;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*
<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+
=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,
>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-
?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-.
@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./
ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0
BCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./01
CDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./012
DEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0123
EFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./01234
FGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./012345
GHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0123456
HIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./01234567
IJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./012345678
JKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0123456789
KLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0123456789:
LMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0123456789:;
MNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0123456789:;<
NOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0123456789:;<=
OPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0123456789:;<=>
PQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0123456789:;<=>?
QRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0123456789:;<=>?@
RSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0123456789:;<=>?@A
STUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0123456789:;<=>?@AB
TUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0123456789:;<=>?@ABC
UVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0123456789:;<=>?@ABCD
VWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0123456789:;<=>?@ABCDE
WXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0123456789:;<=>?@ABCDEF
XYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0123456789:;<=>?@ABCDEFG
YZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGH
Z[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ !"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHI

(Actual listing is 136 columns wide, only 80 columns shown)
```

Figure 2-48. Sample Output Listing

CDCNET Display Menu

The CDCNET Display Menu (figure 2-49) provides options to display the available status information for a CDCNET network, device interface (DI), or a device in a DI.

```
  CML_750 - CDCNET STATUS DISPLAY MENU

Menu items 2-10 use the following (Current) CDCNET System and Device Names.
      System Name:   $DI_080025300119
      Device Name:   $MCI7
      Network Name:  ETHERNET_LL

  1.  Select system/device/line/network names.
  2.  Display_Directory_Status.
  3.  Display_DI_System_Status.
  4.  Display_Hardware_Status.
  5.  Display_Line_Status (summary).
  6.  Display_Line_Status (detailed).
  7.  Display_Line_Status (single line).
  8.  Display_Logical_Names.
  9.  Display_Network_Status.
  10. Display_Test_Status.
  11. Display CATENET Topography Chart.
  12  Display CATENET Reset Chart.

  Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
  CML?
```

Figure 2-49. CDCNET Status Display Menu

Menu Choice	Action
1	Displays a menu of name selection options.
2	Displays the status of the DI directory.
3	Displays the system status of the DI.
4	Displays the hardware status of the DI.
5	Displays the summary status of all lines in a DI.
6	Displays detailed status of all active lines in a DI.
7	Displays the detailed status of the line referenced by the current device name.
8	Displays a display of the logical name in a DI.
9	Displays a display of the status of all networks attached to a DI.
10	Selects a display of the current test execution and results status of the current device.

Menu Choice	Action
11	Display a chart of all DIs in the CATENET organized by network ID.
12	Display a chart of all DIs in the CATENET showing the last reset date.

CDCNET CATENET Topography Chart Menu

The menu shown in figure 2-50 provides selections for display of CDCNET device interface topography. Data for all DIs currently in the CATNET is sorted by network_ ID and DI serial number. Figure 2-51 is a sample of a detailed CATNET topography chart.

```
CML_751 - CDCNET TOPOGRAPHY CHART MENU

Please select an option:

1. Display Topography Data.
2. Print Topography Data.

The requested report will be displayed using the NOS/VE SCU Editor.
The ACTIVATE_SCREEN command may be used to enable full screen editing.
The LIST_LINES,L=ALL command may be used to list the report in line mode.
The QUIT command should be used to exit when done with the report.

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-50. CDCNET CATENET Topography Chart Menu

Menu Choice	Action
1	Display the CATENET topography data using the SCU editor.
2	Print the CATENET topography data on a site default printer.

```
CATENET Topography Chart              Current date/time: 1987-11-11 16:00:10

Network_Id=00000001, Type=ESCI
 DI_System_Name     DI_LOGICAL_NAME  Device_Name  Network_Name
  $DI_080025300117  TDI_117          $ESCI6       NETWORK_1
  $DI_080025300118  TDI_118          $ESCI7       NETWORK_1
  $DI_080025300119  MDI_119          $ESCI5       NETWORK_1
  $DI_08002530034E  NDI_34E          $ESCI6       NETWORK_1

Network_Id=00000002, Type=ESCI
 DI_System_Name     DI_Logical_Name  Device_Name  Network_Name
  $DI_08002510006D  TDI_06D          $ESCI6       NETWORK_2
  $DI_080025100078  TDI_07B          $ESCI6       NETWORK_2
  $DI_08002510008B  TDI_08B          $ESCI7       NETWORK_2
  $DI_08002530009F  TDI_09F          $ESCI4       NETWORK_2
  $DI_08002530034E  NDI_34E          $ESCI7       NETWORK_2

Network_Id=00000003, Type=MCI
 DI_System_Name     DI_Logical_Name  Device_Name  Network_Name
  $DI_080025300119  MDI_119          $MCI4        $NETWORK_3
```

Figure 2-51. Sample CATENET Topography Chart

CDCNET Reset Data Chart Menu

The menu shown in figure 2-52 provides selections for display of CDCNET device interface reset data. Data for all DIs currently in the CATENET is sorted by serial number. Figure 2-53 is a sample of a detailed reset data chart.

```
CML_752 - CDCNET RESET DATA CHART MENU

Please select an option:

1. Display Reset Data.
2. Print Reset Data.

The requested report will be displayed using the NOS/VE SCU Editor.
The ACTIVATE_SCREEN command may be used to enable full screen editing.
The LIST_LINES,L=ALL command may be used to list the report in line mode.
The QUIT command should be used to exit when done with the report.

Enter the number of an option, ort type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-52. CDCNET Reset Data Chart Menu

Menu Choice	Action
1	Display the reset data using the SCU editor.
2	Print the reset data on a site default printer.

