PATHWORKS for DOS

digital

User's Handbook

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HOW TO ORDER ADDITIONAL DOCUMENTATION
DIRECT MAIL ORDERS

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Preface

Purpose

This handbook shows personal computer users how to use
PATHWORKS with the DOS operating system. The handbook
describes what the PATHWORKS system is, and how you
can begin to use PATHWORKS for DOS network services and
applications.

Audience

PATHWORKS for DOS users unfamiliar with networking concepts
and terminology should read this handbook.

This handbook assumes that users are familiar with personal
computers and have some knowledge of DOS.

Organization

The following table can help you find information in this handbook.

Chapter 1	Introduces you to PATHWORKS concepts.
Chapter 2	Describes how to use file and disk services.
Chapter 3	Describes how to use printer services.
Chapter 4	Describes how to use the LAN Manager Screen to use file and printer services.
Chapter 5	Describes how to transfer files over the network.
Chapter 6	Describes how to use PC DECwindows Motif.
Chapter 7	Describes how to use your personal computer as if it were a terminal.
Chapter 8	Describes how to use the SEDT editor.
Chapter 9	Describes how to use the Mail and the Broadcast utilities to send and receive messages.
Appendix A	Describes how to use PATHWORKS in different languages.
Glossary	Contains a list of PATHWORKS for DOS terms.

Related Documents

If you need more detailed information about the topics listed in the following table, refer to their associated documents.

Topic	Document
PATHWORKS for DOS overview	*Overview*
Network commands	*Client Commands Reference*
PC DECwindows Motif	*PC DECwindows Motif Guide*
Terminal emulation	*SETHOST Terminal Emulation Guide* and *Microsoft Windows Support Guide*
SEDT editor	*SEDT User's Reference*
Mail	*Mail User's Reference*
DECnet utilities	*DECnet User's Guide*
TCP/IP network transport	*TCP/IP User's Reference*
Memory requirements	*Memory Solutions for Client Administrators*

Conventions

This book uses the following conventions:

Convention	Meaning
Ctrl/*x*	While you hold down the Ctrl key, press another key or a pointing device button.
Ctrl/Alt/Del	While you hold down the Ctrl and Alt keys, press the Del key.
Esc *x*	Press the Esc key, release it, and then press another key or a pointing device button.
Return	Press the key that executes commands or terminates a sequence. This key is labeled Return, Enter, or ←, depending on your keyboard.
"enter"	Type all required text, spaces, and punctuation marks; then press Return, Enter, or ←, depending on your keyboard.
MB1, MB2, MB3	MB1 indicates the left mouse button, MB2 indicates the middle mouse button, and MB3 indicates the right mouse button. (The buttons can be redefined by the user.)
UPPERCASE	In VMS, DOS, and OS/2 syntax, uppercase letters indicate commands and qualifiers. You can enter commands and qualifiers in any combination of uppercase or lowercase, unless otherwise noted.
	ULTRIX commands are case-sensitive. You must enter commands in the correct case, as printed in the text.
lowercase	Lowercase letters in command syntax indicate parameters. You must substitute a word or value, unless the parameter is optional.
teal blue type	In examples of dialog between you and the system, teal blue type indicates information that you enter. In online (Bookreader) files, this information appears in boldface.
boldface	Boldface type indicates a new term that appears in the glossary. In online (Bookreader) files, boldface indicates information you enter.

Convention	Meaning
kp*n*	Press the specified key on the numeric keypad of your keyboard.
two-line commands	In VMS commands, a hyphen (-) at the end of a command line indicates that the command continues to the next line. If you type the hyphen and press Return, the system displays the _$ prompt at the beginning of the next line. Continue entering the command. If you do not type the hyphen, VMS automatically wraps text to the next line.
	In DOS and OS/2 commands, no hyphen is used at the end of the first line; DOS automatically wraps text. Enter the complete command, then press Return at the end of the command.
NOTE	Notes provide information of special importance.
CAUTION	Cautions provide information to prevent damage to equipment or software.

1

PATHWORKS for DOS Terms and Concepts

PATHWORKS for DOS connects your personal computer to a network of other computers so you can take advantage of network resources and communicate with other users on the network. A **network** provides a high-speed method for connecting computers to other computers and to resources such as files, printers, and communication devices.

PATHWORKS can make your job easier because of the flexibility the network provides for your personal computer. With PATHWORKS for DOS you can:

- Share familiar applications such as spreadsheet and wordprocessing

- Share information such as common databases

- Move files around from computer to computer

- Use electronic mail to send and receive messages

- Print a file on a remote printer

- Use your personal computer as a VT300 series terminal

- Use your personal computer as an X-terminal to display X Window System and DECwindows Motif applications

- Use different languages for different applications for a multilingual working environment

This chapter describes:

- Network concepts

- PATHWORKS for DOS applications and services

- Network naming conventions

- How to log on to PATHWORKS

- How to use a mouse and menus

Understanding PATHWORKS Network Concepts

A computer network means interconnected computers. Some of the computers in the network are servers; others are clients. A **server** is a computer that provides a central file-storage area, and controls printers as well as other network services. A server is also called a **host** computer. A **client** is any personal computer or workstation that accesses network services through the server. All client and server computers attached to the network are called **nodes**. Each node is identified by a **node name** and **node address**.

Networks can have more than one server and many thousands of clients. The clients can use the services of any server and connect to any printer on the network as long as they have access. Access is usually controlled through the use of user names and passwords.

With PATHWORKS for DOS, a client can use services offered on OS/2, ULTRIX, VMS servers, and InfoServer100 for CD-ROM services.

Remote services   The network services that your personal computer accesses and uses are called **remote** services. Remote services include printers, shared data files, and shared software **applications** such as wordprocessing and spreadsheet programs.

Local services   Without the network, your computer can use only **local** services. That is, it can only use the printer connected to your personal computer, and use only the files and applications stored on your hard disk and on the diskettes available to you.

Networks

With PATHWORKS for DOS, you can connect to two kinds of networks:

- **Local Area Network** (LAN)

  A LAN is a network that communicates over short distances, typically within a building or group of buildings. A LAN can consist of many servers and their clients. The connection within a LAN is usually physical: cables connect the servers and clients.

  PATHWORKS supports the following types of LAN technologies:

  - Ethernet

  - Token Ring

- **Wide area network** (WAN)

  A WAN is a network that transmits data over long distances by using telephone lines, satellite transmissions, or radio waves. A WAN can contain many LANs; WANs can be also interconnected.

Users can also connect to a network by using a **modem**, which accesses DECnet nodes by using **asynchronous** communication over a serial line. Asynchronous communications let users access telephone lines to call the LAN or WAN and use the same network services available to those on site. Access through a modem is called a **remote** connection to a network.

Network transport software

Clients connect to networks using a network **transport**. Network transport software, such as DECnet or TCP/IP, provides the mechanism that lets:

- Computers with different operating systems communicate transparently

- Servers provide services and clients access them

Other transports provide specialized services such as:

- **Local Area Disk/Local Area System Transport (LAD/LAST)**

  LAD/LAST provides LAN services to virtual disk servers.

- **Local Area Transport (LAT)**

  LAT provides network services to users in a LAN.

  _____ **Note** _____

  LAD/LAST and LAT run on Ethernet only. LAD/LAST, LAT, and remote boot are not supported over Token Ring.

  _____

  PATHWORKS supports the following types of network transport:

- **DECnet** over Ethernet, asynchronous, and Token Ring

  DECnet is Digital networking software that runs on servers and clients in LANs and WANs.

- **TCP/IP** over Ethernet and Token Ring

  TCP/IP is a set of protocols that runs on servers and clients in the Internet. The **Internet** is a group of networks that includes regional, university, and commercial networks.

  Networks requires a common transport on the client and the server.

  The network transports you use are determined when your personal computer is set up with the Netsetup program.

Applications and Services

With PATHWORKS for DOS you can use the following services:

- Applications
- Microsoft LAN Manager services
- File services
- Printer services
- Disk services

Each of these services is summarized in the following list:

- Applications
  - Mail

    The **Mail utility** lets you send and receive messages you can store on your local hard disk or in a directory on the Mail server.

- BCAST and RCV/TRCV

  The **BCAST** (Broadcast) utility lets you send messages to other network users.

  The **RCV** utility lets you receive messages sent by the system administrator or other network users. It also lets you receive mail notification. The **TRCV** utility lets you receive messages sent over the TCP/IP network transport.

- PC DECwindows Motif

  PC DECwindows Motif lets you use the X Window System and DECwindows Motif applications

- SEDT

  SEDT is a full-screen editor that provides numerous text editing and text manipulation functions.

- USE

  The **USE utility** lets you manage connections to servers, services, and applications.

- Terminal emulation

  The **SETHOST** and **VT320** for Microsoft Windows terminal emulators let your personal computer emulate a VT300 series terminal to connect to a system on the network, such as a VMS or an ULTRIX system. SETHOST is used at the command line, while the VT320 terminal emulator is used within Microsoft Windows only.

- DECnet utilities

  - Network Control Program (NCP)

    NCP is the program you or your system administrator use to locate, manage, and configure network nodes.

  - Network File Transfer (NFT) and File Access Listener (FAL)

    NFT and **FAL** let you exchange files with users on other DECnet systems.

- TCP/IP utilities

  - Address Resolution Protocol (ARP)

    ARP lists the hardware addresses (or IP addresses) and their corresponding Ethernet addresses for nodes on the Internet.

  - File Transfer Protocol (FTP)

    FTP lets you transfer binary and text files to and from any host computer that supports TCP/IP.

  - NETSTAT

    NETSTAT shows the status of the TCP/IP network.

  - PING

    PING is a utility that lets you know if a specific node can be reached.

- Microsoft LAN Manager services

  LAN Manager software manages network tasks, and coordinates communication between servers and clients. With LAN Manager, you can use the **LAN Manager Screen** (a menu-oriented interface) or the LAN Manager NET commands to manage your network connections.

- File services

  A file service lets more than one user read and/or write to files simultaneously.

  A **file service** lets you connect to and use files and directories on a server. File services are used as shared directories where users can read and write.

  A file server uses byte range locking that lets several users write to a file simultaneously. Byte range locking prevents simultaneous updating to the same section of a file when users simultaneously write to a file.

  The system administrator sets up connections to a personal, a common, a printer, and an application service for each user. You are automatically connected to these file services on your server when you log on:

- Personal file service

  A **personal file service** contains the files that belong to you alone. This service is usually assigned to drive M when you log on. Your personal file service is protected from other users by your user name and password.

- Common file service

  A **common file service** contains data and text files you can share with other users. You find these shared applications in the PCCOMMON file service. Common file services can be set up so that access by certain users can be restricted. For example, you can specify that USER1 has only read access to PCCOMMON.

- Printer service

  A **printer service** lets you use a printer connected to a network server or a parallel printer connected to another personal computer.

- Application service

  An **application file service** connects you to an application you commonly use, such as Lotus 1-2-3 or Microsoft Word. You can have many application service connections.

Figure 1–1 shows an example of file service connections.

Figure 1–1 PATHWORKS for DOS File Services

User Files   Common Files   Application Files

Printer Services
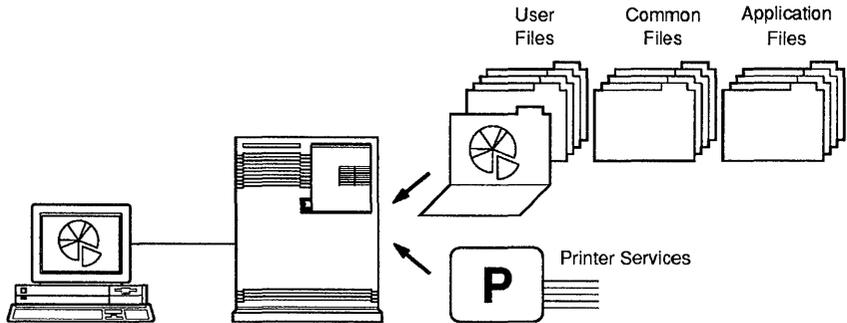
TA-0612-AC

- Disk services

A disk service provides fast access to files.

A server can also store files and directories in a **disk service**. The disk service is located in space allocated on the server called a **virtual disk**. The disk service appears as a VMS file on the server, and lets users access it as if it were a local disk drive.

A disk service lets users simultaneous access to read-only files, and gives one user fast access to read-write files. If an application is stored on a disk server, users can access the application quickly.

——————————————— **Note** ———————————————

Disk services are only offered on VMS servers over Ethernet.

_____

Figure 1–2 shows an example of PATHWORKS disk services.

Figure 1–2 PATHWORKS Disk Services

VMS Server   Disk Services
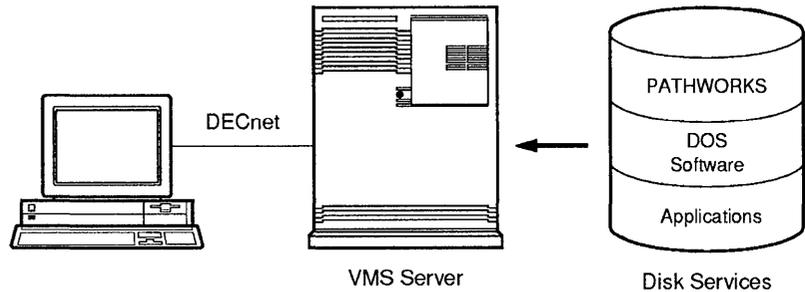
TA-0611-AC

Network Naming Conventions

Just as computers and users are identified by node names and user names, shared resources are identified by network paths and device names.

Network Paths

File and disk services make it easy to find and share data that is available to many network users. To make connections and use network services, you use network paths. **Network paths** are used to identify and locate services on the network. A network path consists of:

- Server name—indicates which server provides the service. For example:

  \\SERVR3

- **Service name**—indicates what service is connected to your personal computer. For example:

  \APPS

Note that the server name must be preceded by two backslash characters, and the service name is preceded by one backslash character.

System administrators assign service names when they make services available.

Network Device Naming Conventions

To use a service, you connect one of your personal computer's device names to the service. A **device name** is a name that identifies a local or remote resource to your personal computer. Device names are also known as **logical devices**. The most common device names are:

- **Disk device names**, that is, drive letters such as A, B, and C.

- **Printer device names**, that is, printer devices such as LPT1 and LPT2.

Logging On to the Network

Logging on lets you access the services your system administrator has set up for you.

Each person who has access to the network has a network **account**, which is assigned by the system administrator. An account consists of the:

- Node name (the name of the server)

- User name (often your surname)

- Password

- A list of services to which you are automatically connected

- A list of system activities you are allowed to do (called privileges). **Privileges** can include access to remote printers and files.

You can use your system account from almost any personal computer on the network. After you turn on your personal computer, connect to your system account by supplying your node name, user name and password. Supplying the information is called **logging on**.

Logging on

To log on to your account, enter:

- The LOGON command

- Your personal computer's node name or the server's node name

- Your user name
- An asterisk (*)

  The asterisk tells the system to prompt you for your password. As you type your password, it is not displayed on the screen.

For example, enter:

```
C:\> LOGON SERVR3 USER1 *
```

At the prompt, enter your password.

If you get an error message, reenter the LOGON command and password.

If no profile has been set up for you on the server, the following message is displayed:

```
No user profile found in user account.
```

Contact your system administrator about setting up your user profile.

When you have logged in, information about the services to which you are connected is displayed. Chapter 2 describes how to use these services.

Using the Mouse and Menus

Read this section if you are unfamiliar with using a mouse.

Many of the applications in PATHWORKS for DOS use a mouse and menus in place of the commands. As you move the mouse on your desk, a pointer on screen reflects the motion. The mouse has a button that you **click** to select an object or text. If a mouse has more than one button, the buttons are always numbered left to right.

Figure 1–3 shows two common varieties of a mouse.

Figure 1–3 Mouse and Mouse Buttons
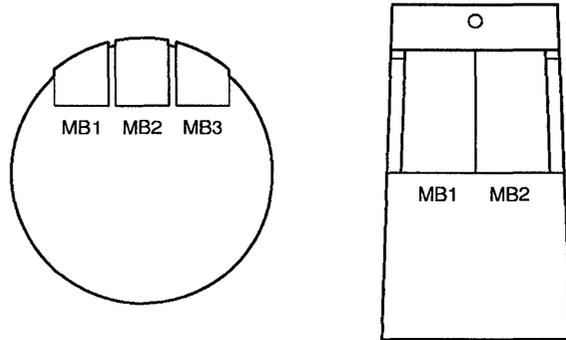
TA-0613-AC

Use the mouse techniques listed in Table 1–1 for MB1; MB2 and MB3 are used less commonly.

Table 1–1 Mouse Techniques

Point	Move the mouse across your desk or another flat surface.
	As you move the mouse, the pointer follows on the screen. When the pointer is where you want it, stop.
Click on	Point to an object and quickly press and release the mouse button to activate the object.
	If you have a mouse with more than one button, use the left button (MB1).
Double click	Point to an object and click twice rapidly.
	If you have a mouse with more than one button, use the left button (MB1).
Shift/click	With the pointer where you want it, press and hold [Shift] and click MB1. Release [Shift] .
Drag	Point, then press and hold down MB1, move the cursor or object, and release the button.

Use the mouse to manipulate the menus used in some applications. A **menu** is a list of items, commands, or functions that you can choose. Depending on the application you are currently using, menus can offer many different options. For example, menus can be used to:

- Open and close files

- Save a file

- Print a file

- Recalculate a column of figures in a spreadsheet

- Change the typeface in a wordprocessor

Using the Mouse to Choose an Option from a Menu

With some applications, such as Mail and Microsoft Windows, you can use the mouse to choose an option (command) from a menu.

1. Point to the menu and hold down the mouse button.

   The items on the menu are displayed.

2. Drag down the menu.

   Some menu items have submenus. Drag the mouse over the submenu.
   As you drag, each menu item is highlighted.

3. To choose an item, highlight it and release the mouse button.

   Figure 1–4 shows Mail's Send menu and its commands.

Figure 1–4 Sample Menu

```
┌──────────────────────────────────────────────────────────────────┐
│ PATHWORKS MAIL                                    SERVR1::USER1    │
│ Read Send Folder Message Filter Group Other       PgUp PgDn Help Quit│
│ ▶  1┌──────────────────────────G::MA| WK3.EPS for kathy "From 9.908,[1706]│
│     │ Send new message         │                                  │
│     │ Forward current message  │                                  │
│     │ Reply to current message │                                  │
│     │ Annotate current message │                                  │
│     │ Resend Last message      │                                  │
│     │ Send with binary attachment│                                │
│     └──────────────────────────┘                                  │
│                                                                    │
│                                                                    │
│                                                                    │
│                                                                    │
│                                                                    │
│                                                                    │
│                                                                    │
│                                                                    │
│ Browser for remote folder MISC  [1 message]                        │
│ Use arrows to select option.   Press ESC to exit   27-Nov-90  02:59pm│
└──────────────────────────────────────────────────────────────────┘
```

2

Using File and Disk Services

The PATHWORKS for DOS software provides access to many
different data-storage locations across a network; the application
or file you need may be located in a distant office on a different
server than the one you normally use. PATHWORKS for DOS
offers these files and applications as file or disk services.

There are two ways to access services. You can use the network
commands described in this chapter, or you can use the LAN
Manager Screen, described in Chapter 4.

This chapter describes how to:

- Use services connected to your personal computer

- Display and use network services available on other servers

- Recover from errors

- Disconnect network services

- Get help

- Connect to network services from Microsoft Windows

Using the Services Connected to Your Personal Computer

Your system administrator sets up your network services so that
each time you log in to the network, you are connected to a variety
of services. Typically, you have various file services, printer
services, and—if your network supports them—disk services
available to you.

To use the file and disk services on your personal computer, follow
these steps.

The USE command lets you view and connect to services.

1. Display the services available to you and the drive assigned to each one

2. Change to the drive for the service you want to use

3. Display the directories on the drive

4. Select the correct application directory

5. Start the application

These steps are explained in the following sections.

Displaying Available Services

To see the services to which you are automatically connected, enter:

```
M:\> USE
```

A listing similar to the following is displayed:

```
USE Version V4.1 Digital Network Connection Manager [Virtual drives D:-I:]

Status  Dev   Type  Connection name          Access  Size
------  ---   ----  ----------------------   ------  ----
        E:    DISK  \\SERVR3\TOOLS             RO     28 MB
        F:    DISK  \\SERVR3\WPS_PLUS          RO     20 MB
        M:    FILE  \\SERVR3\USER7%USER7
        N:    FILE  \\SERVR3\PCCOMMON
        LPT1  PRINT \\SERVR3\LN03$ANSI
```

Table 2–1 explains the information you need to know about in the display.

Table 2–1 Network Service Display Information

Screen Item	Description	Examples
Virtual drives	Drives available to your personal computer for connecting to disk services.	Drives D through I are available.
Status	Availability of the service.	All the services are available.
Dev	Name of the device assigned to the service.	Drive F is assigned to the WPS_PLUS disk service, LPT1 is assigned to the LN03 printer service.
Type	Type of service assigned to the device. Knowing the service type assists you in locating the service on another server.	DISK is a disk service, FILE is a file service, and PRINT is a printer service.
Connection name	Server, service name, and user name for the service.	\\SERVR3\TOOLS \\SERVR3\WPS_PLUS \\SERVR3\PCCOMMON \\SERVR3\USER7%USER7 \\SERVR3\LN03
Access	Level of system access allowed to a disk service: read only or read/write.	RO means Read Only.
Size	Size of the disk.	Device E has a 28 megabyte disk.

Changing to the Drive Assigned to the Service

To access a service connected to your personal computer, change to the drive assigned to the service.

For example, to access PCCOMMON, enter:

`M:\> N:`

The prompt for the new drive is displayed.

`N:\>`

Displaying Application Directories

At the DOS prompt, enter the directory command to display a list of directories:

```
N:\> DIR
```

A screen similar to the following is displayed:

```
Volume in drive N is SERVR3

Directory of N:\

CHART     <DIR>     5-04-90 11:35a
GT        <DIR>     5-04-90 11:35a
HIPAGE    <DIR>     5-04-90 11:35a
PCPAGE    <DIR>     5-04-90 11:35a
SPRSHEET  <DIR>     5-04-90 11:35a

5 Files   49250304 bytes free
```

Selecting an Application Directory

To select the directory containing the application you want, for example SPRSHEET, enter the CD command:

```
N:\> CD SPRSHEET
```

The prompt automatically changes to:

```
N:\SPRSHEET>
```

Now you can use the application. For example, to start the SPRSHEET application, enter:

```
N:\SPRSHEET> SPRSHEET
```

Using Network Services on Another Server

You can use network services that are not directly offered by your server or connected to your personal computer.