```
Status for all DIs in CATENET        Current date/time: 1987-11-11 16:10:40
System_Name       Boot  Sys   Buff  Mem     Last_Reset        Days since Reset

$DI_08002510006D  4006  4006  good  good  87/10/22  01.25.18          18
$DI_080025100078  4006  4006  good  good  87/10/22  01.25.33          18
$DI_08002510008B  4006  4006  good  good  87/10/22  01.25.22          18
$DI_08002530009F  4006  4006  good  good  87/10/22  01.26.01          18
$DI_080025300117  4006  4006  good  good  87/10/22  01.25.09          18
$DI_080025300118  4006  4006  good  good  87/10/22  01.25.11          18
$DI_080025300119  4006  4006  good  good  87/10/22  01.26.07          18
$DI_08002530034E  4006  4006  good  good  87/10/22  01.25.43          18
```

Figure 2-53. Sample Reset Data Display

CDCNET Message Logging and Alarms Menu

The CDCNET Message Logging and Alarms Menu (figure 2-54) provides options to manage the reception of alarms from a DI, control of message logging by a DI, and display of alarm and message data.

```
CML_760 - CDCNET MESSAGE LOGGING AND ALARMS

Menu items 5-10 use the following (current) CDCNET system and device names.
      System Name:  $DI_080025300119
      Device Name:  $MCI7
      Network Name: ETHERNET_LL
      Alarms on:    FALSE

1.  Select a system/device/line/network name.
2.  Activate alarms (alarms are written to file $LOCAL.CDCNET_ALARMS.)
3.  Deactivate alarms.
4.  Display alarms received.  (SCU editor will be used, enter QUIT to exit.)
5.  Display source alarms messages.
6.  Define source alarm message.
7.  Cancel source alarm message.
8.  Display source log messages.
9.  Define source log message.
10. Cancel source log message.

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-54. CDCNET Message Logging and Alarms Menu

Menu Choice	Action
1	Selects a system, device, line, or network name.
2	Selects the NETOU option to receive all CDCNET alarms. The alarms are written to a temporary file called $LOCAL.CDCNET_ALARMS.
3	Deselects the NETOU alarms option.
4	Displays the contents of the alarms file using the NOS/VE SCU Editor.
5	Displays the numbers of the CDCNET message, which will currently cause an alarm.
6	Displays a prompt requesting the number of a CDCNET message for which an alarm is to be generated.
7	Displays a prompt requesting the number of a CDCNET message for which an alarm is not to be generated.
8	Displays the number of the CDCNET messages which will currently cause a log entry. (Refer to CDCNET Diagnostic Messages manual listed in About This Manual).

Menu Choice	Action
9	Displays a prompt requesting the number of a CDCNET message for which a log message is to be generated. (Refer to CDCNET Diagnostic Messages manual listed in About This Manual).
10	Displays a prompt requesting the number of a CDCNET message for which a log message is not to be generated. (Refer to CDCNET Diagnostic Messages manual listed in About This Manual).

Using the CML/VE Toolbox

The CML/VE Toolbox Menu (figure 2-55) allows the user to write, modify, and execute SCL procedures from the CML/VE environment. The procedures are stored in a common object library and are available to all CML/VE users.

```
CML_800 - CML/VE TOOLBOX MENU

1. Display/execute procedures currently in the toolbox.
2. Add procedures to the toolbox from a file.
3. Delete a procedure from the toolbox.
4. Modify a procedure in the toolbox.
5. Write a new procedure for the toolbox.

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP.
CML?
```

Figure 2-55. CML/VE Toolbox Menu

Menu Choice	Action
1	Displays a menu of available procedureds to execute.
2	Adds procedures from a user specified file to the toolbox.
3	Deletes a user specified procedure from the toolbox.
4	Modifies a procedure in the toolbox using the SCU Editor.
5	Writes a new procedure for the toolbox using the SCU Editor.

CML/VE Toolbox Procedure Menu

The CML/VE Toolbox Procedure Menu (figure 2-56) causes the indicated procedure to execute.

```
CML_810 - CML/VE TOOLBOX PROCEDURE MENU

1. TOOL_EXAMPLE.

A menu selection will cause the indicated procedure to execute.

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-56. CML/VE Toolbox Procedure Menu

Menu Choice	Action
All	The indicated procedure executes; the user is prompted for parameters or the parameters are supplied by the procedure.

NOTE

The contents of this menu is dependent on procedures written by CML/VE users. An example procedure is provided as a starting point.

Modify Toolbox Procedures Menu

The Modify Toolbox Procedure Menu (figure 2-57) uses the SCU Editor to modify the selected procedures.

```
CML_840 - CML/VE MODIFY TOOLBOX PROCEDURES MENU

1.  TOOL_EXAMPLE

A menu selection will use the SCU Editor to modify the selected procedures.

Enter the number of a option, or type a command (BACK / MAIN_MENU / HELP)
CML?
```

Figure 2-57. CML/VE Modify Toolbox Procedures Menu

Menu Choice	Action
All	The indicated procedure is made available with the SCU Editor for modification.

Other Maintenance Tools Menu

The Other Maintenance Tools Menu (figure 2-58) displays options for MST execution and file and catalog contents for the online maintenance software.

```
CML_900 - OTHER MAINTENANCE TOOLS MENU

1.  MST (Disk Storage Test).
2.  Maintenance Catalog Contents.

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-58. Other Maintenance Tools Menu

Menu Choice	Action
1	Displays menu of options for MST execution.
2	Displays file and catalog contents for the online maintenance software..

MST (Disk Storage Test) Menu

The MST (Disk Storage Test) Menu (figure 2-59) provides selections to set certain characteristics and to execute MST.

```
CML_910 - MST (DISK STORAGE TEST) MENU

1.  Set number_of_4k_records (integer) = 100
2.  Set volume (name)                  =
3.  Set element_name                   =
4.  Set allow_file_overflow (boolean)  = FALSE
5.  Set file_name (name)               =
6.  Execute MST.

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP.
CML?
```

Figure 2-59. MST (Disk Storage Test) Menu

Menu Choice	Action
1	Set number of 4k records for MST to generate. This will be the number of pages if NOS/VE page size is 4k.
2	Set the disk volume name for MST to use. A random choice is made if this item, or item 3 is not specified.
3	Set the disk element name for MST to use. A random choice is made if this item, or item 2 is not specified. **NOTE** Item 2 or item 3 may be selected, but not both.
4	Specifies if the test file may overflow the specified disk.
5	Defines the file name to be associated with the MST test file. This file is in the $LOCAL catalog.
6	Start execution of MST.

CML/VE Exit Options Menu

The CML/VE Exit Options Menu (figure 2-60) appears when you terminate CML/VE with a system element left in a changed state (that is, a state different from its state upon CML/VE initiation).

```
CML_001 - CML/VE EXIT OPTIONS MENU

1.  Change element states (use the configuration utility).
2.  Display the elements that have been set DOWN or OFF.
3.  Quit without further Element State changes (changes you have previously
    made will remain in effect).

One or more NOS/VE hardware element states were changed during this
CML/VE session.  You may leave these changes as they are or use the
configuration utility to alter them.  If the states are not
left in their initial condition, the NOS/VE operator will be notified.

Enter the number of an option, or type a command (BACK / MAIN_MENU / HELP).
CML?
```

Figure 2-60. CML/VE Exit Options Menu

Menu Choice	Action
1	Selects menus from which you can display and manage the NOS/VE hardware configuration to change the element states.
2	Displays the names and states of all elements whose states were changed during the current CML/VE session.

3	Exits CML/VE, leaving the changes as you made them during the current CML/VE session.
	
	If you choose option 3, CML/VE displays the following message:
	
	`Notifying the system operator that a maintenance user is leaving elemen-`
	`t:`
	`{element name} DOWN OR OFF.  PLEASE WAIT....`

Glossary A

C

CDCNET
Control Data Distributed Communications Network.

CML/VE
Concurrent Maintenance Library for the Virtual Environment.

Configuration Management Utility
Provides information about hardware configuration.

CPU
Central processing unit.

CYBIL
CYBER Implementation Language.

D

DVS
Diagnostic Virtual System.

DI
CDCNET Device Interface.

Device Interface
CDCNET Communications Processor.

E

Element Names
System Control Language name assigned to each hardware element.

H

HPA/VE
Hardware Performance Analyzer for the Virtual Environment.

HPA/VE Interface
Provides access to the HPA/VE menu driven interface, the HPA initialization utility, and the HPA/VE parameter modification utility.

M

MALET/VE
Maintenance Application Language for Equipment Testing for the Virtual Environment.

N

NETOU
Network Operator Utility.

NOS/VE
Network Operating System/Virtual Environment.

NPA
Network Performance Analyzer.

S

SCL
System Control Language.

SCU
Source Code Utility.

SQC
Statistical Quality Control.

T

Terminal Definition Utility
Provides an easy method to define attributes of the terminal being used.

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