For example, if you are a licensed user, and you learn from a colleague that the application Lotus 123 is available on another server, you can connect to it with the USE command by:

1. Determining whether the service is a file or a disk service

2. Entering the appropriate command to connect to the file service

   or

   Entering the appropriate command to connect to the disk service

Determining Whether a Service Is a Disk or File Service

The method for connecting to disk services differs from the one you use to connect to file services. Therefore, begin by entering the USE followed by the service name to determine whether the service you want is offered as a disk or as a file service.

For example, enter the following USE command for 123:

```
M:\> USE 123
```

- If 123 is offered as a disk service, a screen similar to the following is displayed:

```
Service information for 123

Server Name Rating Pass Access   Limit   Users Network Address    Node
----------- ------ ---- ------   -----   ----- -----------------  ----
SERVR1          1   No  RO          30       2 AA-00-05-11-8D-24  9.99
SERVR2          1   No  RO          30       0 AA-00-05-11-4F-25  9.550
SERVR4          1  Yes  RO    No Limit      11 AA-00-05-11-3G-24  9.98
```

The previous screen indicates that 123 is offered as a disk service on three different servers, SERVR1, SERVR2, and SERVR4. You can connect to it as a read-only disk service on any of these servers.

- If the service is unavailable as a disk service, a message similar to the following is displayed:

  ```
  Service information for 123
  ```

  ```
  Error:  Service 123 not offered
  ```

  Since you know the service 123 exists as a service on the network, and it is not a disk service, then it must be available as a file service. See Connecting to a File Service on Another Server for how to find and connect to a file service.

Connecting to a Disk Service on Another Server

When you connect to a disk service you can either let the network connect you to the application or connect to a specific server offering the application you want.

To let the network connect you to an application offered as a disk service on another server:

1. Enter the USE command with the drive letter or wild card character (?:), the name of the service you want, and the qualifier /V (for virtual disk). For example:

   ```
   M:\> USE ?: 123 /V
   ```

   Entering the question mark (?) in place of a specific drive letter assigns the disk service to the first available drive on your personal computer. If you want to use a specific drive, enter the letter for the drive in place of the question mark.

   A message indicating the drive connected to 123 is displayed:

   ```
   Device G: connected to \\SERVR1\123
   ```

2. Change to the drive specified in the message; in this example it is device G:

   ```
   M:\> G:
   ```

3. Now you can use the application. For example, to start 123, enter:

   ```
   G:\> 123
   ```

To use a specific server for a disk service:

1. Enter the USE command and the application name; for example:

   `M:\> USE 123`

   A screen listing of all the servers offering the application is displayed:

```
Service information for 123

Server Name Rating Pass Access Limit Users   Network Address    Node
----------- ------ ---- ------ ----- -----   ------------------ ----
SERVR1          1  Yes  RO        30    11   AA-00-05-11-8D-24  9.99
SERVR2          1  No   RO        30     0   AA-00-05-11-4F-25  9.550
SERVR4          1  No   RO        30     2   AA-00-05-11-3G-24  9.98
```

   Suppose you decide to use SERVR4.

2. Enter the USE command with the /V qualifier (for virtual disk). The /V qualifier indicates you want to connect to a disk service on the server as opposed to a file service. For example, enter:

   `M:\> USE ?:\\SERVR4\123 /V`

   The following message is displayed:

   `Device H: connected to \\SERVR4\123`

3. Change to the drive assigned to the application, in this example, drive H:

   `M:\> H:`

4. Use the change directory command, CD, to change to the application's directory.

   `H:\> CD 123`

5. Now you can use the application by entering the 123 command:

   `H:\123> 123`

Connection Errors

If a device becomes unavailable, the following message is displayed:

```
Not ready error reading drive G
Abort, Retry, Fail?
```

To connect to another device:

1. Enter F for fail at the prompt to disconnect from the current drive.

   The following message is displayed:

   ```
   Current drive is no longer valid
   ```

2. Select another drive. For example, go back to drive M:

   ```
   G:\> M:
   ```

3. Try again, using either means of connection.

If you have been using a service and lose the connection, you can often reconnect.

1. Select another drive. For example, go back to drive M:

   ```
   G:\> M:
   ```

Reconnect to a service.

2. To reconnect, use the qualifier /R, for replace, enter:

   ```
   M:\> USE G:/R
   ```

Connecting to a File Service on Another Server

If a service is offered as a file service, to connect to it you must know the name of the server providing the service. For example, to determine if SERVR1 offers 123:

1. Determine if the application you want is offered as a file service on a particular server by entering:

   ```
   D:\> USE \\SERVR1
   ```

_____ **Note** _____

If you receive the following message, you may need to
include a user name and password to display services:

    Error: Session open rejected by host

Some servers' security is designed to allow only users who
have accounts on the server to display services. To display
a list of services for such a server, enter:

    D:\> USE \\SERVR1%USER1 *

The asterisk (*) tells the system to prompt you for your
password so that as you type your password, it is not
displayed.

_____

A listing similar to the following example is displayed:

```
Services available on SERVR1

User Name  Alias name   Service name   Access RMS protection
---------  ----------   ------------   ------ --------------------
<PUBLIC>   USER1        NEWFILES       RWC    S:RWED,O:RWED,G:R,W:
<PUBLIC>   COMMON       PCCOMMON       RWC    S:RWED,O:RWED,G:R,W:

<PUBLIC>   123          123            RWC    S:RWED,O:RWED,G:R,W:

SYSTEM     PCSAV41      PCSAV41        R      S:RWED,O:RWED,G:R,W:
<PUBLIC>   LN03         LN03           RWC    S:RWED,O:RWED,G:R,W:

SOUSA      DOCCOMMON    DOCCOMMON      RWC    S:RWED,O:RWED,G:R,W:
```

Table 2–2 describes the information you need to know about the display.

Table 2–2 File Service Display Parameters

Parameters	Description
User name	User authorized to access the service. The user PUBLIC means all users have access to the service.
Alias name	Alternate name for the service name. For example, the alias COMMON is another name for the service PCCOMMON.
Service name	Name for the service.
Access	Access rights for the corresponding user:
	RO Read-only access
	RW Read/write access
	RWC Read/write/create access
RMS protection	Protection that limits user's access to the files in the service:
	S:RWED Read/write/execute/delete access for the system administrator
	O:RWED Read/write/execute/delete access for the file's owner
	G:R Read only access for anyone in the system's user group
	W: No access for anyone outside the system's user group

2. Now that you know SERVR1 offers 123, connect to it with the USE command:

   ```
   M:\> USE Z: \\SERVR1\123
   ```

3. Select the drive assigned to the service, in this case, device Z:

   ```
   M:\> Z:
   ```

4. Enter the CD command to change to the 123 directory:

   ```
   Z:\> CD 123
   ```

5. Now you can use the application. For example, to start 123 enter:

   ```
   Z:\123> 123
   ```

Disconnecting from a Service

Before logging out, disconnect from a service when you are using a shared application where the maximum number of connections is limited.

Before you disconnect, be sure that all programs are completed and all files are closed.

To disconnect from a service, you disconnect the drive assigned to that service. You cannot disconnect the drive you are currently using. For example:

1. To disconnect from the service assigned to drive I, enter:

   `M:\> USE I: /D`

2. To verify the disconnection, enter USE at the DOS prompt to display your current service connections.

   The disconnected drive is not included in the display.

Getting Help for Network Services

The commands presented in this chapter are a few of the many network commands available to you. To find out about other commands and variations on the commands presented in this book, use the Help facility.

The Help facility provides the following information:

- A brief overview of the network commands
- A general command format
- Command qualifier descriptions
- A list of topics for which you can get more specific information

You can get help for network commands and the USE utility.

- To get help for network services commands, enter:

  `M:\> HELP`

- To get help for the USE utility, enter:

  `M:\> HELP USE`

Connecting to File and Disk Services from Microsoft Windows

You can access PATHWORKS file and disk services from Microsoft Windows with the File Manager.

_____ **Note** _____

Before using Microsoft Windows, make sure you run the WIN3SETU utility. WIN3SETU lets you use Microsoft Windows with PATHWORKS.

_____

To connect to file and disk services from Microsoft Windows:

1. Enter the following command to start windows:

   C:\> WIN

2. From the Window menu in the Program Manager, double-click on the **Main** icon.

3. In the Main menu, double-click on the **File Manager** icon.

4. From the File Manager menu, choose **Disk**.

5. From the Disk menu, choose **Connect Net Drive**. The Connect Network Drive dialog box is displayed.

6. Assign a drive letter to the service, or press Tab to accept the default and move to the Network Path field.

   When you connect to services from Microsoft windows, you must know whether the service you want is a file or disk service.

   • For a disk service, enter an available letter that is alphabetically _before_ the drive letter assigned to the system service.

     For example, if your system service is connected to drive J, use any letter from A through I to connect to the disk service.

   • For a file service, enter an available letter that is alphabetically _after_ the drive letter assigned to the system service.

For example, if your system service is connected to drive J, use any letter from K through Z to connect to the file service.

7. In the Network Path field, use the same conventions you use with the USE command.

Be sure to precede the server name with two backslash characters and precede the service name with one backslash character. If your system requires it, follow the service name with a percent sign and a user name.

8. If required, press Tab to move to the Password field and enter a password.

Figure 2–1 shows a completed Connect Network Drive dialog box.

Figure 2–1 Connecting to a File Service from Microsoft Windows
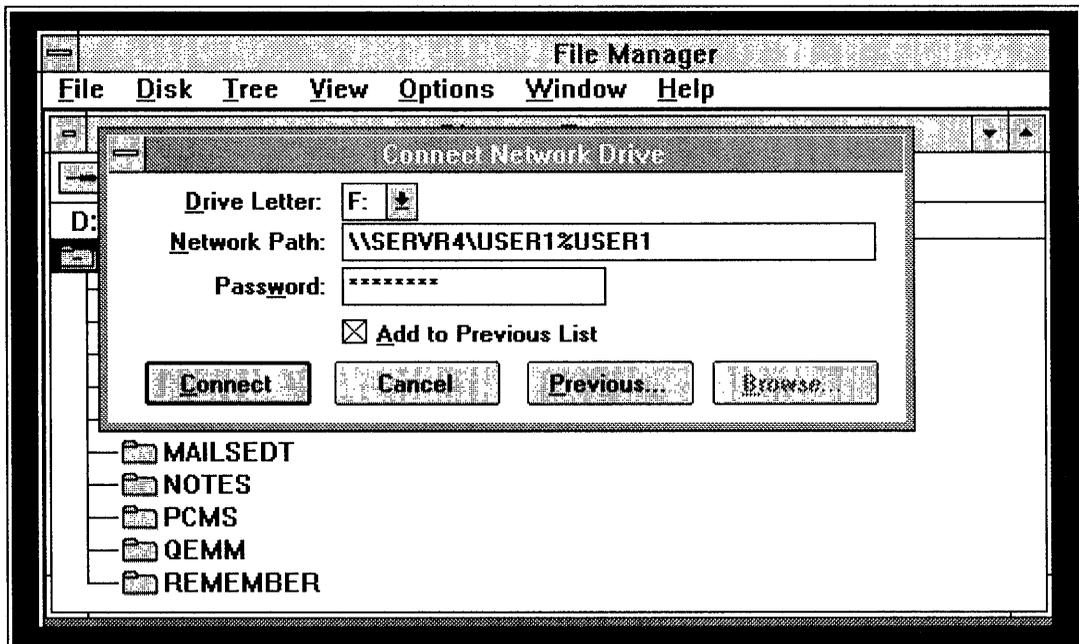
For further information about using the File Manager, refer to your Microsoft Windows documentation.

3

Printing

PATHWORKS for DOS printer services provide access to printers on the network. This chapter describes:

- Network printer services

- Parallel and serial printers

- Remote printing

- Local printing

- Using the PrintScreen utility

- Printing from applications

- Connecting to printer services from Microsoft Windows

For information about connecting to printer services from the LAN Manager screen, see Chapter 4.

Network Printer Services

With network printer services you can print files on a **remote printer** or print on your **local printer**. A remote printer is connected to any network server or personal computer to which you can connect. A local printer is connected to your personal computer.

Parallel and Serial Printers

A printer is either **parallel** or **serial**. Parallel means that a group of data bits is transferred at the same time, each bit on a different line. The group of bits is transferred at one time.

Serial means each bit in a stream of data is transferred one bit at a time.

Serial and parallel ports are the hardware connections for printers on your personal computer. The connection to a serial printer from your personal computer is the serial port; the connection to a parallel printer is the parallel port.

Remote Printing

You can print on remote printers that are automatically connected to your personal computer when you log in to the network, or you can establish connections to other printers attached to other servers.

To print on remote printers:

1. Display printer services that are:

    • Connected to your personal computer

    • Available on a server

2. Connect to a printer service.

3. Use the COPY or NET PRINT command to print a file.

4. Disconnect from the printer service.

The COPY command works on remote printers the same way it does on local printers. The NET PRINT command, supplied with your PATHWORKS software, lets you use additional features for remote printing.

_____ **Note** _____

The PRINT command for DOS, PRINT filename, is not supported over the network.

_____

The following example describes these steps and also other remote printing features.

Displaying Your Remote Printer Connections

Before you can print on a remote printer, you must determine which printer services your personal computer can use.

Enter the USE command to display the printers, and other available services, to which your personal computer is connected:

M:\> USE

A screen similar to the following is displayed:

```
USE version V4.1  Digital Network Connection Manager  [Virtual drives D:-I:]

Status  DEV  Type  Connection name              Access  Size
------  ---  ----  -------------------------    ------  ----
        E:   DISK  \\SERVR3\TOOLS               RO      28 MB
        F:   DISK  \\SERVR4\SPREAD_SHEET        RO      20 MB
        K:   FILE  \\SERVR4\PCCOMMON
        M:   FILE  \\SERVR4\USER5%USER5
        LPT1 PRINT \\SERVR1\LNO3_DPORT
        LPT2 PRINT \\SERVR3\LNO3_DLAND
        LPT3 PRINT \\SERVR4\LPS$ASCII
```

This sample display shows three available printers identified as "PRINT" under the heading "Type". The logical device name assigned to each service is shown in the "DEV" column. The printing format is identified in the "Connection Name" column. The printers in this example are:

- LPT1, a laser printer using **portrait mode**

  Portrait mode prints tall, like a standard business letter.

- LPT2, a laser printer using **landscape mode**

  Landscape mode prints wide, across the long axis of the page.

- LPT3, an ASCII format printer

Using Print Commands

Use the COPY or the NET PRINT command to print a file on any one of the three available printers. For example, to print the file MYTEXT.DAT on the printer service assigned to LPT2, enter:

```
M:\> COPY MYTEXT.DAT LPT2:
```

Locating Other Remote Printers on the System

Suppose you want to use a remote printer to which your personal computer is not connected. For example, you want to use special features on a printer located on another server, SERVR4.

To use printer service on another server:

1. Display the available services on the server. For example, to display the services on SERVR4, enter:

```
M:\> USE \\SERVR4
```

The screen displays information similar to the following:

```
USE Version 4.1     Digital Network Connection Manager

Services available on SERVR4

File Server Authorized Services:

User name      Alias name      Service name  Access  RMS protection
------------   ------------    ------------   ------  ----------------------
<PUBLIC>       LN03            LN03           RWC     S:RWED,O:RWED,G:,W:
<PUBLIC>       LPS$ASCII       LPS$ASCII      RWC     S:RWED,O:RWED,G:,W:
<PUBLIC>       LN03_DPORT      LN03_DPORT     RWC     S:RWED,O:RWED,G:,W:
<PUBLIC>       LN03_LAND       LN03_LAND      RWC     S:RWED,O:RWED,G:,W:
```

Printers generally have public access, indicated by the <PUBLIC> in the User name column. In this display, the printer services are:

- LN03

- LPS$ASCII

- LN03_DPORT — portrait mode

- LN03_LAND — landscape mode

2. From the display, identify the printer service you want to use, for example, the printer service LPS$ASCII.

3. Connect to the desired printer with the USE command. When you connect to a printer service, you assign a logical device name to that printer service. For example:

```
M:\> USE LPT1: \\SERVR4\LN03
```

_____ **Note** _____

Some applications only print to LPT1. If you frequently print while using these applications, it is advisable to assign either LPT2 or LPT3 for remote printing to save LPT1 for applications that require it.

_____

Identifying yourself with your user name and password makes it possible to control print jobs.

- If you have an account on the SERVR4 server, enter the USE command with your user name. When you enter your user name and password, it identifies your print requests, and makes it easier to list, delete, or locate print jobs.

  Another benefit of entering your user name and password is that your user name is printed on the front page of the print job.

  By not including your user name and password in the USE command, you cannot delete or list remote print jobs by a specific user name.

  For example, if you are user USER5 and want to connect to the printer service LPS$ASCII, enter:

  ```
  M:\> USE LPT2: \\SERVR4\LPS$ASCII%USER5 *
  ```

- If you do not have an account on the server or are not registered as a user on the server, you can connect to the printer with public access. The USE command connects the logical device and printer service. For example, to connect LPT2 to the LPS$ASCII printer service on the server SERVR4, enter:

  ```
  M:\> USE LPT2: \\SERVR4\LPS$ASCII
  ```

4. Enter the NET PRINT command to print a file. For example, to print the file MYTEXT.DAT on the printer service for LPT2, enter:

```
M:\> NET PRINT MYTEXT.DAT LPT2:
```

Your file MYTEXT.DAT is printed on the printer service assigned to LPT2.

Disconnecting from a Remote Printer

Disconnect from the device when you are finished printing to it.

To disconnect from a remote printer and make the logical device available for another use, enter the USE command with the /D (for disconnect) qualifier. For example, to disconnect from LPT2, enter:

```
M:\> USE LPT2: /D
```

The following section describes how to use other options available to you with the NET PRINT command.

Other Remote Printing Features

The NET PRINT command gives you flexibility in printing by providing other printing features that:

- Print a file after a defined time
- Print multiple copies of a file
- Print a file with an alternate form
- Print directly to a server printer queue
- Remove print settings
- Display print job information
- Delete the print job you started
- Get help on certain printing functions

This section shows examples of how to use the NET PRINT command for each case.

_____ **Note** _____

If you are running the Full LANMAN 2.0 support redirector, and you want to use the PATHWORKS PRINT command (instead of the LAN Manager PRINT command), enter the NETD PRINT command.

_____

Each example assumes that you have already connected to a printer with the logical device LPT3.

Printing After a Defined Time

Use the NET PRINT command to hold a print job to print after a certain time. To print the file MYFILE.TXT on LPT3 on August 14, 1991, after 5:00 PM, enter:

```
M:\> NET PRINT MYTEXT.TXT LPT3:/AFTER:14-AUG-1991:17:00
```

---------------------------------- **Note** ----------------------------------

Computers use 24-hour time. The hours after noon are 12:01 through 23:59. Keep this in mind when requesting a print job in the afternoon.

Printing Multiple Copies of a File

Use the NET PRINT command to print the file with the /COPIES: qualifier. To print two copies of MYFILE.PS on LPT3:

```
M:\> NET PRINT MYFILE.PS LPT3: /COPIES:2
```

Use the /COPIES: qualifier to print multiple copies.

The printer assigned to LPT3 prints two copies as long as your personal computer is connected to LPT3, or until you remove the /COPIES:2 qualifier.

Printing with an Alternate Printer Form

Sometimes you want to use an ULTRIX or VMS printer form that is unavailable as a printer service. A printer form defines the physical layout of a page, including the page width. For example, you might want to print a file in landscape mode when all the printer services are set up for portrait mode.

ULTRIX and VMS printer forms are portrait and landscape.

If your server has a printer form already defined for landscape, such as LANDSCAPE, you can use that form with the NET PRINT command.

For example, to specify the form LANDSCAPE for LPT3, enter the NET PRINT command to print the file MYFILE.PS:

```
M:\> NET PRINT MYFILE.PS LPT3:/FORM:LANDSCAPE
```

Printing Directly to a Server Printer Queue

If you know of an ULTRIX or VMS printer queue that is not set up as a PATHWORKS printer service (for example, one located near your office), you can use the NET PRINT command to print to it.

Use NET PRINT to send print jobs to a server printer queue that is not set up as a PATHWORKS printer service.

To do so:

1. Obtain the name of the server and the server's printer queue.

2. Connect to the server with the USE command.

3. Use the NET PRINT command.

For example to print the file MYFILE.PS on the VMS printer queue LPS$POSTSCRIPT, on SERVR1, enter the following commands:

```
M:\> USE LPT3: \\SERVR1\LPS$POSTSCRIPT
M:\> NET PRINT MYFILE.PS LPT3:
```

Removing Print Settings

A print setting is a condition you set with one of the print command qualifiers, such as /COPIES:2 or /FORM:LANDSCAPE. Once you use one of these qualifiers, it remains the default until you change or remove it.

Use the /SET qualifier to remove printer settings.

For example, to remove the settings assigned to LPT3, use the NET PRINT /SET command:

```
M:\> NET PRINT LPT3: /SET
```

This cancels any settings you previously entered. For example, the number of print copies returns to the default of one copy, and the time defaults to the current time.

Displaying Print Job Information

You can display information on print jobs sent to a specific device. For example, if you want to know how many copies you had set for a file, you enter the NET PRINT /SHOW command.

Use the /SHOW qualifier to display print job information.

To display information for print jobs sent to another device, such as LPT1, enter:

```
M:\> NET PRINT LPT1: /SHOW
```

Information similar to the following is displayed:

```
LPT1: \\SERVR4\LN03_DPORT%USER5 /COPIES:2
```

Deleting a Print Job

Suppose you sent the wrong file to be printed. You can delete a job associated with a logical device with the NET PRINT /DELETE command. The following example shows how to delete a print job request.

—————————————————— **Note** ——————————————————

If you connect to a printer without a user name, then you cannot delete any print jobs started with that connection.

1. Connect to the printer service with your user name by entering:

   ```
   M:> USE LPT3:\\SERVR3\LPS$POSTSCRIPT%USER8
   ```

Use the /DELETE qualifier to delete a print job request.

2. Use the NET PRINT command to print a file DOC1.PS on LPT3 by entering:

   ```
   M:> NET PRINT DOC1.PS LPT3:
   ```

3. Use the NET PRINT command for LPT3. This command displays the print jobs assigned to LPT3. You can determine the job number of the print job you want to delete:

   ```
   M:> NET PRINT LPT3:
   ```

   Information similar to the following is displayed:

   ```
   User        Job Name           Job# Size  Pos Status
   ---------   ----------------   ---- ----- --- -------
   Queue       LPS$POSTSCRIPT
   USER5       EXAMPLE2.PS        923  512   1
   USER8       DOC1.PS            924  52    5
   ```

4. To delete print job number 924, enter:

   ```
   M:\> NET PRINT LPT3: 924 /DELETE
   ```

   Only job number 924 for user USER8 is deleted.

Getting Help

For further information on the NET PRINT command, enter:

`M:\> NET HELP PRINT`

The NET PRINT Help function includes:

- NET PRINT command format
- NET PRINT command qualifiers
- Brief descriptions of commands and qualifiers

Printing on Local Printers

This section describes how to do the following local printing tasks:

- Print on a parallel printer
- Share your local printer with other users
- Print on a serial printer

Printing on Local Parallel Printers

Your personal computer uses the logical name LPT1 by default to identify the local printer port.

LPT1, LPT2, LPT3, and LPT4 are logical device names for parallel printers.

If you are using a parallel port printer, the logical devices are assigned automatically. You do not need to redirect your print requests if your printer connects to logical devices LPT1, LPT2, LPT3, and LPT4.

To print on a local printer, use the DOS COPY command or the print command for the application you are using.

The COPY command prints the file immediately. You cannot use other commands until the COPY command finishes.

For example, to print the file MYTEXT.DAT on a printer assigned to LPT1, enter:

`M:\> COPY MYTEXT.DAT LPT1:`

Sharing Your Local Printer

You can share a printer connected to your personal computer with other network users. When you share your printer, you:

- Let other users access your printer regardless of their personal computer's operating system

- Offer it as a Local Area Transport (LAT) service that provides network services to users in a local area network

- Cannot access the shared printer locally. You must give up local access and connect to it remotely, just like any other user in the group.

- Must queue your print job to that printer queue, since other users can use it

_____ **Note** _____

PATHWORKS for DOS V4.1 supports sharing local printers on VMS and ULTRIX servers through the DECnet transport system over Ethernet only. Sharing local printers is not supported over TCP/IP.

_____

Ask your system administrator to set up your local printer as a shared printer. Sharing your printer requires VMS or ULTRIX system privileges. Your system administrator must:

- Offer your printer as a LAT service using LATCP commands on the client

- Set up your printer as a VMS or ULTRIX printer queue

- Give you the name of the printer service

Figure 3–1 shows a printer shared as a LAT service.

Figure 3–1 Sharing Your Local Printer

DECnet

LAT

. . . use LPT1

Printer on LPT1
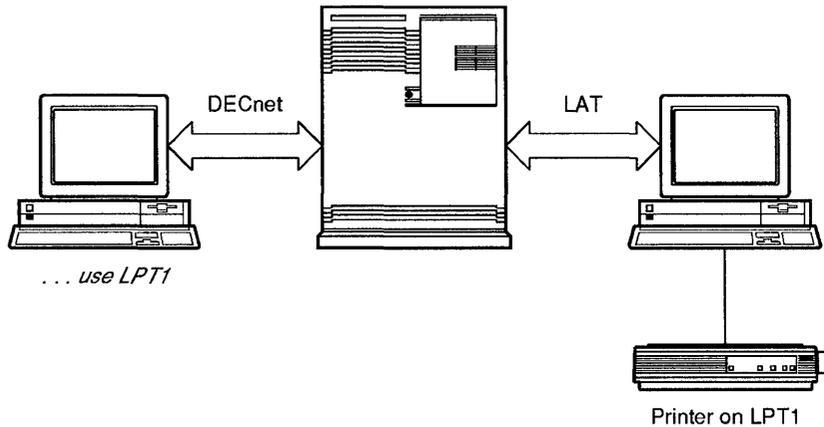
TA-0610-AC

Connecting to a Shared Printer

You can connect to any shared printer with the USE command. For example:

```
C:\ USE LPT3: \\SERVR2\MYPRINTER
```

You can connect to any shared printer regardless of the operating system of the client or server.

Once you connect to the shared printer, use the COPY or NET PRINT commands to print files.

Printing on Local Serial Printers

COM1, COM2, and COM3 are serial printer ports.

For you to print on a local serial printer, your system administrator must assign the logical devices LPT1, LPT2, or LPT3 to the printer ports COM1, COM2, or COM3. These are the physical devices for serial ports.

Refer to the DOS documentation for your personal computer, and the documentation for applications you use to print on your local printer.

Using the PrintScreen Utility

PATHWORKS for DOS provides the PrintScreen utility. PrintScreen lets you:

- Print whatever is displayed on your screen when you press Shift/PrintScrn. PrintScreen directs the output to a local or remote printer. The output always goes to the printer assigned to LPT1.

- Send print jobs to the printer queue, or **close** the print job assigned to an application when you press Ctrl/Alt/PrintScrn while printing within an application.

_____ **Note** _____

Before you can use the PrintScreen utility, PrintScreen files must be copied to your local disk from a system file service, and PrintScreen utility commands must be entered in your STARTNET.BAT file. Ask your system administrator to set this up for you. Or refer to the *Client Installation and Configuration Guide*.

Printing a Screen Display

To print a screen display, follow these steps:

1. Display the screen you want to print.

_____ **Note** _____

You cannot use PrintScreen with PC DECwindows Motif.

2. Press Shift/PrintScrn.

   A ripple crosses the screen, and PrintScreen sends the output to the printer assigned to LPT1.

For information about additional PrintScreen features refer to the *Client Installation and Configuration Guide*.

Printing from Applications

This section describes special considerations for printing from applications. For more information, see the application documentation.

Using LPT1

Before you print from applications, check your printer connection.

Some applications always direct data to print to LPT1. When using an application that always prints to LPT1, set LPT1 up as you would any printer.

Using Printing Commands

In general, use the application's PRINT command to print from an application.

Whenever possible, use the application PRINT command to send application files to a printer. For applications that do not have print commands, write the output you want to print to a file, then use the COPY command for local printing, or the NET PRINT command for remote printing.

Controlling Printed Output

The printer driver of your application can initialize and override settings of the printer queue on the server.

For example, some applications restrict the printed output on an LN03 to portrait mode even though the server's printer queue has been set to landscape mode.

Be sure you understand how your particular application controls printing. For further information, see the application documentation.

Closing Files

Some applications do not close the file when they send a file to the printer. When this occurs, the server waits for the file to be closed before printing the file. If a file fails to print, it may still be open.

Closing a file

To close the file from inside the application, press Ctrl/Alt/PrintScrn .

Printing should begin.

If the file still does not print, exit from the application. Printing should then begin.

Setting Time Closure for Network Printers

You can set the closure time for printers assigned to LPT1, LPT2, and LPT3. Automatic closure means you set the amount of time an application has to send the output to the printer before the file is automatically closed. You set the closure for a printer with the PSC command.

To use the timed closure function, you must know something about the applications you use. If the time you set is too short, the print output is unnecessarily cut short.

If you want to use the printer timed closure function, see your system administrator. Or refer to the *Client Installation and Configuration Guide*.

Echoing Input to the Printer

From the DOS prompt, you can also print to the local printer on LPT1 using **line echo,** which prints what is displayed on the screen, character by character, as you type it. To use line echo, press Ctrl/P.

Not all applications support line echo; if an application does not support line echo, nothing prints after you press Ctrl/P as long as you are using the application. When you exit the application, line echo starts again. Press Ctrl/P again to stop line echo.

Connecting to Printer Services from Microsoft Windows

You can access PATHWORKS file and disk services from Microsoft Windows.

_____ **Note** _____

Before you can use printer services from Microsoft Windows, you must:

*   Run WIN3SETU to set up your PATHWORKS configuration to support Microsoft Windows.

*   Install a printer driver for the printer you want to use. Ask your system administrator to install the printer drivers you need. Or refer to the *Microsoft Windows Support Guide*.

_____

To connect to printer services from Microsoft Windows:

1. Enter the following command to start Windows:

    C:\> WIN

2. From the Window menu in the Program Manager, double-click on the **Main** icon.

3. In the Main menu, double-click on the **Printer** icon. The Printers window is displayed as shown in Figure 3–2.

Figure 3–2 Sample Printers Window
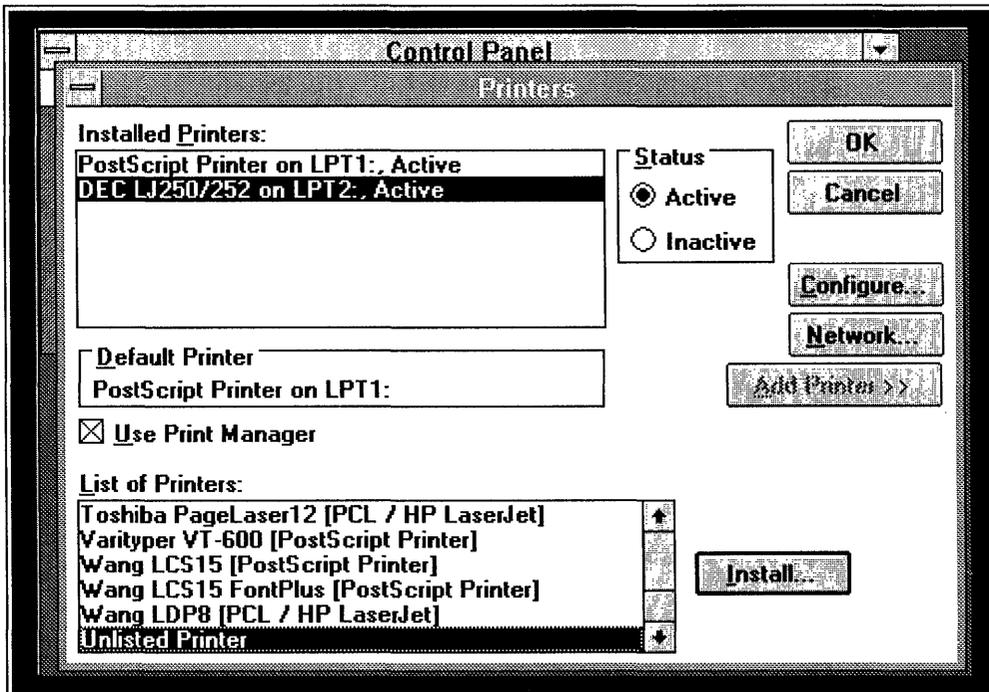
4. Double-click on [Network].

    The Printers Network Connection box is displayed.

5. In the Port: field, enter a the printer device name. In Windows, you can only use LPT1, LPT2, LPT3 for network printers.

6. In the Path field, use the same conventions you use with the USE command.

    Be sure to precede the server name with two backslash characters and precede the service name with one backslash character. If your system requires it, follow the service name with a percent sign and a user name.

7. If required, press Tab to move to the Password field and enter a password.

8. Double-click on Connect.

    Your network connection appears in the Network Printer Connection box as shown in Figure 3–3.

Figure 3–3 Completed Printers Network Connection Dialog Box
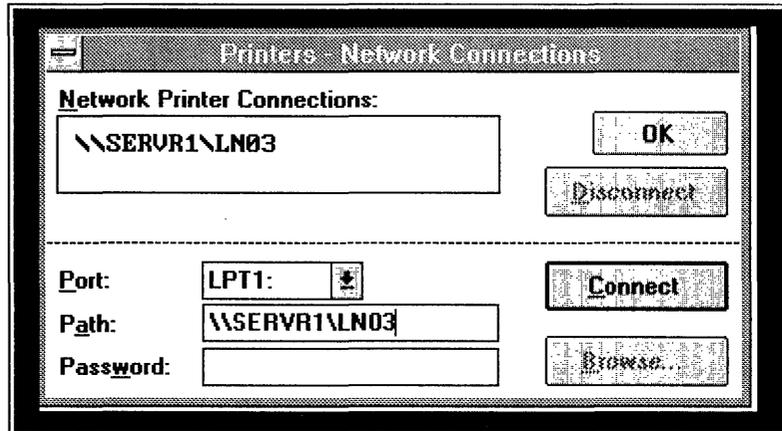
9. You can now print from your Windows applications or from the Windows File Manager.

For further information about printing from Microsoft Windows, refer to your Microsoft documentation.

4

Using File and Printer Services with the LAN Manager Screen

The LAN Manager software supported by PATHWORKS provides the **LAN Manager Screen**, a menu-driven interface that lets you view network resources, locate services, and connect to services without having to memorize commands.

To use network commands to connect to file and printer services, refer to Chapter 2 and Chapter 3.

_____ **Note** _____

The LAN Manager Screen is available only if you select either the Enhanced or the Full LANMAN 2.0 support Redirector during Netsetup. By default, Netsetup installs the Basic Redirector. Consult your system administrator to install a redirector that lets you use LAN Manager. Or refer to your *Client Installation and Configuration Guide*.

LAN Manager software manages network tasks, and coordinates communication between servers and clients, and between clients.

DOS clients can connect to any network server running the LAN Manager software, such as a PATHWORKS for OS/2 server. However, both client and server must be running the same network transport, such as DECnet or TCP/IP.

_____ **Note** _____

You cannot connect to a virtual disk or copy files from the LAN Manager Screen.

This chapter describes:

- LAN Manager naming conventions
- Starting the LAN Manager Screen
- Using the LAN Manager Screen
- Connecting to and using shared directories (file services)
- Connecting to and using shared printers (printer services)
- Exiting the LAN Manager Screen
- Getting help

LAN Manager Naming Conventions

The LAN Manager Screen has different naming conventions for network components.

The LAN Manager Screen uses the following network naming conventions:

- Personal computers connected to the network are called **workstations**.
- A workstation or server on the local area network is identified by its **Computername**.
- File services are called **shared directories**. Users can read or write to shared directories.
- Printer services are called **shared printers**. Shared printers let you view, connect to, and control printers connected to LAN Manager servers.
- Network services are called **shared resources**. They are identified by **sharenames**.
- Servers and workstations can be set up to belong to a **domain**. A domain is a group of workstations and servers established to simplify network administration and security. After you start your personal computer, you log into a domain on the network, usually the one that has the servers you use most often. You can also use shared resources on servers in domains other than the domain you are logged in to.

The Enhanced and Full LANMAN 2.0 Redirectors limit the length of service names (sharenames) and passwords as follows:

LAN Manager does not support long service names, user names, or passwords.

- Service name (sharename): 8.3 characters or fewer

- User name: 12 characters or fewer

- Password: 8 characters or fewer

Therefore, if you are using the LAN Manager Screen to access an account on an ULTRIX or VMS server, your user name and password must be limited to a maximum of eight characters. The Enhanced and Full LANMAN 2.0 Redirectors do not support user names and passwords in VMS and ULTRIX format.

Using NET Commands

In addition to using the LAN Manager Screen, you can also use NET commands to manage your network connections.

- To use a LAN Manager NET command, enter NET followed by the command.

  For more information about using LAN Manager NET commands, refer to the *Microsoft LAN Manager User's Guide for MS-DOS.*

- To use a PATHWORKS for DOS NET command, substitute NETD for NET if you are running the Full LANMAN 2.0 Redirector.

  For more information about using PATHWORKS for DOS NET commands, refer to the *Client Commands Reference.*

Starting the LAN Manager Screen

To display the LAN Manager Screen, enter the following command at the system prompt:

```
NET
```

——————————————— **Note** ———————————————

If you have a monochrome display, you may need to enter the following command:

```
NET/MONO
```

_____

The LAN Manager Screen, as shown in Figure 4–1, is displayed.

Figure 4–1 Initial LAN Manager Screen

```
┌─────────────────────────────────────────────────────────────────────────┐
│                                                                           │
│   View    Message   Config    Accounts                          Help      │
│                                                                           │
│                                                                           │
│    ┌──────────────────────────────────────────────────────────────────┐  │
│    │  Set current focus on [                          ]                │  │
│    │                                                                   │  │
│    │  Server name      Remark                                          │  │
│    │  ┌──────────────────────────────────────────────────┐─────────┐  │  │
│    │  │              ┌─────────────────────────────────┐            ↑│  │  │
│    │  │              │ You have user privileges at \\USER1.│         ░│  │  │
│    │  │              │                                 │            ░│  │  │
│    │  │              ├─────────────────────────────────┤            ░│  │  │
│    │  │              │                   ‹  OK  ›       │            ░│  │  │
│    │  │              └─────────────────────────────────┘            ░│  │  │
│    │  │                                                            ░│  │  │
│    │  │                                                            ░│  │  │
│    │  │                                                             ↓│  │  │
│    │  └───────────────────────────────────────────────────────────┘  │  │
│    │                                                                   │  │
│    └──────────────────────────────────────────────────────────────────┘  │
│                                                                           │
└─────────────────────────────────────────────────────────────────────────┘
```
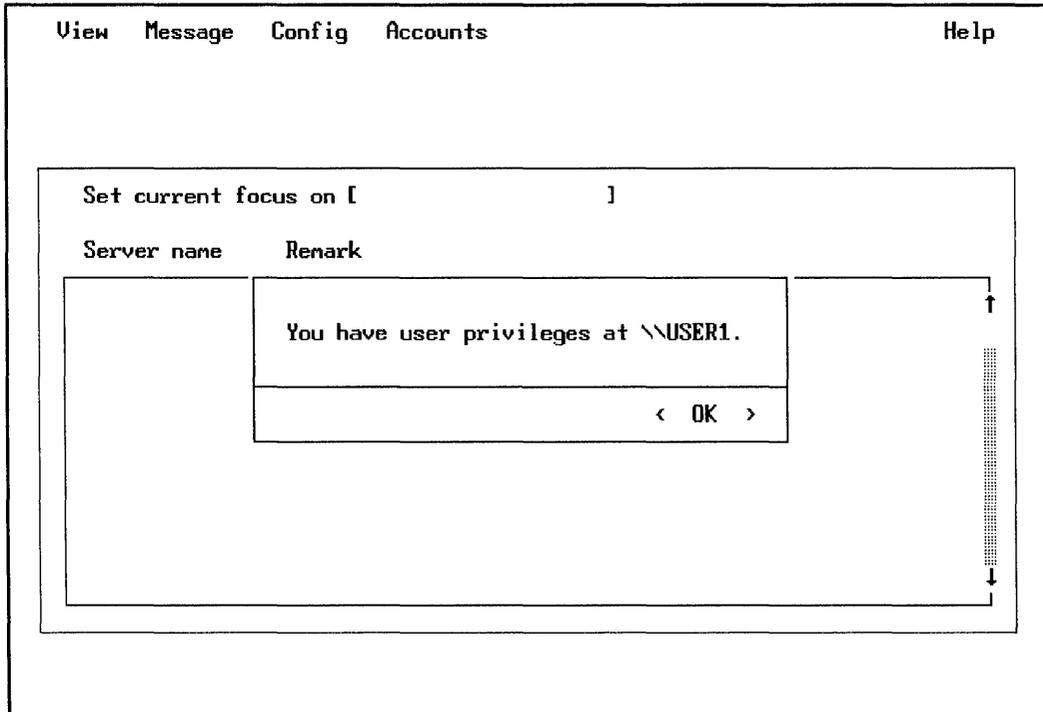
Press Return to acknowledge your network connection. LAN
Manager displays the available resources as shown in Figure 4–2.
Only servers running LAN Manager software are included in the
display.

Using the LAN Manager Screen

The LAN Manager Screen gives you access to resources on the network through a menu interface.

Figure 4–2 shows the LAN Manager Screen elements.

Figure 4–2 The LAN Manager Screen Elements
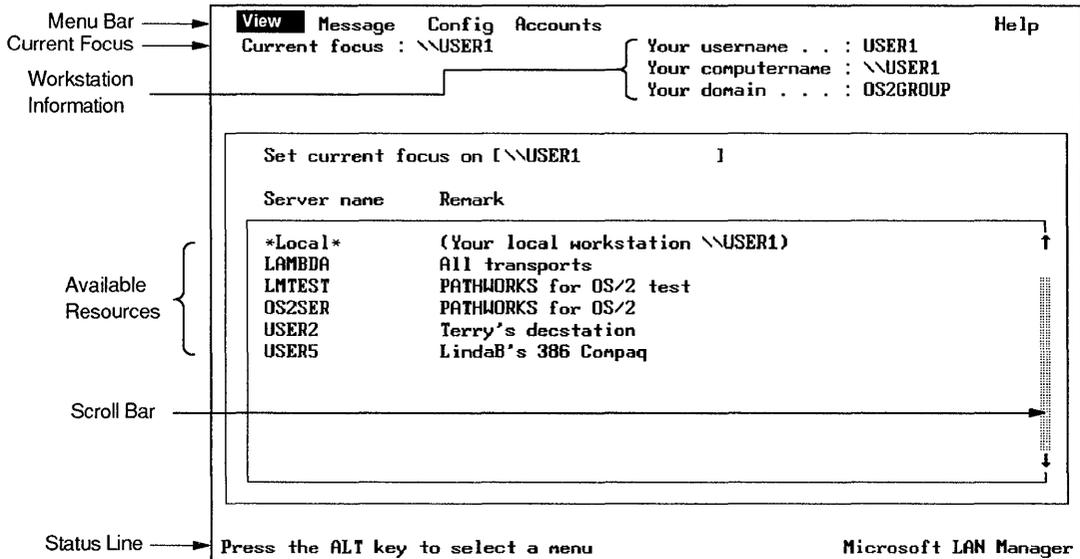
Table 4–1 describes the LAN Manager Screen elements.

Table 4–1 LAN Manager Screen Elements

Element	Description
Menu bar	Displays the names of the menus from which you choose commands
Current focus	Shows the computername of your workstation or the server that is the focus of activity in menu commands
Workstation information	Indicates the: Username specified when you connected to the network Computername specified when the workstation was started Domain specified when you connected to the network
Available resources	Lists the servers in your area
Scroll bar	Lets you scroll through the servers in the available resources list box
Message line	Provides a brief description about the current menu, command, or task

Selecting a Menu

To use the LAN Manager Screen, select a menu, which displays a list of menu items. When you choose an item, a **dialog box** is displayed. You enter information in the dialog box to perform a task.

There are two ways to select a menu.

You select a menu by one of the following methods:

• Use the mouse:

   1. Move the pointer to the menu you want.

   2. Click the mouse button to display the menu items.

   3. Click the mouse button again when you finish using the menu.

- Use the keyboard:

  1. Press [Alt] to move the cursor to the View menu.

  2. Select a menu by typing the highlighted letter or by using the direction keys to move to the menu you want.

  3. Press [Return].

  When you choose a menu, a brief description of the menu is displayed at the bottom of the screen. Figure 4–3 shows the LAN Manager View menu.

Figure 4–3 LAN Manager View Menu

```
 View    Message   Config   Accounts                                    Help
 ┌──────────────────────────┐  Your username . . : USER1
 │ Available resources...   │  Your computername : \\USER1
 │ Printer queues...        │  Your domain . . . : OS2GROUP
 │ Comm-device queues...    │
 ├──────────────────────────┤ ┌──────────────────────────────────────────────┐
 │ Used resources...        │ │\\USER1            ]                           │
 ├──────────────────────────┤ │                                              │
 │ Users on a server...     │ │                                              │
 │ Users on a domain...     │ ├──────────────────────────────────────────────┤
 ├──────────────────────────┤ │local workstation \\USER1)                   ↑│
 │ Exit              F3     ││ORKS for OS/2 Test                            │
 └─────────────────────────┘ │ORKS for OS/2                              ░░░│
    │ USER2           Terry's DECstation                                  ░░░│
    │ USER5           LindaB's 386 Compaq                                 ░░░│
    │                                                                       │
    │                                                                       │
    │                                                                       │
    │                                                                     ↓│
    └───────────────────────────────────────────────────────────────────────┘

 View resources available on the server of current focus  Microsoft LAN Manager
```

Selecting from a Menu

To choose a menu item, use the mouse or direction keys to highlight the item you want, then press Return. LAN Manager displays the corresponding dialog box for the menu item.

Use the mouse or the direction keys to select the dialog box fields. For example, in Figure 4–3, when you choose the **Used resources** item from the View menu, the Used Resources dialog box is displayed. The dialog box lets you perform additional tasks.

When you finish using the dialog box, select the Done command button. The display returns to the Servers Available on Network dialog box.

Connecting to and Using Shared Directories

Using shared directories (services) involves:

- Selecting servers and resources
- Connecting to a shared directory
- Changing to a shared directory
- Using a shared directory
- Disconnecting from a shared directory

Selecting Servers and Resources

When the Servers Available on Network dialog box is first displayed, the cursor is displayed in the Set Current Focus text box. The current focus defaults to your workstation. You set the current focus by either typing the name of a server or selecting one from the list box.

The Set Current Focus command displays a server's resources.

To select from the list box:

1. Highlight the server you want.

2. Press Return.

3. Display the resources available at the server by selecting the View menu.

4. Choose **Available resources** from the menu. The Resources Available at (Server) dialog box is displayed. This contains a list box showing the resources available for your use on the server.

Figure 4–4 shows an example of the Resources Available at (Server) dialog box.

Figure 4–4 Resources Available at (Server) Dialog Box

```
 View    Message    Config    Accounts                                    Help
 Current focus : \\OS2SER                  Your username . . : USER1
                                           Your computername : \\USER1
                                           Your domain . . . : OS2GROUP
                        ┌──────── Resources Available at \\OS2SER ────────┐
                        │         PATHWORKS for OS/2 SERVER               │
 ┌──────────────────────┴────────────────────────────────────────────────┴──┐
 │                                                                           │
 │     Sharename      Type       Used as      Remark                         │
 │    ┌──────────────────────────────────────────────────────────────┐      │
 │    │ CROOT          Disk                    Admins only!          ↑ │  ┐  │
 │    │ LN03           Printer                 LN03 Plus on OS2SER     │  ↑  │
 │    │ OS2DOS         Disk                    DOS Applications      ▓ │     │
 │    │ OS2CORE        Disk                    OS/2 Uncommon Apps    ▓ │     │
 │    │ PUBLIC         Disk                    Public Domain         ▓ │     │
 │    │ USER4          Disk                    Matthew's Stuff       ↓ │     │
 │    └──────────────────────────────────────────────────────────────┘     │
 │                                                                        ▓ │
 │   < Use resource >  < Zoom >  < Stop using >                           ▓ │
 │   < View queue contents >  < View permissions >           < Done >     ▓ │
 │                                                                        ▓ │
 │                                                                          │
 │                                                                        ↓ │
 └───────────────────────────────────────────────────────────────────────┘
 View resources available on the server of current focus  Microsoft LAN Manager
```

The Resources Available at (Server) dialog box display uses the following service naming conventions in the "Type" column:

Service	Type
File	Disk
Printer	Printer
Communication	Comm

5. To view further information about a resource, select the Zoom command button. When you click on Zoom, or press Return, detailed information about the highlighted resource is displayed.

Connecting to a Shared Directory

To connect to a shared directory, for example, the PUBLIC file service on server OS2SER, follow these steps:

Connect to a shared directory to use a network application.

1. Set current focus on OS2SER.

2. From the View menu, choose **Available resources**.

   The Resources Available at (Server) dialog box is displayed.

3. Set current focus to your local workstation, for example, USER1.

4. From the view menu, select **Used resources**.

5. Select **Add use**.

   The Use a Network Resource dialog box is displayed, as shown in Figure 4–5.

Figure 4–5 Use a Network Resource Dialog Box

```
 View   Message   Config   Accounts                        Help
 Current focus : \\OS2SER           Your username . . : USER1
                                    Your computername : \\USER1
                                    Your domain . . . : OS2GROUP

  ┌──────────────── Resources in Use by USER1 at \\OS2SER────────────┐
  │                                                                   │
  │  [ ] Show deviceless uses    [ ] Pause using printers and comm devices │
  │                                                                   │
  │    Device   Making use of                    Remark              │
  │  ┌────────────────────────────────────────────────────────────┐ │
  │  │  I:              ── Use a Network Resource ──             │↑│ │
  │  │     ┌──────────────── Type of Use ────────────────┐       │ │ │
  │  │     │  (•) 1 Disk           ( ) 3 Comm            │       │▓│ │
  │  │     │  ( ) 2 Printer        ( ) 4 Deviceless use  │       │▓│ │
  │  │     └──────────────────────────────────────────────┘      │▓│ │
  │  └──┐                                                       │↓│ │
  │     │ Local device . . [J:···]                              └─┘ │
  │     │ Network resource [ ······························]          │
  │ < Add│ Password . . . . [ ················]                ┌───── │
  │ < Vie│                                                    │ne >  │
  │  └───┴──────────────────────────────────────────────────┴─┐    │
  │              < OK > <Cancel>                                │    │
  └───────────────────────────────────────────────────────────────┘

 View resources used by your workstation          Microsoft LAN Manager
```

6. Select **Disk**, the default. Press Tab to move to the Local Device field.

7. Enter a device name, or accept the default device name displayed.

   The Local device field automatically shows the drive letter of your workstation that LAN Manager has assigned to the PUBLIC file service. LAN Manager uses the first available drive letter as the default. If you had already connected drive I to a shared directory, then the default would be J.

8. Press Tab to move to the Network resource field.

9. Enter the network path using the format \\server\sharename. For example, to select the shared directory PUBLIC on server OS2SER, enter:

   \\OS2SER\PUBLIC

10. If needed, enter a password.

11. Select **OK**.

You have now connected your workstation to the shared directory.

The Resources in Use dialog box now shows an additional service, as shown in Figure 4-6.

Figure 4-6 Resources Connected to Your Workstation

```
View   Message   Config   Accounts                              Help
Current focus : \\USER1              Your username . . : USER1
                                     Your computername : \\USER1
                                     Your domain . . . : OS2GROUP

┌──────────────── Resources in Use by USER1 at \\USER1 ──────────────┐
│                                                                    │
│  [ ] Show deviceless uses     [ ] Pause using printers and comm devices │
│                                                                    │
│     Device    Making use of              Remark                    │
│    ┌──────────────────────────────────────────────────────┐       │
│    │ I:        \\OS2SER\DOS             DOS applications ....  ↑    │
│    │ J:        \\OS2SER\PUBLIC          Public domain              │
│    │ LPT1      \\OS2SER\LN03            LN03 laser printer...      │
│    │                                                              │
│    │                                                         ↓    │
│    └──────────────────────────────────────────────────────┘       │
│                                                                    │
│  < Add use >  < Zoom >  < Stop using >                             │
│  < View queue contents >  < View permissions >         < Done >    │
│                                                                    │
└────────────────────────────────────────────────────────────────────┘

View resources used by your workstation            Microsoft LAN Manager
```

Switching to the Shared Directory

After you connect one of your workstation's drives to a shared directory, use the shared directory with DOS commands.

To use a shared directory, follow these steps:

1. If you have not already done so, select Done.

2. Press F3 to exit the LAN Manager Screen and return to the DOS prompt.

3. At the DOS prompt, enter the letter of the drive you connected to the shared directory, followed by a colon (:).

   For example, if your personal computer's J drive is currently connected to the shared directory PUBLIC, enter:

   ```
   J:
   ```

You can now use DOS commands to use the applications in the PUBLIC directory.

Disconnecting from a Shared Directory

To return to the LAN Manager Screen and disconnect from a shared directory, follow these steps:

1. At the DOS prompt enter:

   ```
   NET
   ```

2. From the View menu, choose **Used Resources**. The Resources in Use dialog box is displayed.

3. Select the service you want to disconnect, for example, \\OS2SER\PUBLIC.

4. Select **Stop Using**.

5. Select **OK**.

   LAN Manager displays the following prompt:

   ```
   Do you wish to stop using \\OS2SER\PUBLIC?
   ```

6. Select **OK**.

   LAN Manager removes the service from the list box, and disconnects your workstation from the service. \\OS2SER\PUBLIC is no longer displayed in the Resources in Use dialog box.

7. Select **Done**.

Connecting to and Using Printer Services

The LAN Manager Screen lets you use shared printers (remote printer services). This section explains how to:

- Display a server's printer queues

- Connect to a printer queue

- Print on the network

- Disconnect from a printer queue

Displaying a Server's Printer Queues

To display the printer queues for server OS2SER:

1. Set the current focus on OS2SER by highlighting it in the list box and pressing ⎡Return⎤.

2. From the View menu, choose **Printer queues**.

   The Print Queues on (Server) dialog box is displayed, as shown in Figure 4–7.

3. Select **Done**.

Figure 4–7 Print Queue Dialog Box

```
 View    Message   Config   Accounts                              Help
 Current focus : \\OS2SER              Your username . . : USER1
                                       Your computername : \\USER1
                                       Your domain . . . : OS2GROUP

               ┌─────── Print Queues on \\OS2SER ───────────────────┐
 │    Name                    Job #    Size       Status            │
 │   ┌────────────────────────────────────────────────────────────┐│
 │   │ LN03        QUEUE ( 0 Jobs)              * Queue Active *   ↑││
 │   │ LN03_PRO    QUEUE ( 0 Jobs)              * Queue Active *    ││
 │   │ LPS20$PS    QUEUE ( 2 Jobs)              * Queue Active *   ▓││
 │   │  USER2                6      1024          Printing         ▓││
 │   │  USER13               7      4136          Waiting          ▓││
 │   │                                                             ▓││
 │   │                                                              ││
 │   └─────────────────────────────────────────────────────────── ↓┘│
 │                                                                   │
 │  <Hold>  <Release>  <Restart>  <Zoom>  <Delete>  <Purge>   <Done> │
 │  ┌──────────────────────────────────────────────────────────┐  ↓ │
 │  │                                                           │    │
 │  └──────────────────────────────────────────────────────────┘    │
 View spooled printer queues                    Microsoft LAN Manager
```
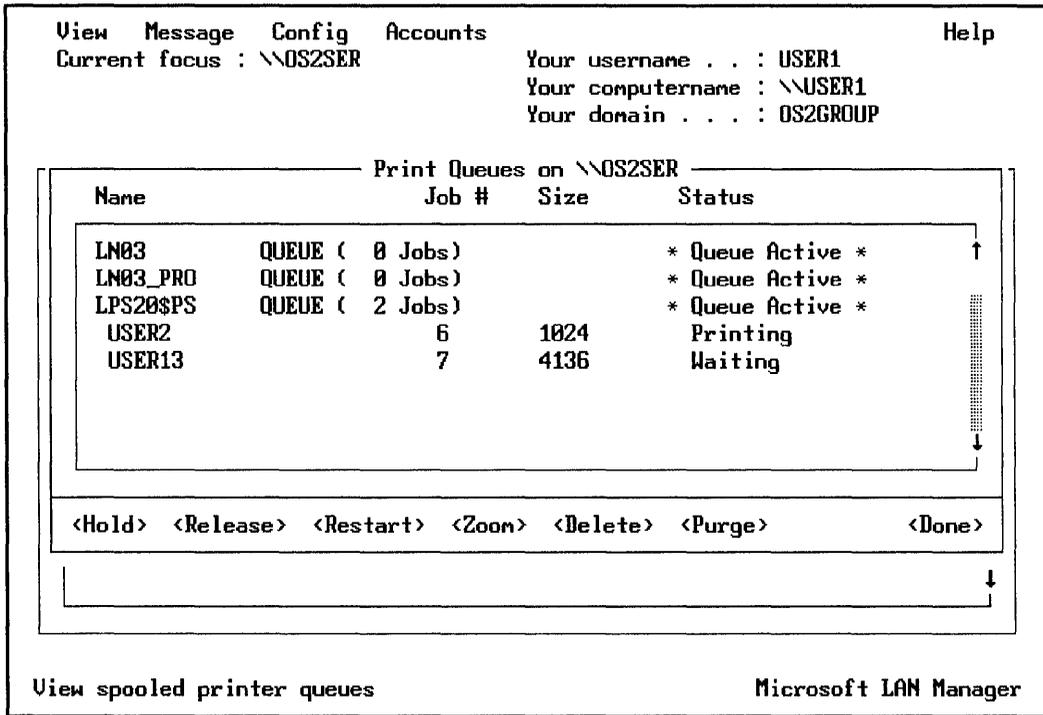
Connecting to a Printer Queue

To connect to a printer queue, for example LN03 on OS2SER, follow these steps:

1. Set current focus to your local workstation USER1.

2. From the View menu, choose **Used resources**.

   The Resources in Use dialog box is displayed.

3. Select **Add use**.

   The Use a Network Resource dialog box is displayed.

4. Select **Printer** in the Type of Use dialog box.

   Press [Tab] to move to the next field.

5. Enter a device name, or accept the default device name displayed.

   Press [Tab] to move to the next field.

6. Enter the network path for the printer service:

   `\\OS2SER\LN03`

   Enter a password, if necessary. In most cases, printer services are public services, and require no password.

7. Select **OK**.

8. Press Return . You have now connected your workstation to the printer queue.

   The Resources in Use dialog box now shows the printer service.

Printing on the Network

Once you make your connection, exit the LAN Manager Screen by pressing F3 and return to the DOS prompt. Use the printer queue as if it were a printer attached to your computer. To print a file, use DOS commands to direct an application's print output to the device name you assigned to the printer queue. For example:

`J:\WP>  NET PRINT MYDOC.TXT LPT1:`

Disconnecting from a Printer Queue

When you finish using the printer queue, or when you want to use the device for a different connection, disconnect your personal computer from the printer queue.

To disconnect from the printer queue:

1. From the View menu, choose **Used resources**. The Resources in Use dialog box is displayed.

2. In the list box, choose the printer queue that you want to disconnect.

3. Select **Stop Using**.

4. When prompted for confirmation, select **OK**.

5. Select **Done**.

For more information about printing with the LAN Manager screen, refer to the *Microsoft LAN Manager User's Guide for MS-DOS*.

Exiting the LAN Manager Screen

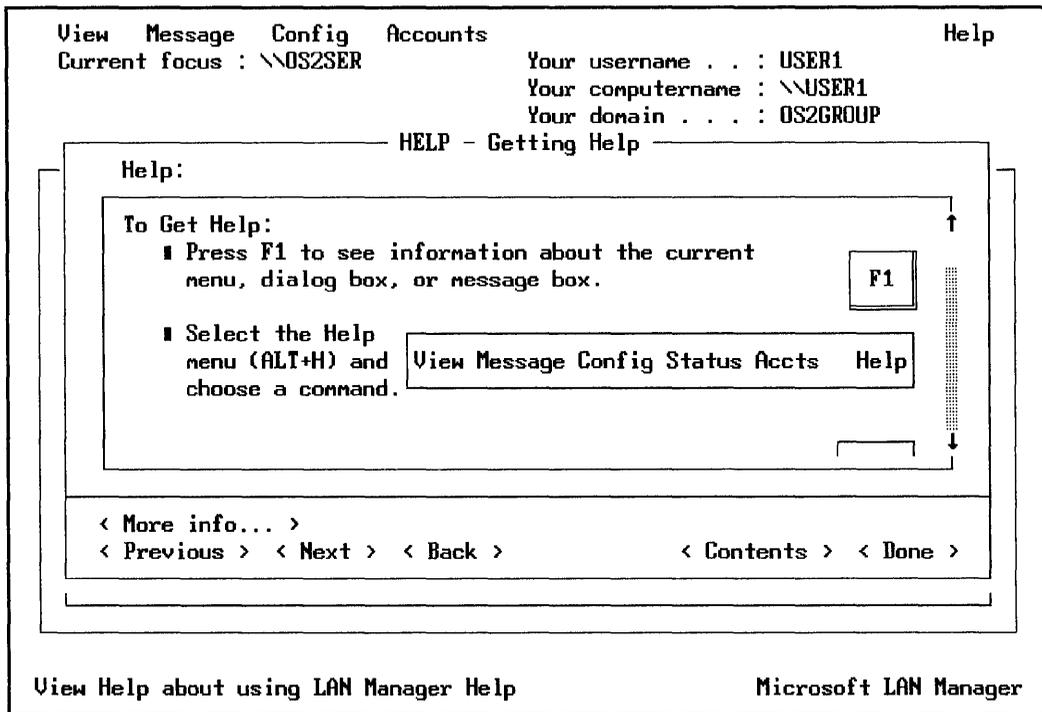To exit the LAN Manager Screen and return to the system prompt, press [F3].

Getting Help

[F1] *displays information for the current dialog box.*

You can get help at any time by pressing [F1] or by clicking on the Help menu. LAN Manager displays information related to the menu or dialog box on your screen.

The Help menu also contains a table of contents that lets you select the help information for a particular topic.

Figure 4–8 shows an example of a Help dialog box.

Figure 4–8 LAN Manager Help Dialog Box

```
┌──────────────────────────────────────────────────────────────────────────┐
│   View    Message    Config    Accounts                          Help      │
│   Current focus : \\OS2SER            Your username . . : USER1             │
│                                       Your computername : \\USER1           │
│                                       Your domain . . . : OS2GROUP          │
│                            ───── HELP - Getting Help ─────                  │
│    ┌─ Help: ──────────────────────────────────────────────────────────┐    │
│    │                                                                    │    │
│    │  ┌──────────────────────────────────────────────────────────┐┬    │    │
│    │  │ To Get Help:                                              ││↑   │    │
│    │  │  ■ Press F1 to see information about the current          ││    │    │
│    │  │    menu, dialog box, or message box.              ┌────┐  ││    │    │
│    │  │                                                   │ F1 │  ││    │    │
│    │  │  ■ Select the Help                                └────┘  ││    │    │
│    │  │    menu (ALT+H) and ┌──────────────────────────────────┐  ││    │    │
│    │  │    choose a command.│ View Message Config Status Accts   Help│ ││   │    │
│    │  │                     └──────────────────────────────────┘  ││    │    │
│    │  │                                                  ┌────┐   │┴    │    │
│    │  └──────────────────────────────────────────────────────────┘↓    │    │
│    │                                                                    │    │
│    │  < More info... >                                                  │    │
│    │  < Previous >  < Next >  < Back >          < Contents >  < Done >   │    │
│    └────────────────────────────────────────────────────────────────────┘   │
│                                                                            │
│  View Help about using LAN Manager Help              Microsoft LAN Manager  │
└──────────────────────────────────────────────────────────────────────────┘
```

For further information about LAN Manager and the LAN Manager Screen, refer to the *Microsoft LAN Manager User's Guide for MS-DOS*.

5

Transferring Files

You can transfer application files you created to computers with different operating systems running the same transport. For example, you can share a file you created on your personal computer with a user on an ULTRIX server.

PATHWORKS provides different file transfer methods. The method you use depends on the:

- File type

- Destination of the file

- Operating system where you created the file

- Network transport

This chapter describes:

- Different file types

- File transfer:

    - To and from PATHWORKS servers

    - To other DECnet nodes using DECnet utilities

    - Over TCP/IP using the File Transfer Protocol (FTP)

Understanding Different File Types

When you transfer a file on the network, you need to know what type of file you are transferring. Depending on the file type, you may need to use a file type command qualifier to ensure that the file reaches its destination in the appropriate format.

Files can be one of two types:

- **Binary**

  You cannot type or print a binary file. The most common examples of this file type are executable files (.EXE), spreadsheet files (.SLK), and graphic files (.SCR). This type of file is also known as an **image** or **data** file.

- **ASCII**

  An ASCII file is a text file. Its lines end with a carriage return/line feed (CR/LF) character pair that tells the program to move down one line. The file is usually created with a text editor such as SEDT.

Special Characters in File Names

The DOS operating system and the VMS operating system have different file systems and use different file-naming schemes.

With DOS, you can use any special character. **Special characters** are any valid DOS characters other than the regular characters A-Z, 0-9, $, and _ . Table 5–1 lists the special characters you can use in a file name and file extension.

Table 5–1   Special Character for File Names

a-z	#	%	!
'	(	)	—
@	^	{	}
~	'		

With VMS you can only use the following characters:

- Uppercase A-Z
- Digits 0-9
- Special characters -, _, and $

Since DOS allows more valid characters than VMS, VMS converts or "maps" an invalid character to a four character string. The form is "_ _XX". "XX" is the ASCII value VMS assigns to invalid character it does not recognize.

For example, if you copied your DOS file MY%FILE.DAT to your VMS account, VMS would convert the percent sign in the file name to its ASCII value:

MY_ _25FILE.DAT

If you plan on transferring files between your VMS and DOS systems, only use the special characters recognized by both VMS and DOS.

Transferring Files to and from PATHWORKS Servers

You can transfer the files on your personal computer's hard (or local) disk to a server account, or copy a file from your account on a server to your personal computer. For example, you can transfer a file created on the WINGZ file service and copy it into your directory on your personal computer's local disk.

Usually, you can use the COPY command to transfer DOS, OS/2, VMS, and ULTRIX files to and from PATHWORKS servers. However, when you transfer files between DOS and ULTRIX, you must also use the ULTRIX conversion utilities.

Furthermore, because of file system differences, when transferring a binary file to VMS or ULTRIX servers for use on those systems, you may need to use NFT to ensure that that the file reaches its destination in the appropriate format. If you use the COPY command to transfer a file to a VMS or ULTRIX server, and if you are have problems using the file, use the NFT COPY command described later in this chapter in the Transferring Files to a DECnet Node section.

For more information about transferring different file types to and from a VMS server, see your system administrator. Or refer to the *Server Administrator's Guide.*

Transferring DOS and Server Files

Whether you transfer a DOS file or a file on a server to or from your personal computer's local disk, the procedure is the same. First, connect to the service, then use the COPY command to transfer the file.

For example, you created the file MYFILE.SLK using the service WINGZ on SERVR1. To transfer the file to your personal computer's WINGZ directory on drive C:

1. Connect to the service with the USE command:

   ```
   C:\> USE Z: \\SERVR1\WINGZ
   ```

2. Copy the file to your personal computer's directory.

   ```
   C:\> COPY Z:\WINGZ\MYFILE.SLK C:\WINGZ
   ```

Converting Files for Transfer to or from an ULTRIX Server

Use ULTRIX file conversion utilities to share files between DOS clients and ULTRIX servers.

When you create a text file on an ULTRIX server, you need to convert it to a DOS format. Likewise, if you transfer a DOS text file created on your personal computer, you need to convert it to an ULTRIX format.

ULTRIX files indicate the end of a line with a line feed (LF) character, whereas VMS, DOS, and OS/2 files indicate the end of the line with the carriage return/line feed (CR/LF) characters.

If you do not convert ULTRIX files, the missing CR character prevents the text from being displayed properly in a DOS text editor.

ULTRIX servers provide the following file conversion utilities to let DOS users share ASCII text files:

- **ult2dos** converts ASCII text files from an ULTRIX format to a DOS format

- **dos2ult** converts ASCII text files from a DOS format to an ULTRIX format

—————————————— **Note** ——————————————

You must use a terminal emulator to log in to a user account on the ULTRIX server to use these file conversion utilities.

_____

Because the ULTRIX and DOS operating systems maintain only one version of a file in a directory, it is a good idea to make a copy of a file. Give the copy a different name before converting the original file.

For example, before converting the file MYFILE.TXT, enter the following command at the ULTRIX prompt to create a copy called MYULTFIL.DAT:

```
% cp myfile.dat myultfil.dat
```

Converting ULTRIX Format to DOS Format

To convert a file created with ULTRIX to use with a DOS application, use the ULT2DOS utility to convert the file's format.

For example, if you created a file MYFILE.DAT on an ULTRIX server, and you want to share the file with another DOS user, enter the following command at the ULTRIX prompt:

```
% ult2dos myfile.dat
```

Converting DOS Format to ULTRIX Format

Use the dos2ult utility to convert files with a DOS format to an ULTRIX format. For example, if you created the file MYFILE.TXT with the SEDT editor and wanted to share the file with an ULTRIX user who uses the VI editor, enter the following command at the ULTRIX prompt:

```
% dos2ult myfile.txt
```

You can now use the file on your personal computer by:

1. Connecting to the service on the ULTRIX server with the USE command

2. Using the DOS COPY command to transfer the file to a directory on your personal computer's hard disk

Transferring Files to Other DECnet Nodes

DECnet utilities let you access computers anywhere on the network.

You can connect to any DECnet node on the network, whether or not it is set up with PATHWORKS network services.

To transfer files you must:

* Understand file type qualifiers

* Turn on the File Access Listener (FAL) utility to enable other network users to share files with your personal computer

_____ **Note** _____

When you turn on FAL, you cannot enter any other commands until you stop it.

_____

* Define the network node you want with the Network Control Program (NCP) utility

* Transfer files with the Network File Transfer (NFT) COPY command

Using File Type Qualifiers

When you transfer a file using NFT, it is a good idea to include NFT command qualifiers based on the type of files you are transferring:

If you are transferring:	Use this qualifier:
Text or ASCII files	/ASCII
Data or binary files	/BLOCK

_____ **Note** _____

Some ASCII files do not have a final CR/LF at the end of the ASCII file. For example, a very small file or a file created by some editors may be missing the CR/LF. In these cases, use the /BLOCK qualifier with the ASCII file, or edit the file and insert a CR/LF character.

_____

Using FAL to Connect to Other DECnet Nodes

FAL lets you access and share your files with other clients on the network.

If you want others to transfer files to or to access files on your computer, make sure the File Access Listener (FAL) utility is running on your personal computer.

FAL monitors the network for requests from other users for your files such as an NFT command. FAL also determines if the request comes from a user with permission to copy your file. This permission is called **access**. You can also set your personal computer so that it allows file access to any user. If you want to access your personal computer from another site, or if you want to provide access for other users, start FAL.

Starting FAL

At the DOS prompt, enter:

```
C:\> FAL
```

The FAL prompt, along with information about the FAL utility, is displayed.

```
C:\> FAL

               FAL -- File Access Listener -- V4.1
Network Driver Version 4.1
Current Working Directory:C:\
Files will be sent as either ASCII or binary.
Existing files will be overwritten.
No access checking will be done (world has read/write privileges).

Type ! to exit.
FAL running....
```

FAL continues to run until you stop it. You cannot enter any other commands until you type the exclamation point (!).

FAL also lets you keep a log file of operations. To keep a FAL log file, enter the following command from the DOS prompt:

```
C:\> FAL/ERROR/LOG:LOGFILE.TXT
```

Information about all transactions are stored in the file LOGFILE.TXT.

Locating Network Nodes

To transfer files to a computer that is a DECnet node, but not a PATHWORKS server or client, you must:

- Make sure your personal computer and the remote system know each other's network address

- Add the remote address to your personal computer's DECnet node database if it is not known to your personal computer

1. Use the following NCP command to display a list of nodes (computers) known to your personal computer:

   ```
   C:\WINGZ> NCP LIST KNOWN NODES
   ```

   A list similar to the following is displayed:

   ```
   Known Permanent Nodes as of 1-Aug-1991 10:32:42

   Executer node         = 9.998 (USER1)

   State                     On
   Executor Identification   PATHWORKS for DOS V4.1 client
   ```

Node Address	Node Name	Active Links	MS-NET	Account Information
2.222	ULTSER	3	M	
9.222	SERVR1	0		
9.888	OSSER	2	M	
9.788	SERVR5	2		
9.998	USER1	1		EXEC
25.100	USER5	1		

   Because USER2 is not listed, it is not known to your personal computer. You must enter USER2's network name and address to your personal computer's DECnet node database before you can access it.

   See your system administrator for the DECnet addresses for nodes you want to access.

2. When you know the node address for the computer you want to reach, use the NCP DEFINE NODE command to define the node in your personal computer's DECnet database file.

   For example, to define node USER2 in your personal computer's database file, enter:

   ```
   C:\WINGZ> NCP DEFINE NODE 23.998 NAME USER2
   ```

   If you enter the NCP LIST KNOWN NODES command again, NCP now lists USER2 in the display.

Now you can transfer your file using the NFT COPY command.

Transferring Files to a DECnet Node

The NFT COPY command lets you copy files to a remote network node.

Once you know the remote node's address, and the type of file you are transferring, use the NFT COPY command to transfer the file.

The following example shows how to transfer the binary file MYFILE.SLK from your personal computer's WINGZ directory to another personal computer, USER2.

- Enter the following NFT COPY command:

  ```
  C:\WINGZ> NFT COPY/BLOCK MYFILE.SLK USER2::
  ```

  Note that USER2 is followed by two colons (::). This indicates the file is to be copied to the current directory of the specified personal computer.

  If NFT displays the following error message, make sure the remote personal computer is running FAL.

  ```
  Error opening file: user2::myfile.slk
  Unrecognized object
  ```

- Some DECnet nodes may require user names and passwords. If you transfer the file to one of these accounts, you must specify the:

  - User name and password for the account

  - Device name

  - Directory name

  For example:

  ```
  C:\WINGZ> NFT COPY/BLOCK MYFILE.SLK SERVR5"USER2 PASSWORD"::
  DISK3:[USER2.WINGZ]
  ```

Here are examples of transferring different types of files.

- Example 1: Binary File Transfer

  When you transfer a binary file from a spreadsheet on your DOS personal computer to another user, you may want to retain the same formatting at both ends of the file transfer process. Use the /BLOCK qualifier with the NFT COPY command. For example:

  ```
  C:\WINGZ> NFT COPY/BLOCK MYFILE.SLK USER2::C:\WINGZ
  ```

- Example 2: Text (ASCII) file transfer

  When you transfer an ASCII file (for example, a program file) from a server to or from your DOS personal computer, use the /ASCII qualifier with the NFT COPY command as shown in the following example:

  ```
  C:\> NFT COPY/ASCII VAXSER::DISK2:[USER2]MYPROG.HLP
  ```

Stopping FAL

You may want to stop FAL after completing your file transfer tasks.

There are two ways to stop FAL. One way allows it to complete the current file transfer, if any. The second way stops FAL immediately.

1. Cancel FAL by pressing the exclamation mark (!).

   Any current file transfer is completed before your system prompt is restored.

2. To stop FAL immediately, press Ctrl/C.

   FAL exits immediately, and shuts off any remote network links that were open.

Getting Help for DECnet Utilities

You can get more information about NFT, NCP, and other DECnet utilities commands by entering the utility name followed by HELP as shown in the following example:

```
C:\> NFT HELP
```

The Help display contains a:

- List of the commands and qualifiers

- General command format

You can also display information for a specific command and qualifier as shown in the following example:

```
C:\> NFT HELP COPY/BLOCK
```

For further information about transferring files with the DECnet utilities refer to *DECnet User's Guide*.

Transferring Files over TCP/IP

File Transfer Protocol (FTP)

If you are running the TCP/IP network transport, use the FTP utility to transfer files to and from another computer or host. With FTP, transferring files is the same as copying them.

To transfer a file with FTP you must:

- Define the Internet node names for the nodes to which you want to connect
- Start FTP
- Connect to a host
- Transfer a file to or from a host
- Return to DOS and:
  - Leave FTP running in the background
  - Close the connection
  - Terminate the FTP session

The following sections describe these procedures.

Defining Internet Node Names for TCP/IP

Complete the following steps to define Internet node names in the HOSTS. file:

Is the node name already defined?

1. Determine whether the node name is already defined by entering the PING command followed by the node name or address for the node you want to reach. For example:

   ```
   C:\> PING SERVR2
   ```

   a. If you receive the following message, the node name and address are already defined:

      ```
      SERVR2 is alive.
      ```

      Go to the Starting FTP and Connecting to a Host section.

   b. If the node name and node address are not listed in file, PING displays the following message:

      ```
      Unknown host SERVR2
      ```

      Go to step 2.

Defining the node 2. Ask your system administrator for the the Internet address of the node you are defining.

3. Using any text editor, open the HOSTS. file, usually located in your \TCPIP subdirectory. Edit the file to add the Internet node address and node name of each node you want to access.

   For example, to add the node names SERVR2 (Internet address 13.130.192.98) and SERVR3 (Internet address 13.140.198.22) add the following lines to your HOSTS. file:

   ```
   13.130.192.98 servr2
   13.140.198.22 servr3
   ```

4. Save and exit the file.

Starting FTP and Connecting to a Host

To start FTP, enter the FTP command and the name of the host node from which you want to control the file transfer.

For example:

```
C:\WPROCESS> FTP SERVR3
```

The host log in prompt may be displayed. If so, log in as you normally do.

After you log in, the FTP> prompt is displayed. You can now enter file transfer commands.

There are additional FTP command parameters for starting FTP in *TCP/IP User's Reference*.

Transferring Files to and from a Host

The FTP PUT command transfers a file to a host computer.

To transfer a file from your personal computer to a TCP/IP host, (for example, to an ULTRIX or VMS host), use the PUT command at the FTP> prompt.

For example, the following command transfers the file MYFILE.SLK from your personal computer to the file MYFILE2.SLK on the host:

```
FTP> PUT MYFILE.SLK MYFILE2.SLK
```

The FTP GET command transfers a file to your personal computer.	To transfer a file from a host to your personal computer, use the GET command at the FTP> prompt.

For example, the following command transfers the file MYFILE2.SLK from a host to your personal computer:

`FTP> GET MYFILE2.SLK MYFILE.SLK`

Unless you specify the full pathname of the destination file, the file is placed in your current directory. A pound sign (#) appears on the screen at regular intervals, indicating that the file transfer is in progress. When the FTP> prompt is displayed, the file transfer is complete. |

Returning to DOS

You can temporarily leave FTP, but keep it running in the background. To leave FTP and return to DOS, press [!] and then [Return] at the FTP> prompt. The DOS prompt is displayed. This procedure lets you start another session with a host, or issue any DOS command.

Returning to FTP from DOS	To return to FTP at the DOS prompt, enter:

`FTP> EXIT`

The FTP> prompt is displayed. |
| *Closing the connection* | To close an FTP connection, enter the following at the FTP prompt:

`FTP>  CLOSE`

The FTP> prompt appears, and you can open another session. |
| *Terminating FTP* | To close an FTP connection and terminate the FTP session, enter the following at the FTP> prompt:

`FTP> QUIT` |

6

Using PC DECwindows Motif

PC DECwindows Motif software provides an X server environment for the X Window System on your personal computer. With PC DECwindows Motif, you can use different **X applications** at the same time.

This chapter describes:

- The X Window System
- Configuring PC DECwindows Motif
- Starting the X server
- Starting applications
- Managing multiple windows
- Using the icon box
- Using dialog boxes
- Copying, moving, and deleting text
- Getting help
- Using DOS from the X server
- Pausing and exiting the X server

The X Server Environment

The X Window System is based on the following client/server relationship:

X server
- **X servers** provide a display facility for X applications. The X server takes requests from many applications, performs the operation, and manages the display screen in an orderly fashion. The X server also manages input from personal computer devices, such as the mouse and keyboard. It returns input to the appropriate X application. Built-in security features ensure that access to the personal computer is restricted.

X client
- The X server and X applications communicate via the X protocol. Also called **X clients**, X applications send messages to X servers with display requests. X applications receive input from the X server through the use of devices such as the keyboard and pointer. This process is entirely transparent to the user.

In the X server environment, you can divide the screen into many **windows**. Each window displays an application that is running on a system such as a VMS, ULTRIX, or RISC computer.

You manage the windowing environment by using **menus**, **dialog boxes**, and a mouse to manipulate text, data, and the application in each window.

Figure 6–1 shows the PC DECwindows Motif environment.

Figure 6–1   Model of PC DECwindows Motif Environment

DECwindows Motif Applications
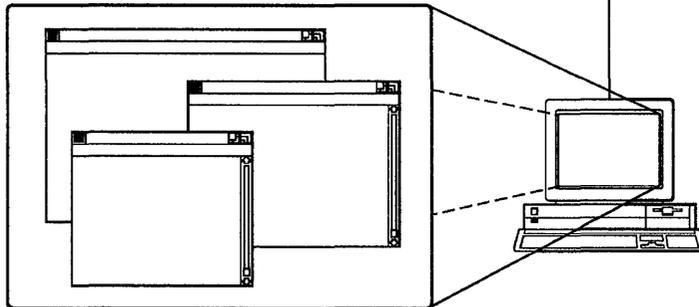Running on Remote Nodes
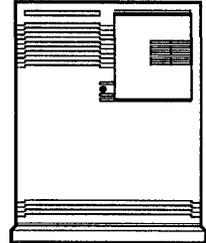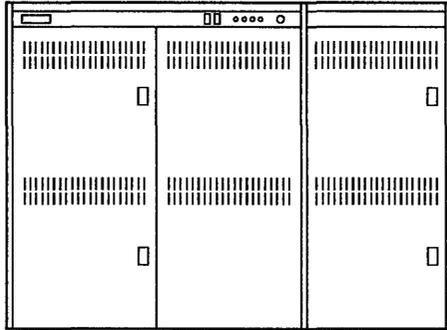
VMS   ULTRIX

Network

DECwindows Motif Applications
Displayed on a Personal Computer

TA-0614-AC

When you use PC DECwindows Motif, you use one of the X
servers, either DWDOS286 or DWDOS386.

PC DECwindows Motif software lets you take advantage of the X Window System and X applications. The windowing environment lets you:

- Connect to and use different applications without having to memorize commands for different operating systems

- View and access multiple sessions on the screen at the same time

- Use an application's cut and paste function to transfer information to an application in another window

- Use X applications such as:

  - VMS and ULTRIX User Executive applications—a graphical interface to operating systems

  - VMS Bookreader—an online version of VMS documentation

  - VMS and ULTRIX mail

  - DECwrite

  - Calendar

  - DECpaint

For example, you can display an application that is running on a remote VMS system in one window and cut and paste information in another application that is running on a remote ULTRIX system in another window. You use both windows as if they are running locally on your personal computer.

Figure 6–2 shows a sample screen for the X server with several X applications, including a window manager, Bookreader, DECwrite, and Clock.

Figure 6–2 A Sample X Server Screen
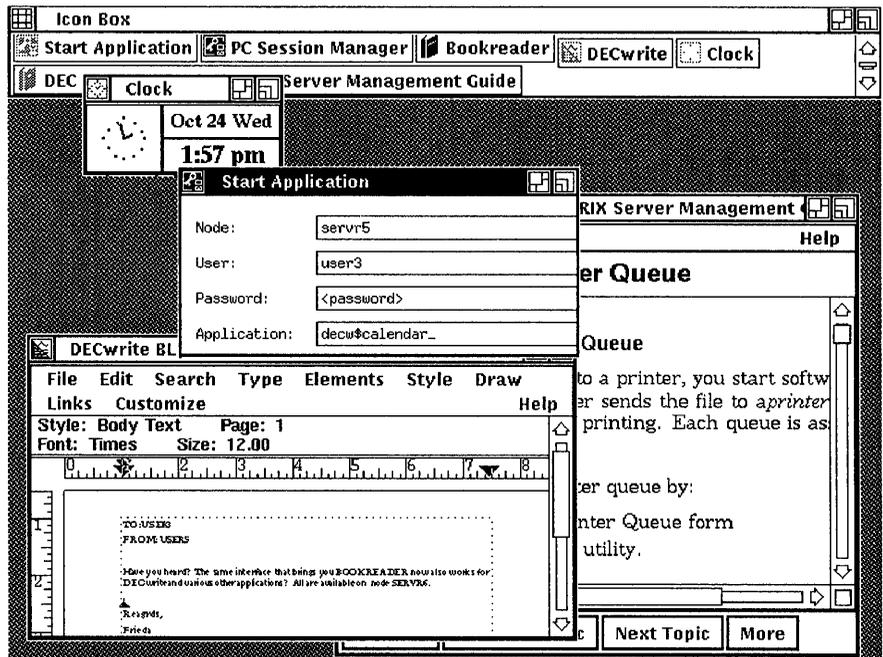
Configuring PC DECwindows Motif

Before you use the X server you must **configure** the client to use
the software. You configure the client only once to begin using the
X server.

The DWCONFIG utility is easy to use, but you need to know some
technical information about your system before you begin. Consult
your system administrator if you have any questions.

To start the configuration utility, enter:

C:\> DWCONFIG

Read the directions on your screen and make the selections you
want.

You can reconfigure your personal computer for the X server
as your needs change. For example, you can reconfigure the X
server to use a different country keyboard, or to start applications
automatically when you use PC DECwindows Motif.

If you have questions about configuring your personal computer for PC DECwindows Motif, consult your system administrator. Or refer to the *PC DECwindows Motif Guide.*

Starting the X Server

Once you have configured your computer to use PC DECwindows Motif, you can begin using it.

The X server is supplied in two versions:

* DWDOS286

* DWDOS386

Deciding which DOS/X server to use

Use the following guidelines to help you select which version to use:

* If you have an 80286-based personal computer, you must use DWDOS286.

* If you have an 80386- or 80486-based personal computer, you can use either version. Base your decision on the type of memory in your personal computer as shown in Table 6–1.

Table 6–1   Memory Considerations and Use

If you want:	Use:
To use maximum suspend session memory	DWDOS286
To get better performance and better swapping performance for low-memory conditions	DWDOS386
To start the X server from Microsoft Windows running in enhanced mode	DWDOS286

Start the X server by entering one of the following commands, depending on which version you choose:
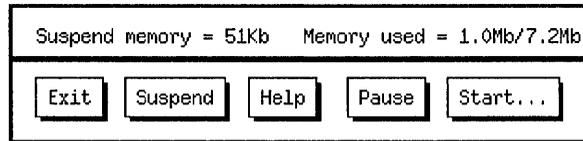
C:\> DWDOS286

or

C:\> DWDOS386

After a few moments, the DIGITAL logo is displayed, followed by
the PC Session Manager, as shown in Figure 6–3.

Figure 6–3 PC Session Manager

```
┌─────────────────────────────────────────────────────┐
│  Suspend memory = 51Kb    Memory used = 1.0Mb/7.2Mb  │
│                                                       │
│  ┌──────┐  ┌─────────┐  ┌──────┐  ┌───────┐  ┌────────┐ │
│  │ Exit │  │ Suspend │  │ Help │  │ Pause │  │ Start...│ │
│  └──────┘  └─────────┘  └──────┘  └───────┘  └────────┘ │
└─────────────────────────────────────────────────────┘
```

The PC Session Manager only lets you start applications; it
does not let you move and manage windows. Therefore, the first
application you start should be a window manager.

A window manager lets you:

*The window
manager lets
you manage the
applications on
your screen.*

• Select windows

• Move windows

• Resize windows

• Shrink windows to icons

• Expand icons to windows

Different window managers may accomplish these tasks in a
slightly different way. For example, you may have to click on a
different area of the window to move it. PCX$WINMGR lets you
move windows by clicking on the border.

Refer to your window manager documentation or consult your
system administrator for specific information about the window
manager you use.

Starting Applications

Before you start an application, you need an account on a VMS, ULTRIX, or UNIX system that offers the applications. You must know your:

- Node name

- User name

- Password

To start the window manager, or any X application, follow these steps.

1. Click on **Start** to display the Session Manager Start Application dialog box.

   The Session Manager dialog box has text-entry fields and buttons. To start applications, you fill in the fields and click on the appropriate button.

   The information you enter in this dialog box indicates the node and account that offers the application you want.

2. Click anywhere on the dialog box to activate (select) it.

3. Enter the information requested in each dialog box field, pressing Tab after each entry. The Tab key moves the cursor to the next field.

Use Shift/Tab to move back to the preceding field.

When you enter your password, it is not displayed on the screen.

In the Application field, enter the name of the application.

For example, to start the VMS Window Manager provided with PC DECwindows Motif, enter:

```
PCX$WINMGR
```

To run the VMS DECwindows XUI Window Manager, enter:

```
DECW$WINMGR
```

To run the ULTRIX DECwindows XUI Window Manager, enter:

```
dxwm
```

4. Choose **Start Application**.

To start the application, select **Start Application**. The **Start Application** command button has a double border. The double border indicates it is **default** command button. You choose the default command button by pressing Return, or by clicking on it with the mouse.

Figure 6–4 shows a completed request to start the PC Session Manager.

Figure 6–4 PC Session Manager Start Application Dialog Box

```
┌─────────────────────────────────────────────────────────┐
│  Suspend memory = 51Kb    Memory used = 1.1Mb/7.2Mb      │
│ ┌──────┐ ┌─────────┐ ┌──────┐ ┌───────┐ ┌────────────┐  │
│ │ Exit │ │ Suspend │ │ Help │ │ Pause │ │ Start...   │  │
│ └──────┘ └─────────┘ └──────┘ └───────┘ └────────────┘  │
└─────────────────────────────────────────────────────────┘
```

```
┌─────────────────────────────────────────────────────────┐
│  Node:          │SERVR1                              │    │
│                                                           │
│  User:          │USER1                               │    │
│                                                           │
│  Password:      │<password>                          │    │
│                                                           │
│  Application:   │DECW$WINMGR_                         │    │
│ ┌─────────┐ ┌───────┐ ┌──────┐ ┌───────────────────┐    │
│ │ Dismiss │ │ Clear │ │ Help │ │ Start Application │    │
│ └─────────┘ └───────┘ └──────┘ └───────────────────┘    │
└─────────────────────────────────────────────────────────┘
```

_____ **Note** _____
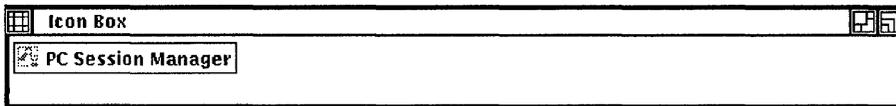
During application startup, the cursor changes shape to indicate that there is network activity to access the application, and you cannot perform any operations.

After a few moments, the Window Manager **icon box** is displayed as shown in Figure 6–5.

Figure 6–5 DECwindows XUI Window Manager

MR–3592–IRA

_____ **Note** _____

The icon box could be covered over by the PC Session Manager dialog box.

_____

The Managing Multiple Windows section describes how to use the Window Manager to display other applications.

To use other applications, you must know which node offers the application you want, and have an account on that node. You can start additional applications from the same node as the window manager or from different nodes.

Once you have started the applications you want, remove the Start Application dialog box from your screen by choosing **Dismiss** to close the window. To retrieve the Start Application dialog box, choose **Start** from the Session Manager window. Refer to _PC DECwindows Motif Guide_ for a list of X applications.

For information about X applications, refer to the applications' documentation.

Managing Multiple Windows

To use more than one window at a time, use the Window Manager to manage and control the different windows.

_____ **Note** _____

The DECwindows XUI Window Manager described in this section is shipped with DECwindows Motif for VMS and ULTRIX. You can also use other window managers.

_____

The following sections explain how to control and organize windows using the DECwindows XUI window manager.

Selecting a Window

Before you can do anything with a window, you must select it. Selecting a window directs what you enter at the keyboard to that window. Once a window is selected, you can:

- Enter information into the application in the window

- Move within the application

- Control the window

To select a window, click anywhere on the window except on a push button. The title bar is highlighted.

_____ **Note** _____

Only one window can be selected at a time. Selecting a window always deselects another window.

_____

Moving a Window

You can rearrange the windows on your screen. This feature is especially helpful if you have many windows open at one time.

To move a window:

1. Select the window you want to move by pressing and holding the mouse button anywhere on the title bar.

   The outline of the window is highlighted.

2. Drag the window to the new position.

3. Release the mouse button.

_____ **Note** _____

To cancel a window move while in progress, click another mouse button. The window returns to its original position.
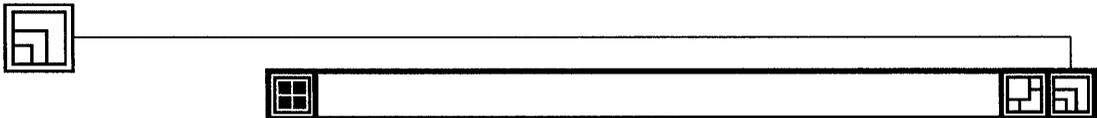
Changing the Size of a Window

Changing the size of windows makes your work easier. For example, you can make your main working window larger than the others, or create a number of small windows to view the information in them.

To change the size of a window:

1. Point to the resize push button, shown in Figure 6–6.

Figure 6–6 Resize Button

TA–0527–RA

2. Press and hold the mouse button.

3. To make the window:

   • Larger, drag diagonally outward.

   • Smaller, drag outward, then diagonally inward.

   • Longer, drag straight upward.

   • Shorter, drag straight up, then downward.

   • Wider, drag straight outward.

   • Narrower, drag outward, then straight inward.

4. When you like the size of the window, release the mouse button.

_____ **Note** _____

To cancel a resize in progress, press a different mouse button.

_____

Stacking Windows

When windows of different sizes are open, they pile up on top of other windows. This is a stack of windows. To view a bottom window, you can rearrange the stack. Moving a window to the bottom of a stack is called **push**. Moving a window to the top is called **pop**. Windows cycle from the top to the bottom of the stack as you push each successive window.

Pushing Windows to the Bottom of the Stack

To push a window to the bottom of the stack:

1. Click on the top window's push-to-back button, shown in Figure 6-7.

Figure 6-7 Push-to-Back Button
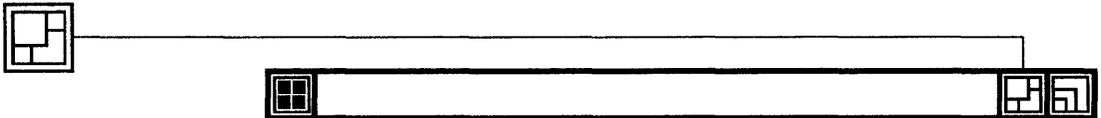
TA–0528–RA

2. Repeat until the window you want is on top.

Selecting any window in the stack pops it to the top of the stack.

If more than two windows are stacked, each cycles toward the top of the stack, moving up one place at a time as other windows are pushed to the back.

Locking Windows in a Stack

You can select a window to work without pushed it to the top of the stack. To lock a window in the stack:

1. Point to the window push-to-back button.

2. Shift/click on MB1.

    The window is pushed to the bottom and the button is shaded.

Whenever a window is locked in position in the stack, the button is shaded. You can lock more than one window at a time.

When a window is locked in place, you can click on the shaded-in stack button to:

*   Push the top window to the bottom of the stack.

*   Pop the bottom window to the top of the stack.

Unlocking Windows in a Stack

When a stack-locked window at the bottom of the stack is unlocked, it is popped to the top; when a stack-locked window at the top of the stack is unlocked, it is pushed to the bottom.

To unlock a window in the stack:

1. Point to the push-to-back button on the window.

2. Shift/click on MB1.

    The shaded-in portion is unshaded again.

Shrinking a Window to an Icon

The Window Manager has a window called the icon box. (See Figure 6–5 for an illustration.) The icon box displays one icon for each of the applications you have running. To free up screen space or to set aside an application temporarily, shrink the window to its icon in the icon box. When you want to use the window again, you expand it to its original size.

To shrink a window to an icon:

Click on the shrink-to-icon button shown in Figure 6–8.

The window closes and shrinks. Its icon in the icon box becomes bold.

Figure 6–8 Shrink-to-Icon Button
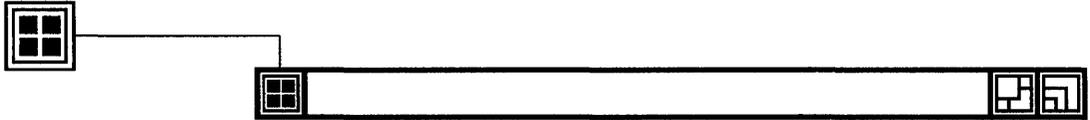
TA–0529–RA

Retrieving Windows

When you retrieve an icon from the icon box, the window opens on top of any other open windows. It is also selected, de-selecting any other window. To retrieve and expand a shrunken window:

Click on its icon in the icon box.

The shadow of the icon remains in the icon box.

Using the Icon Box

Here are some facts about the icon box:

- When you start an application, its icon is added to the box.

- When you stop an application, its icon is deleted from the box.

- You can rearrange the icons by dragging them within the icon box.

- You can click on the grid icon at the top left corner to rearrange the icons' alignment and spacing.

- If there are a lot of icons in the box, **scroll bars** let you scan the complete icon box

When you finish using an application, you can:

- Click on the window icon to close the window and display the application's icon in the Icon Box.

  Use this method if you want to use the application again.

- Select the application's **File** menu, then choose exit or close from the application menu.

  When an application is closed, its window and icon are removed from the screen.

Using Dialog Boxes

In PC DECwindows Motif, you provide input to the applications with a dialog box instead of entering VMS, ULTRIX, or UNIX commands. A dialog box shows what settings are already in use and lets you activate or change the settings. Figure 6–9 shows a sample of the dialog box for the appointment calendar.

Figure 6–9 Sample Appointment Calendar Dialog Box

MR–3695–IRA
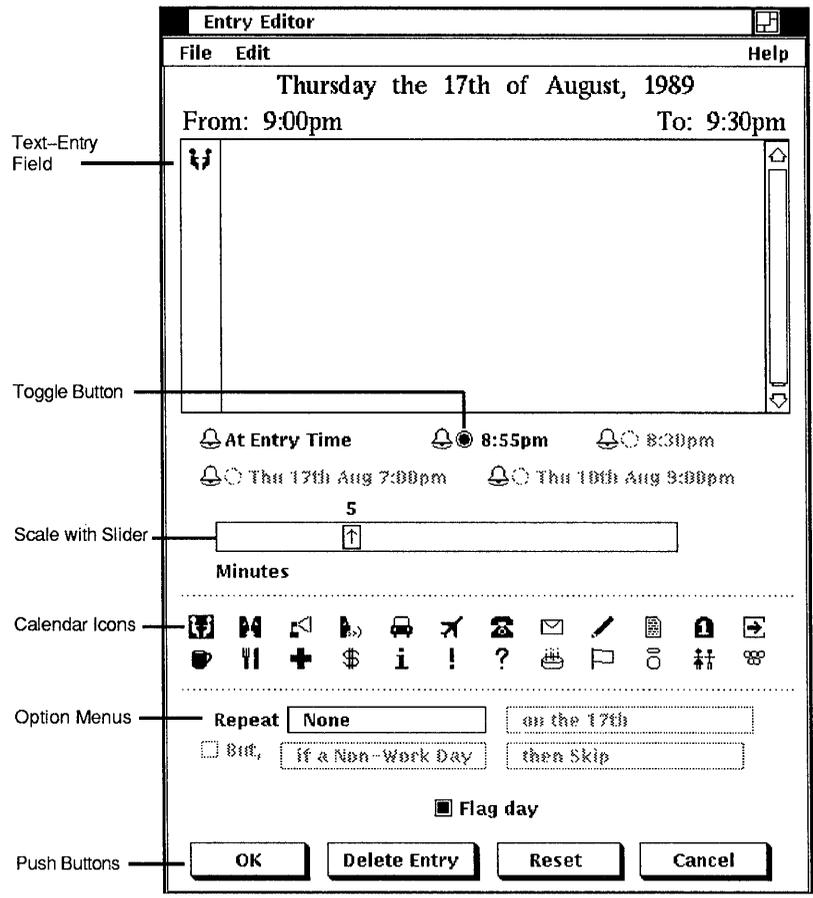
To display and use the Calendar dialog box:

1. Click on **Start** in the PC Session Manager.

2. If the appropriate fields in the Start Application Dialog box are not already filled in, type the node, user name, and password for your account, pressing ⎡Tab⎤ after each entry.

3. Type the application name in the Application field:

    *   If the X server is on a VMS node, type DECW$CALENDAR.

    *   If the X server is on an ULTRIX node, type dxcalendar.

4. Click on **Start Application**. The calendar is displayed.

5. Click on the calendar icon to display the calendar. When the calendar is displayed, Double-click on a date to display the calendar dialog box for that day. Click on **Help** for information about using the calendar.

Table 6–2 shows additional ways to supply information to a dialog box.

Table 6–2 Supplying Information to Dialog Boxes

Function	Description	How to use the function
List box	Displays a list of options from which you can select. If it is a long list, there may be a scroll bar.	To select an option, point and click on it.
Option button	Lets you select one option from a small group.	To select an option, click on the button.
Option menu	Displays a list in the form of a menu.	To display an option menu, point to the current option, hold down MB1 to display other menu options, and drag to highlight an item. Release the button.
Toggle button	Turns an option on or off, like a light switch.	To change the setting, click once.

Table 6–2 (Cont.) Supplying Information to Dialog Boxes

Function	Description	How to use the function
Scale	Displays and specifies the potential range.	To select where in the range you want to be, drag the ⬆.
Push button	Indicates what to do with the information supplied in the rest of the dialog box. The **Start Application** button in the PC Session Manager is a push button.	To push the button, click on it. If it is double-bordered, you can also press Return.
Text entry fields	Type in information here.	To position the cursor, point and click.
		To move down one field, Tab
		To move up one field, Shift/Tab
		To correct typing, backspace.

Editing Text

PC DECwindows Motif provides an easy method of copying text and data between windows. Use these functions in addition to whatever functions you use with the application. You can copy or move data and text:

- From one place in a window to another place

- From one window to another window

- From one application to another application

To copy, move, or delete text and data, there are two basic steps:

- Select the text or data

- Copy, move, or delete what you selected

Text manipulation limitations

Keep the following limitations in mind when you manipulate text with PC DECwindows Motif:

- You can select text or data with any PC DECwindows Motif compatible mouse.

- Copy and move operations require a three-button mouse, or a two-button mouse with three-button mouse emulation set with the DWCONFIG utility.

- Copy and move functions cannot be used in the PC Session Manager dialog box.

Selecting Text

Before you can copy, move, or delete text or data, you must select it using one of the following methods. Selected text or data is highlighted.

To:	Do this:
Select one word	Double-click on it.
Select one line	Triple-click on it.
Select a short portion	Drag over the material, release MB1 at the end location.
Start a selection	Click on the start location.
Mark the end of the selection	Shift-click on the end location.
Extend an existing selection	Hold Shift and drag through the additional material. At the new endpoint, release MB1 and the Shift key.
Select continuous text	Drag the pointer across the material.
Cancel any selection	Click anywhere else in the window that contains the selection.

_____ **Note** _____

Once text is selected, do not type. If you type, the selected text is deleted.

_____

Copying, Moving, or Deleting Text

Once the text is selected, you can copy or move it to a different location in the same window, another application, or another window.

You can copy text only to a window or application that accepts text.

To copy text:

1. Select the text or data to be copied.

2. Click on the new location.

3. Press MB3.
   The text is copied to the new location.
   The window from which you selected text is now selected.

Using QuickCopy   QuickCopy is different from copy in two ways:

- You select the text to be copied as it is needed

- The window to which you copy remains selected before, during, and after the procedure.

To QuickCopy:

1. Select the text or data.

2. Click on the position where you want to insert the new material.

3. Position the cursor in the other window or location.

4. Press and hold Mouse Button 3 (MB3).

5. Drag over the text you want to copy.
   The text is underlined as it is selected.

6. Release MB3.
   The text is copied to the location you chose in step one.

Moving Text Between Windows

You can move text from one window to another. **Move** is different from copy. Move deletes the text from one place and puts it in another place. You can move text to a different location in the same window, another application, or another window.

To move text:

1. Select the window into which you want to move text.

2. Click on the position where you want to insert the new material.

3. Position the cursor over the material you want to move.

4. Press and hold Ctrl/MB3.

5. Drag over the text you want to move.
   The text is underlined as it is selected.

6. Release Ctrl/MB3.
   The text is moved to the new location.
   The selected window is the one to which you moved the text.

Deleting and Replacing Text

You can delete existing text and replace it with something you type.

To delete and replace text:

1. Select the text to be deleted.

2. Press any key.

   The selected text is deleted and replaced with what you typed.

   _____ **Note** _____

   To cancel a delete operation, before you press any key, point to the selected text and click MB1.

   _____

Getting Help

You can get three kinds of help for PC DECwindows Motif:

- Through the PC Session Manager

- For the applications

- For specific screen objects and items

Getting Help for the X Server

To get help for the X server, click on **Help** in the PC Session Manager or the Start Application dialog box. A window similar to that shown in Figure 6–10 is displayed.

Figure 6–10 The X Server Help Window
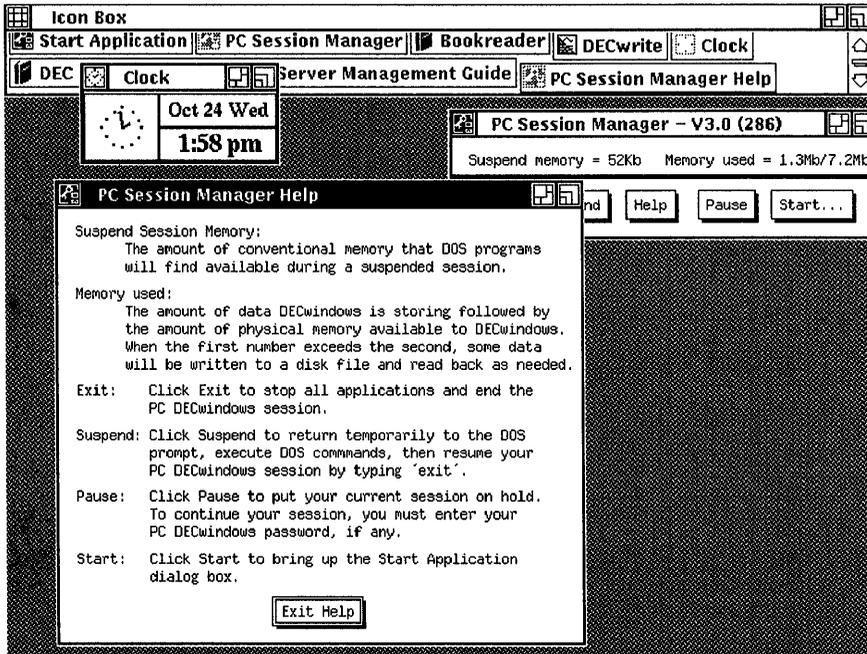
Getting Help for X Applications

To get help with applications:

1. Click and drag on **Help** on the menu bar of any application.

2. For general help, choose **Overview**.

   General information about the application is displayed along with an **Additional Topics** list.

3. For help on a specific topic double click on an additional topic.

4. When you are finished reading about an additional topic, choose:

- **Go Back** to return to the **Additional Topics** list.

- **Exit** to exit the Help window.

Figure 6–11 shows a help window for the Calendar application.

Figure 6–11 Calendar Help Window
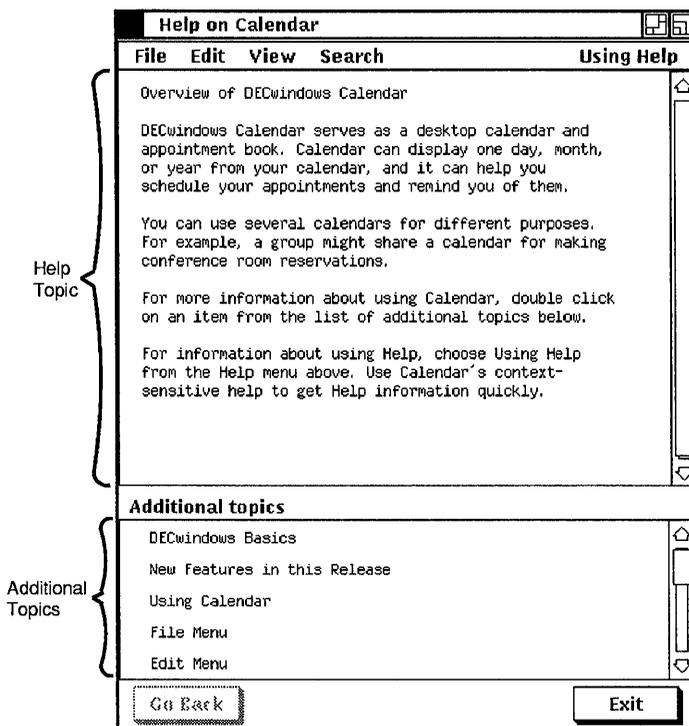
MR-3694-IRA

Getting Help for Objects and Menu Items

To get specific information about a screen object such as a scroll bar or dialog box, or to get help about a specific menu item:

1. Press and hold [Help] on your keyboard:

- If you have an LK250 keyboard, use [Help].

- If you have an industry standard keyboard configured with LK201 emulation, use [F11].

2. Click on the object or item for which you want help.

Viewing Two Help Topics at the Same Time

Sometimes you want to check another topic without closing the first topic. To open more than one topic simultaneously:

1. Click on a topic from the Additional Topics list.

2. Choose **Visit** from the View menu to open a second Help window.

Searching Help by Topics

If you can remember only a topic name but not the application for the topic, you can find the information you want by searching.

To search for help by topic:

1. Select the window in which you need help.

2. Pull down the Help menu for the application.

3. Pull down the Search menu and choose **Title**
   Help displays the Search Topic Titles dialog box.

4. In the Title field, enter the word or phrase.
   If you want a list of topics, leave the field empty.

5. Click on **Apply**.
   Help displays the topics containing the word or phrase, or a list of available topics.

6. Select the topic you want:

   - Double click on the topic

     or

   - Click on the topic and then click on **Visit**.

   The Search Topic Titles dialog box remains open so that you can continue your search if necessary.

Searching Help by Keywords

Each application has predefined **keywords** that you can search for in Help. To search for a keyword:

1. Select the window in which you need help.

2. Pull down the Help menu for the application

3. Pull down the Search menu and choose **Keyword**.
   Help displays the Search Topic Keywords dialog box.

4. To select a keyword:

   • Double-click on the topic you want

      or

   • Click on the topic and then click on **Visit**.

   The "Search Topic Keywords" dialog box remains open so that you can continue your search if necessary.

Exiting Help

To exit from Help, click on **Exit Help**. If you have multiple Help windows open, click on each one.

Using DOS from the X Server

You can temporarily return to the DOS prompt while remaining in the X server. While the X server is suspended, you can issue DOS commands.

To return to the DOS prompt and issue a DOS command:

1. Select the PC Session Manager.

2. Click on **Suspend**.

The conventional memory in your personal computer is limited during a suspended session. If you try to use a DOS application that requires a lot of memory, it may not work. See your system administrator if you cannot use DOS commands from a suspended session of the X server.

Do not run terminate-and-stay-resident (TSR) DOS programs that run in the background such as SideKick, or utilities such as the PRINT command while you have a suspended session.

_____ **Note** _____

Even when the X server is suspended, the network is
active. Do not change any network controls or reset the
network. You could lose work.

_____

To return to the X server from the DOS prompt, enter:

EXIT

Pausing the X Server

If you want to leave your office but do not want to leave your work
vulnerable to others, you can pause the X server. Pausing blanks
the screen, maintains the current application environment, and
secures your work.

To pause the X server:

1. Select the PC Session Manager.

2. Click on **Pause**.

    A dialog box requesting a password is displayed. To resume
    working, enter the password.

_____ **Note** _____

You must use DWCONFIG to configure the PC
DECwindows Motif password. Refer to *PC DECwindows
Motif Guide* for information about setting this up.

_____

Exiting the X Server

To exit the X server:

1. Close the applications you are using.
   If you do not close the applications, you can lose all of your work.

2. Select the PC Session Manager.

3. Click on **Exit**.
   The X server displays a dialog box that prompts:

   ```
   Do you really want to exit?
   ```

4. To exit the X server and return to the DOS prompt, click on **Yes**.

   Or, to resume the X server session, click on **No**.

7

Using Your Personal Computer as a Terminal

A terminal emulator is an application that lets your computer operate as if it were a terminal connected to a host computer, such as a VMS or ULTRIX server.

PATHWORKS for DOS offers terminal emulation through:

• SETHOST

• VT320 terminal emulator for Microsoft Windows

• DECterm, an X application terminal emulator available with PC DECwindows Motif

This chapter covers the first two. See your system administrator or refer to your application's documentation for information about using DECterm.

Terminal emulation works with a host with a LAT, DECnet, or TCP/IP transport. Ask your system administrator if you do not know which operating system and transport you have available.

The following sections describe how to get started with SETHOST and the VT320 terminal emulator for Microsoft Windows.

Using SETHOST

A SETHOST connection to the host computer is known as a **session**. You can have as many as four sessions at one time. The sessions can be on different hosts or the same host. You can log in to any host in your network on which you have an account.

The following sections describe how to:

- Start SETHOST

- Set up SETHOST sessions

- Select and switch between sessions

- Suspend SETHOST and return to the DOS prompt

- Get help

    For complete information about SETHOST, see the *SETHOST Terminal Emulation Guide*.

Starting SETHOST

You can start SETHOST:

- With a host name

- Without a host name

To start SETHOST with a host name:

1. At the DOS prompt, enter the SETHOST command followed by the host name. For example:

    `C:\> SETHOST VHOST5`

2. Log in to the host following the prompts.

    When your login is complete, the system prompt is displayed.

For example, if you connected to a session on VMS host VHOST5, SETHOST would display the screen shown in Figure 7–1.

Figure 7–1 SETHOST Login Screen

```
SETHOST V4.1
Copyright (c) 1985-1991 by Digital Equipment Corporation

Press F3 to enter Set-Up to select a Session
Press F4 to switch sessions (or Shift Prev and Shift Next)
Press Ctrl F10 to exit or Ctrl F9 to go to MS-DOS


Connecting to Service 1 VHOST5 via CTERM


        Unauthorized access is PROHIBITED!!

Username:
```

To start SETHOST without a host name:

1. At the DOS prompt, enter:

    C:\> SETHOST

2. Press F3 to enter Set-Up and select a session.

    Follow the steps described in the Setting Up SETHOST section.

Setting Up SETHOST

If you have never used SETHOST before, or want to change the session connections already defined, you need to:

- Set up the communications environment by selecting the:
    - Network communications port
    - Service type
- Assign host connections to each of your SETHOST sessions
- Save your setup parameters

Setting the Communications Environment

Use the following procedure to set up your personal computer SETHOST connection to the network.

1. At the DOS prompt, enter:

    `C:\> SETHOST`

2. Press F3 to enter the Set-Up menu to select a session.

3. Use PgUp or PgDn to select the **Communications** menu.

    The parameters for that menu are then displayed as shown in Figure 7–2.

Figure 7–2 The Communications Menu

```
        Actions          Communications        Display           General
        Keyboard         Printer               Tabs              Telephone
     ─────────────────────────────────────────────────────────────────────
      CURRENT SETTINGS                     SELECTIONS

      Network Communications Port          Comm Port 1: Data Leads Only
      Service Type: NET                    Comm Port 1: Full Modem Control
      Session 1: Not assigned              Comm Port 2: Data Leads Only
      Session 2: Not assigned              Comm Port 2: Full Modem Control
      Session 3: Not assigned              Comm Port 2: Hayes Modem
      Session 4: Not assigned              Network Communications Port




     ─────────────────────────────────────────────────────────────────────
      Use arrow keys to select desired action, then press Enter(Return) key.
      To move among screens, press the PgDn(Next) and PgUp(Prev) keys.
      To leave Set-Up, press F3(Set-Up) key.
```

To connect to a network host, select **Network Communication Port**.

4. Use ⬇ to highlight the **Comm Port 1** choice in the **CURRENT SETTINGS** column.

5. Use → to highlight the **SELECTIONS** column.

6. Use ⬇ to move to the **Network Communications Port** choice and press Return .

7. Use ⬇ or ⬆ to highlight the **Service Type** choice in the **CURRENT SETTINGS** column.

   A screen similar to Figure 7–3 is displayed.

8. Use ➡ to move the highlighting to the **SELECTIONS** column.

9. Use ⬆ or ⬇ to select the service type appropriate for your network as shown in Figure 7–3.

Figure 7–3 Selecting the Communications Environment

```
   Actions          Communications      Display           General
   Keyboard           Printer           Tabs              Telephone
  ─────────────────────────────────────────────────────────────────

  CURRENT SETTINGS                      SELECTIONS

  Network Communications Port           Service Type: LAT
  Service Type: NET                     Service Type: CTERM
  Session 1: Not assigned               Service Type: NET
  Session 2: Not assigned               Service Type: TELNET
  Session 3: Not assigned
  Session 4: Not assigned




  ─────────────────────────────────────────────────────────────────
   Use arrow keys to select desired action, then press Enter(Return) key.
   To move among screens, press the PgDn(Next) and PgUp(Prev) keys.
   To leave Set-Up, press F3(Set-Up) key.
```

──────────────────────────────── **Note** ────────────────────────────────

NET connects the fastest way possible. In DECnet, NET tries LAT first, and if LAT is cannot make the connection, it uses CTERM. In TCP/IP, NET connects using TELNET.

──

Assigning and Selecting a Session

Once you have the communications port and service type set, choose a host for the session.

To assign sessions:

1. In the Current Settings menu, select Session 1 with the arrow keys.

2. Press Return .

    The list of hosts or service names is displayed in the SELECTIONS menu.

3. Move to the SELECTIONS menu by using → and choose a host.

4. Use ↑ or ↓ to choose a host/service name.

5. Press Return . Session 1 is assigned to the host.

6. Move to Session 2 and repeat the procedure.

Figure 7–4 shows an example of session assignments.

Figure 7–4 Assigning SETHOST Sessions

```
      Actions          Communications      Display          General
      Keyboard         Printer             Tabs             Telephone
  ─────────────────────────────────────────────────────────────────────
   CURRENT SETTINGS                    SELECTIONS

   Network Communications Port         Not assigned
   Service Type: NET                   Enter System:
   Session 1: VHOST3-NET-Inactive      VHOST1
   Session 2: VHOST5-CTERM-Inactive    VHOST2
   Session 3: VHOST1-NET-Inactive      VHOST5
   Session 4: Not assigned             VHOST3
                                       VHOST5
                                       VHOST6
                                       VHOST7




  ─────────────────────────────────────────────────────────────────────
   Use arrow keys to select desired action, then press Enter(Return) key.
   To move among screens, press the PgDn(Next) and PgUp(Prev) keys.
   To leave Set-Up, press F3(Set-Up) key.
```

Repeat the setup procedure until you have created up to four sessions with the connections and services for each session.

Saving Setup Parameters

You can use session information for future connections to SETHOST without re-entering Set-Up each time.

To save setup parameters:

1. When you have set the parameters you want, use $\boxed{\text{PgUp}}$ or $\boxed{\text{PgDn}}$ and move to the Actions screen.

2. Use $\boxed{\downarrow}$ to select **Save Set-Up Parameters**.

   A file name is displayed.
   The settings are saved to this file.

3. Press $\boxed{\text{Return}}$ to save the settings.

4. To leave Set-Up, press $\boxed{\text{F3}}$.

   • If a necessary parameter is missing, a message is displayed that tells what parameter needs to be set.

     Press $\boxed{\text{F3}}$ to return to Set-Up and supply the missing information.

   • If you have selected a session, SETHOST connects you to the host's login screen.

Switching Between Sessions

SETHOST lets you switch from one terminal emulation session to another. Suppose, for example, you are working on a file in one session, and you want to print an application file located on another host. With SETHOST, you can switch to another session to print the application file without terminating the current session.

─────────────────────── **Note** ───────────────────────

You must be logged in to a session for the session to be active.

───

To log in to another session:

1. Press $\boxed{\text{F3}}$.

2. Return to the Communications Menu and set up other sessions.

3. Press $\boxed{\text{F3}}$ to leave Set-Up.

4. Press [F4] to connect to a host.

5. Follow the prompts to log in.

To switch among active sessions:

1. Press [F4] to step between sessions.

   The name of another active host is displayed.

2. To resume a session on that host, press [Return]. For example, if you returned to your session on VHOST5, SETHOST displays:

   ```
   Resuming Session 2: VHOST5...
   ```

Suspending SETHOST to Use DOS

You can suspend SETHOST and return to the DOS prompt while remaining connected to your host sessions by using the following procedure:

[Ctrl/F9] suspends SETHOST.

1. Press [Ctrl/F9].

   The DOS prompt is displayed.

2. To return to SETHOST, enter:

   ```
   C:\> EXIT
   ```

   The EXIT command returns you to your SETHOST session exactly where you left off.

   _____ **Note** _____

   If you want to run another SETHOST session, switch to another session at the SETHOST screen instead of the DOS prompt.

   If you suspended a SETHOST session and issue the SETHOST command at the DOS prompt, you can run out of memory.

   _____

Exiting SETHOST

When you exit SETHOST, all the session connections are terminated. Be sure to save all your work on all the hosts before exiting.

To exit SETHOST:

Press Ctrl/F10.

If you have not logged off all the sessions, SETHOST displays the following prompt:

Disconnect SETHOST (Y/N)?

- Enter Y to disconnect all your SETHOST sessions and return to the DOS prompt.

  Or

- Enter N to return to your current SETHOST session.

Getting Help for SETHOST

SETHOST has online help to assist you in starting and setting up a session. Use Help to find out more about SETHOST operation than is presented in this book.

The SETHOST Help function describes:

- The command format

- How to connect to sessions

- SETHOST service types, service names, and command qualifiers

To get help with SETHOST, enter:

M:\> SETHOST HELP

Using the VT320 Terminal Emulator in Microsoft Windows

In addition to SETHOST, with PATHWORKS for DOS you can use the VT320 terminal emulator in Microsoft Windows.

This section describes how to get started with the VT320 terminal emulator.

_____ **Note** _____

If you are a new Windows user, you should learn more about selecting setup features and using configuration files. To use the VT320 terminal emulator in Windows, you must:

- Load network components in Netsetup

- Run the PATHWORKS Windows setup utility, WIN3SETU

Consult your system administrator for information about setting up Windows. Or refer to the *Microsoft Windows Support Guide*.

_____

This section describes how to use the VT320 terminal emulator with Windows to:

- Start the VT320 terminal emulator

- Set up your terminal emulator session

- Exit to DOS

To start Windows on your personal computer, enter:

C:\> WIN

The Program group is displayed.

Depending on how you have set up Windows, the VT320 emulator icon may be included in the initial Program group as shown in Figure 7–5.

Figure 7–5 Program Group with VT320 Icon
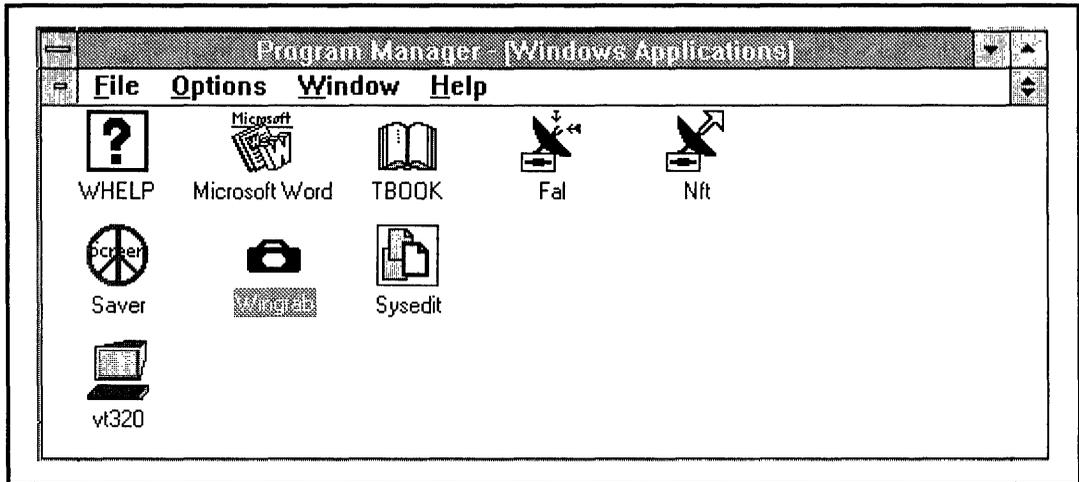
See your Microsoft user documentation for instructions on creating a Program Group and creating and including an icon.

Starting the VT320 Emulator

You start the VT320 emulator by:

- Using the Program Manager Run option
- Expanding the VT320 icon

The following sections describe each method.

Using the Program Manager Run Option

To start the VT320 emulator with the Run option, follow these steps:

1. From the menu bar in the Program Manager, choose the **File** option.

2. Choose the **Run** option.

3. Enter VT320 in the dialog box as shown in Figure 7–6.

Figure 7–6 Using the Run Option to Start the Emulator
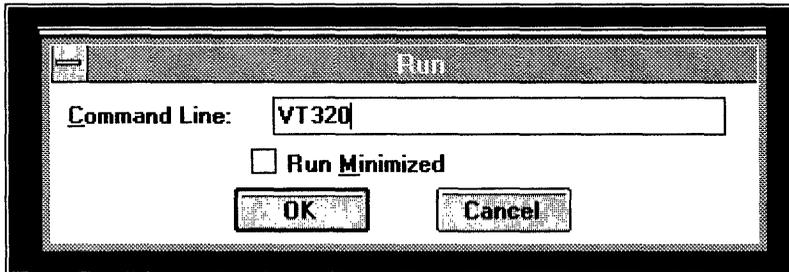
4. Click on **OK**.

   The VT320 emulator window opens as shown in Figure 7–7.

Figure 7–7 VT320 Emulator Login Screen
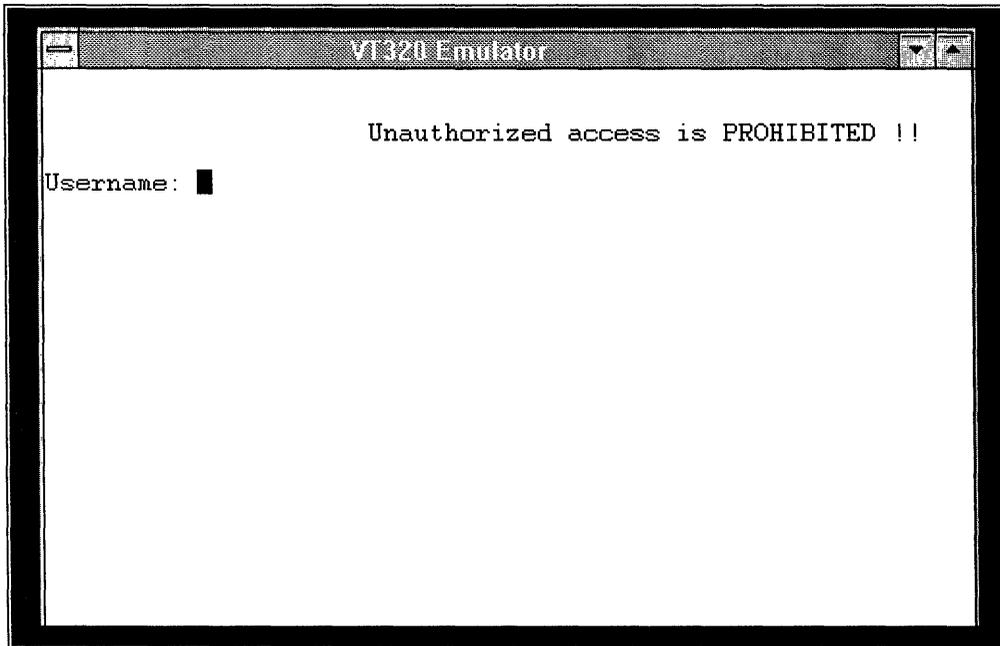
5. At the prompt, log in to your host system as you normally do.

Expanding the VT320 Icon

Vt320

To start the VT320 emulator by expanding the VT320 icon, follow these steps:

1. From the Windows Applications window, double-click on the VT320 emulator icon. The VT320 emulator window is displayed as shown in Figure 7–7.

2. At the prompt, log in to your host system as you normally do.

Setting Up the VT320 Emulator

Sometimes, when you start the VT320 emulator, the emulator window is displayed without a host login prompt, as shown in Figure 7–8.

Figure 7–8   VT320 Emulator Window
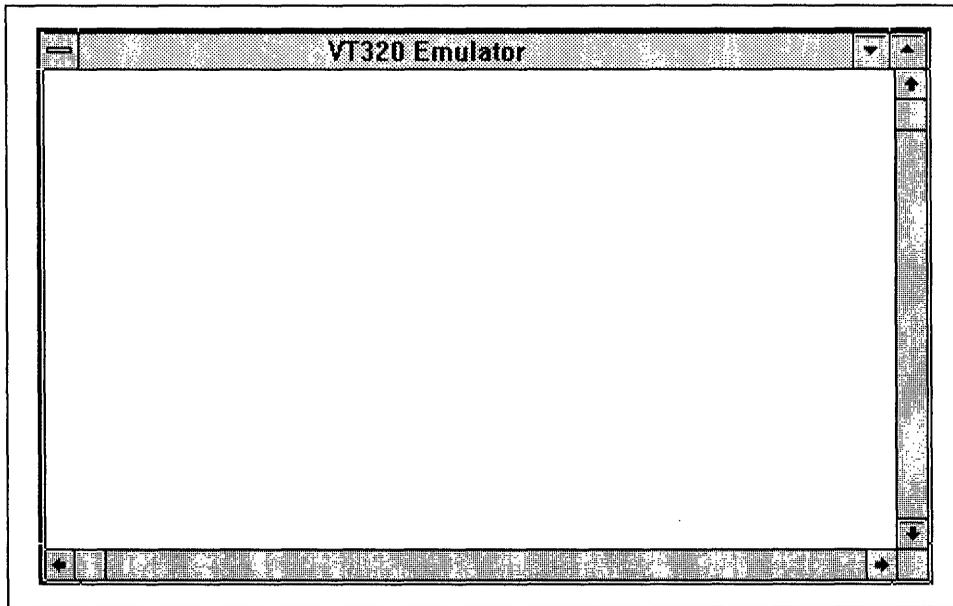
If this occurs, you must use the Set-Up function before you can use the VT320 emulator.

Use the Set-Up function to:

- Set up the communications environment to establish a host connection
- Select a host

Follow these steps to connect to and select a host:

1. Click on the Control-menu button in the upper left corner of the VT320 Emulator window to display the VT320 Emulator menu.

2. Choose the **Set-Up** function.

3. Choose **Communications** from the Set-Up menu.

4. Choose **Port/Network** from the Communications menu.

5. Check with your system administrator for the type of communication setting you should set. Then choose **Network Communication Port** from the Port/Network menu.

6. Choose **LAT**, **CTERM**, or **TELNET** from the Network Communication Port menu, depending on what your system administrator has told you.

7. Choose **Network Terminal Service** from the Communications menu.

8. Enter a host name, or accept the default host displayed in the Network Terminal Service dialog box. Click on OK.

9. Close the Set-Up window.

   After you set up the VT320 emulator, a screen with a login prompt from the host system is displayed, indicating a successful connection, as shown in Figure 7–7.

10. At the prompt, log in to your host system as you normally do.

For more information about setting up the VT320 terminal emulator, ask your system administrator. Or refer to the *Microsoft Windows Support Guide*.

Exiting the VT320 Emulator

To exit the VT320 emulator, select one of the following commands from the VT320 System menu:

- Minimize

  The **Minimize** command switches to another application or another VT320 session without ending the current session. The current VT320 emulator window shrinks to an icon. You can return to this session again by expanding the icon.

- Close

  The **Close** command ends the current VT320 emulator session. Before using this option, log off your host system.

8

Writing and Editing with SEDT

The SEDT editor is a built-in application of PATHWORKS for DOS. It provides a full-screen editor for letters, memos, reports, and other text.

This chapter describes how to:

* Start an editing session with the SEDT editor
* Understand the SEDT editor screen display
* Use basic SEDT editing tools
* Set up margins and tabs
* Get help
* Leave the SEDT editor

Starting an SEDT Editing Session

Before beginning an editing session:

* Be at the system prompt
* Decide in which directory you want to store your files, and change to that directory

Starting SEDT

You can start SEDT in one of two ways. One method starts the application with a new, blank file. The second method starts an editing session on a text file that already exists.

* To create and edit a new file, at the system prompt, enter:

  `C:\> SEDT PRACTICE.TXT`

  SEDT creates a new file called PRACTICE.TXT.

- To edit an existing file, enter the name of the file. For example, if you already have a text file called NAMES.TXT enter:

  `C:\> SEDT NAMES.TXT`

Note

SEDT file names can be up to eight characters long. They can have extensions up to three characters long. For example, LONGNAME.TXT is a valid file name in SEDT.

Understanding the SEDT Screen

This section describes the four areas of the SEDT screen shown in Figure 8–1. As you read the descriptions, refer to the appropriate labels in Figure 8–1.

Figure 8–1 SEDT Default Screen
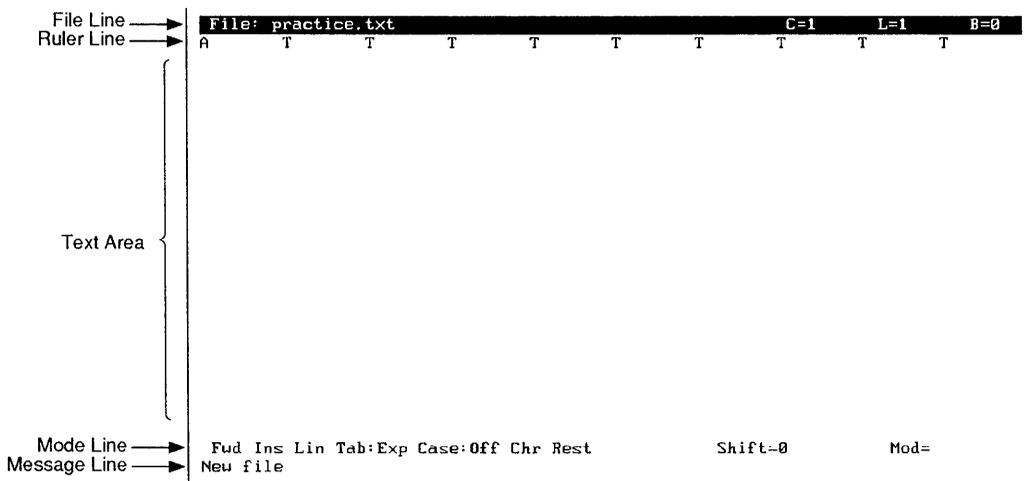
- The **file line** contains the name of the file you created. The following information about the file is displayed:

*	If you have edited or made changes to the current file, SEDT displays an asterisk (*) in front of the word "file".
C=	Indicates the column number the cursor is in.
L=	Indicates the line number the cursor is on.
B=	Indicates which of four file buffers (0 through 3) you are editing. If you just created a file, you are in buffer 0.

- The **ruler line** contains the SEDT default ruler tab and margin settings.

- The **text area** is for entering and displaying text. You enter text at the cursor position.

- The **mode line** displays the current state of options for SEDT. These options are editing features you can select. The options are displayed on the mode line in the order shown in Table 8–1.

  ―――――――――――――― **Note** ――――――――――――――

  If you are using a mouse, clicking on an editing function listed in the mode line toggles between the options for that function.

  ――――――――――――――――――――――――――――――――

- The **message line** displays prompts or informational messages.

Table 8–1   SEDT Editing Options Displayed in the Mode Line

Options	Key Sequence	Description
Fwd	kp4	When used with a command or key sequence, moves forward in the file. For example, when used with a request to search for a word in the text, searches *forward*.
Rev	kp5	Moves *backward* (or reverse) in the file.
Ins	Esc/O	*Inserts* characters; any character at the cursor position moves to the right.
Rep	Esc/O	*Replaces* characters; the character at the cursor is overwritten.
Lin	Esc/L	Cuts and pastes selected text by *line*.
Blk	Esc/L	Cuts and pastes by *block* of text.
Tab:Exp	Esc/I	When tabs are selected, inserts spaces instead of tab characters between tab stops.
Tab:Ins	Esc/I	Saves file space by inserting horizontal tab characters between tab stops.
Case:Off		Searches text disregarding *case sensitivity*; that is, does not distiguish uppercase from lowercase when searching. This is the default SEDT setting.

Table 8–1 (Cont.) SEDT Editing Options Displayed in the Mode Line

Options	Key Sequence	Description
Case:On	NumLock/kp7/:TU	Searches text with *case sensitivity*.Pressing NumLock/kp7 , then entering :TU at the SEDT Command prompt toggles between Case:Off and Case:On.
Def	NumLock/kp7/:TX	Assigns a function definition to the key or key sequence. For example, pressing Ctrl/E moves the cursor to the end of the line. When you press Ctrl/E, the mode line displays *Def* for *definition*.
Chr	NumLock/kp7/:TX	Associates no function with the key. When you press a key with no definition, the mode line displays *Chr* for *character*.
Free	NumLock/kp7/:TF	*Frees* the cursor's movement into any area of the file, whether or not it contains text. This option is useful if, for example, you are creating tables in a wide format. Pressing NumLock/kp7 and entering :TF at the SEDT command prompt toggles between Rest and Free.
Rest		*Restricts* the cursor's movement to the area of the file containing text.
Lrn	Esc/Shift/F8	Displays *Learning* before the MOD= field when defining a function for a key or keystrokes.

Table 8–1 (Cont.) SEDT Editing Options Displayed in the Mode Line

Options	Key Sequence	Description
Exe	Esc/Shift/F8	Displays *Executing* before the MOD= field when initiating a function with a key or keystrokes.
Shift=Off	Esc/A	Turns off automatic screen shifting and makes the leftmost position of the screen correspond to the first column.
Shift=*n*	Esc/A	When automatic screen shifting is turned on, *n* indicates how many columns are hidden to the left of the screen. SEDT keeps the cursor visible by automatically shifting the screen to the right.
Mod=	Shift/F7 through Shift/F10	Indicates the numbers of the screen buffers that contain unsaved changes. If there are no modified buffers, no number is displayed. You can have up to four screen buffers.

Editing with SEDT

SEDT provides the standard text creation and editing tools. It also helps you navigate within the file.

This section describes:

- Typing and deleting text

- Moving the cursor

- Selecting text

- Moving text (cut and paste)
- Saving your work

––––––––––––––––––––––– **Note** –––––––––––––––––––––––

When referring to keys, this chapter uses the IBM
enhanced keyboard terminology.

Typing and Deleting Text

Before you start, make sure you:

1. Have an open SEDT file

2. Type some text

   The text is inserted at the cursor.

   When the right side of the screen is reached, the screen shifts
   to the left unless you have set the right margin.

3. Use ⏎Backspace⏎ to delete unwanted characters

Moving the Cursor

Use the arrow keys to move the cursor. If you hold down an arrow
key, the cursor moves at a continuous rate, and the text scrolls. If
the cursor reaches the end of the file, a message is displayed and
the cursor stops moving. Notice that as you move the cursor, the
cursor indicators on the file line change.

Selecting Text

1. Move the cursor to the beginning of the text to be selected.

2. Press End.

3. Move the cursor.

   As the cursor moves, the selected text is highlighted.

Moving Text by Cutting and Pasting

1. Select the text to be moved.

2. Press ←Delete .

   The text is cut and stored in the paste buffer.

3. Move the cursor to where you want to insert the text.

4. Press Insert .

_____ **Note** _____

The **paste buffer** is a storage location where the most recently cut text is kept. The contents of the paste buffer remain unchanged until new text is cut or you leave SEDT. You can paste the same piece of text many times.

However, if you cut additional text without pasting the original text first, the original text is lost.

_____

Saving Your Work

Esc/S

1. Press Esc/S .

2. Type a valid file name at the prompt and press Return . SEDT saves the current screen buffer in a file with that name. The new file name is now associated with the screen buffer.

This procedure saves your work to the file; SEDT remains open, and you can continue to work. If you do not type a file name, your work is saved to the file named in the file line.

Creating Margins and Tabs

SEDT can store ten different rulers.

Margin and tab settings are provided on a ruler. The **ruler** is the second field on the SEDT screen. A default ruler, called RULER0.TXT, with default margins and tabs is provided with SEDT. When you change the settings, you create a new ruler. You can create your own settings on other rulers and keep as many as ten different rulers to use in your files. When you start an editing session, SEDT displays the ruler line below the file line.

This section describes how to create, save, and use rulers.

Creating a New Ruler

1. Enter ruler mode by pressing Esc/R.

    The cursor moves to the ruler.

2. Using the arrow keys, set the left margin (W), the right margin (R or J), and the tab settings. See Table 8–2 for complete descriptions of the ruler settings.

3. You can change the tab stops even if you do not change the margins. Using the arrow keys, move the cursor to a tab stop (T).

4. To remove the tab stop, press the hyphen (-) key or Spacebar. Repeat for each of the tab settings you want to remove.

5. Move the cursor to the column where you want to set a tab and press the T key. Do this for each tab stop you want to set.

    Set or clear other options using the characters in Table 8–2.

6. When you finish, save to a ruler file by pressing Esc/n. "n" is a number between 1 and 9.

    A file is created called RULERn.TXT with the number from 1 to 9 that you provided.

7. To exit ruler mode, press Return.

Table 8–2 lists the keys you use to set characters in ruler mode.

Table 8–2 SEDT Ruler Settings

Character	Action
Hyphen (-)	Removes the tab stop (T) at the current cursor position.
T	Sets a tab stop. You can set tab stops at any column up to column number 232.
Spacebar	Clears any ruler settings at the current cursor position.
L	Sets the automatic paragraph indent. When you press Enter at the end of a sentence, the next sentence indents to L.
I	Sets the manual paragraph indent. Press Tab to move the cursor to the I indent you have marked on the ruler.

Table 8–2 (Cont.) SEDT Ruler Settings

Character	Action
W	Sets the left margin. Text wraps (returns automatically) to this setting. Cancels any A setting on the left of the ruler.
R	Sets a ragged right margin. Cancels any J setting.
J	Sets a justified right margin. Cancels any R setting.
A	Cancels the automatic right margin, and cancels any W setting.
	Set A at the left margin by overwriting the current left margin setting. Be sure the right margin is set at R. The screen scrolls to the right indefinitely to increase the column width for your text beyond the default of 74. For example, you can enter text for landscaped output. Cancels any W setting.

Using a Saved Ruler

1. Enter ruler mode by pressing Esc/R.

2. Enter the number of the ruler you want.

    The new ruler is used for all subsequent text.

Getting Help

Esc/H

SEDT has online help that explains all the SEDT functions and provides all the key commands.

To get help with SEDT, press Esc/H.

To exit Help, follow the directions on the Help screen.

Leaving SEDT

You can leave SEDT in one of two ways:

*   Exit SEDT and save the file for future editing sessions

*   Quit SEDT without saving any changes in the file

Exiting SEDT

Esc/F

To save the file and exit SEDT, press Esc/F or F10.

A message is displayed on the screen telling you that SEDT is saving your file. After the file is saved, SEDT returns you to the system prompt.

Quitting SEDT

Esc/Q

1. If you do not want to save the file or any edits, press: Esc/Q or F8.

   If you made edits to the file, SEDT displays the following:

   Unsaved changes. Quit? Y/N:

2. You can now do one of the following:

   - If you want to quit without saving your changes, press Y.

   - If you want to continue editing, press N.

     SEDT returns you to the editing area.

9

Using Mail and Broadcast

You can send messages to other users on the network using either Mail or Broadcast.

Mail lets you quickly send messages, memos, and files to other people on the network. You send your message to another person, or a list of people. They have the options of printing it and saving it for future reference.

Mail is private communication; it is between the sender and the receiver.

Broadcast is most often used by system administrators to send a brief message to all the users of a particular server. It is usually not private communication. Broadcast is useful for alerting a large number of people to a meeting, a printer breakdown, or a planned change in the network such as a temporary server shutdown.

This chapter describes Mail and Broadcast.

_____ **Note** _____

Mail is currently not available over TCP/IP with a VMS server. You can access your Mail account on a VMS server only over DECnet.

Getting Started with Mail

Mail lets you send and receive electronic mail from other users.

This section describes how to:

- Set up Mail
- Start Mail
- Use Mail's main menu, the Browser
- Use Mail's editor
- Read mail
- Send mail
- Use mail folders to organize your messages
- Extract mail to a directory
- Suspend and resume your Mail session
- Delete mail messages
- Get help for mail functions

For advanced user information about using Mail, refer to the *Mail User's Reference*.

Setting Up Mail

You must run MAILSETUP before using Mail.

Use the MAILSETUP utility to set up your personal computer to use the Mail program. Unless you want to change the setup, you have to do this procedure only once.

To complete the setup, you must:

• Have a Mail account on a server.

• Know your user name for the Mail account.

Your system administrator can give you this information.

You can get help for MAILSETUP by pressing $\boxed{\text{F1}}$.

To modify more parameters and customize your Mail environment, switch to Advanced Installation mode by pressing $\boxed{\text{F10}}$.

To start MAILSETUP, at the DOS prompt enter:

C:\> MAILSETU

The MAILSETUP screen is displayed as shown in Figure 9–1.

Figure 9–1 MAILSETUP Screen

```
PATHWORKS MAIL Setup Program                    Quick Installation
-[Setup Options]--------------------------------------------------------
 | * User Options
 |  ►User Name =              USER1
 |  ►Node Name =              SERVR1
 | * Keyboard and Mouse
 |   Command Mode =           off
 |   Mouse Menus =            on
 | * Callable Text Editor Options
 |   Callable Editor =        off
 | * Screen Options
 |   Character Set =          none
 |
-[Description]----------------------------------------------------------
 The username field contains the user name field you use when you
 login to the remote VAX.


       ►► Type in the entry for this field and press ENTER ◄◄
    F1:Help,  F10:Quick/Advanced,  Ctrl/Enter:Exit,  ESC:Cancel
```

*MAILSETUP's
Quick Installation
lets you set up
Mail by accepting
the defaults.*

To set up Mail by accepting the defaults:

1. Use the direction keys ⬆ and ⬇ to move the cursor up and down through the fields in the MAILSETUP screen.

2. Enter your user name.

3. Enter the node name of your mail server.

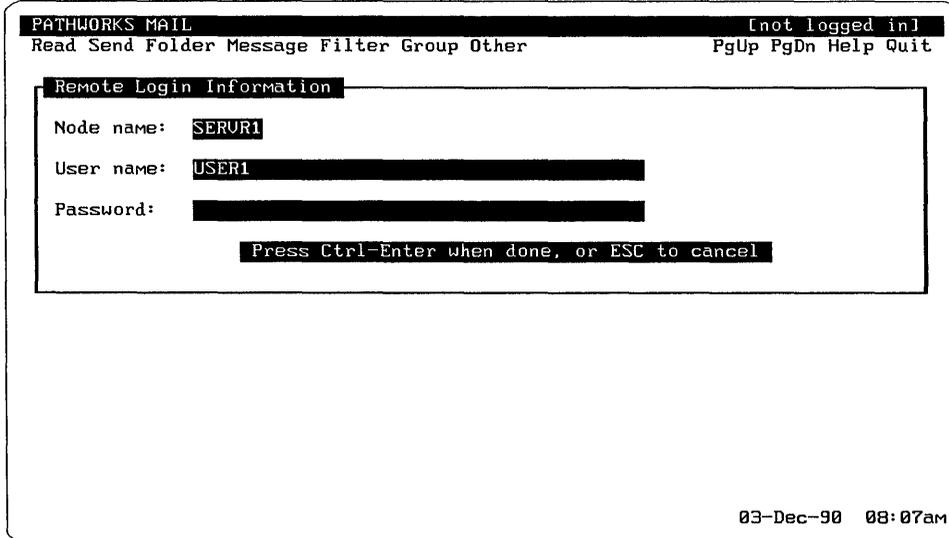4. Press ⌈Ctrl/Return⌉ to accept the defaults in the other MAILSETUP fields.

Starting Mail

Once you have set up Mail, start Mail by entering the following command at the DOS prompt:

C:\ MAIL

The Mail Login to Server window is displayed, as shown in Figure 9–2.

Figure 9–2 Mail Login to Server Window

```
┌──────────────────────────────────────────────────────────────────┐
│ PATHWORKS MAIL                                    [not logged in]  │
│ Read Send Folder Message Filter Group Other      PgUp PgDn Help Quit│
│  ┌─ Remote Login Information ──────────────────────────────────┐   │
│  │                                                             │   │
│  │  Node name:  SERVR1                                         │   │
│  │                                                             │   │
│  │  User name:  USER1                                          │   │
│  │                                                             │   │
│  │  Password:                                                  │   │
│  │           Press Ctrl-Enter when done, or ESC to cancel      │   │
│  │                                                             │   │
│  └─────────────────────────────────────────────────────────────┘  │
│                                                                    │
│                                                                    │
│                                                                    │
│                                                                    │
│                                              03-Dec-90   08:07am   │
└──────────────────────────────────────────────────────────────────┘
```

The Mail Login to Server window contains the user name and server name you entered in MAILSETUP.

To log in to Mail:

* Press ⌴Return⌴ to move to the Password field.

──────────────────────── **Note** ────────────────────────

You can also enter a different server name and user name
at the Login to Server window.

──

* Enter your password, which is not displayed on the screen.

To cancel your   * Press ⌴Ctrl/Return⌴.
login, press ⌴Esc⌴.

The main menu of Mail is displayed. It is called the **Browser**.
Figure 9–3 shows an example of the Mail Browser.

Figure 9–3 Mail Browser

Information
Line   ───▶ PATHWORKS MAIL v1.15   SERVR1::USER1
Menu Line ──▶ Read Send Folder Message Filter Group Other   PgUp PgDn Help Quit
  Current ──▶▶   1 01-May-90   FAD   SERVR1::USER2   ¦ This is the first message   [1]
  Message   2 01-May-90   SERVR1::USER2   ¦ This is the second message   [2]

  Message ──────────────────────────────┘
  Flag

   Status
   Line ───▶ Directory of remote folder MAIL [2 messages]   ↓
   Prompt ───▶ Mail>
               No new mail.

Table 9–1 lists the Browser elements.

Table 9–1 Browser Screen Elements

Information line	Displays the version of Mail and the node name and user name specified in MAILSETUP.
Menu bar	Displays the Mail menu options you can choose.
Current message	The right-pointing cursor (▷) indicates the current message. Mail performs most of its functions on the current message.
Message list	The mail you have in your folder and information about each piece of mail. You can sort the mail in a variety of ways.
Message length	Indicates the number of lines for each message.
Status line	Includes further information about the mail, for example, how it is sorted, which folder you are looking in, or total number of messages.
Command line	Lets you enter commands instead of using a menu to select Mail functions.

Message Flags

In the Browser, Mail uses **message flags** to indicate the status of a message. Table 9–2 contains the different message flags you can see for a message.

Table 9–2 Message Flags

Flag	What It Means
Blank	You have read the message but have not marked it, answered it, deleted it, or highlighted it.
*	You have marked the current message. Mail allows you to perform operations on marked messages, such as move, copy, print, or extract all the marked messages in a specific folder.
A	You answered the message.
D	You deleted the message.
F	You highlighted the message.
N	You have a new message you have not read.

Using the Browser

You perform all Mail functions at the Browser screen, such as reading and sending mail.

Select Mail functions in the Browser by using the mouse or the direction keys, hot keys, and command line. You move around in the Browser by using the keypad keys.

Using the Mouse

To use the mouse:

1. Point to the menu you want.

2. Click and hold down the first mouse button, MB1, to display the list of menu commands.

3. Drag the mouse pointer to the command you want. Release the mouse button to initiate the command.

Using the Direction Keys and Hot Keys

To use the direction keys and hot keys:

1. Press Tab. Mail highlights the hot key for each menu. The **hot key** for each menu is indicated by a letter in each menu name that is displayed in bold type.

2. Press the hot key for the menu you want. Mail displays the commands for that menu.

3. Use the direction arrows to move the pointer to the menu selections of the menu bar. Press Return to initiate the command.

4. Press Esc to cancel the command.

Using the Mail Command Line

You can also type some of the menu commands at the Mail command line. For example, to read a message:

1. Make the message you want to read the current message.

2. At the command line, enter:

    Mail> READ

Mail displays the current message.

Moving in the Browser

To move around the Browser screen, use the keypad keys described in Table 9–3.

Table 9–3 Moving in the Browser

⬆ ⬇	Moves one line up or down.
PgUp PgDn	Moves up or down an entire screen.
Ctrl/PgUp	Moves to the top of the list.
Ctrl/PgDn	Moves to the bottom of the list.
▷	Makes the message it points to the current message.
Return	Initiates the command entered at the command line.

The following sections describe how to use Mail.

Using Mail's Default Editor

Mail provides an editor you use whenever you send, reply to, annotate, or forward messages. To specify a different editor, such as SEDT, refer to the Using a Callable Editor section of the *Mail User's Reference*.

Use the key sequences listed in Table 9–4 when editing mail.

Table 9–4 Mail Editor Key Sequences

Key Sequence	Function
Ctrl/A	Moves the cursor to the beginning of the line.
Ctrl/E	Moves the cursor to the end of the line.
⬆ ⬇	Moves the cursor one line up or down.
← →	Moves the cursor one character left or right.
Backspace	Deletes the previous character.
Ctrl/K	Deletes the line.
PgUp	Moves up one screen.

Table 9-4 (Cont.) Mail Editor Key Sequences

Key Sequence	Function
PgDn	Moves down one screen.
Ctrl/Z	Sends the message and ends the editing session.
Ctrl/C	Cancels the message and ends the editing session.

Reading Mail

This section describes how to:

- Read mail displayed on the Browser

- Read new mail

- Check for new mail

When you first access Mail, the Browser displays a list of mail messages. The display includes all the messages in your Mail folder. The status line tells you how many messages are waiting to be read.

Reading Mail Displayed on the Browser

To read a mail message on the screen:

1. Move the cursor (▷) to select the message you want to read.

2. Press Return.

The message you selected is displayed on the screen, as shown in Figure 9-4.

Figure 9–4 Reading a Mail Message

```
┌──────────────────────────────────────────────────────────────────────────┐
│ ▐PATHWORKS MAIL▌                                        SERVR1::USER1       │
│  Reply Send Delete Message Find           Prev Next PgUp PgDn Help Dir      │
│ From:    SERVR2::USERZ                                   6-Dec-1990 9:30     │
│ To:      SERVR1::USER1                                                      │
│ CC:                                                                         │
│ Subj:    Lunch                                                             │
│                                                                            │
│          Scott,                                                           │
│                                                                            │
│          Meet me in the cafeteria at 12:15                                │
│                                                                            │
│                                                                            │
│                                                                            │
│                                                                            │
│                                                                            │
│                                                                            │
│                                                                            │
│                                                                            │
│                                                                            │
│ ▐Message 17 from SERVR2::USERZ (3 lines)▌                                  │
│                                                  03-Oct-90  11:10am         │
└──────────────────────────────────────────────────────────────────────────┘
```
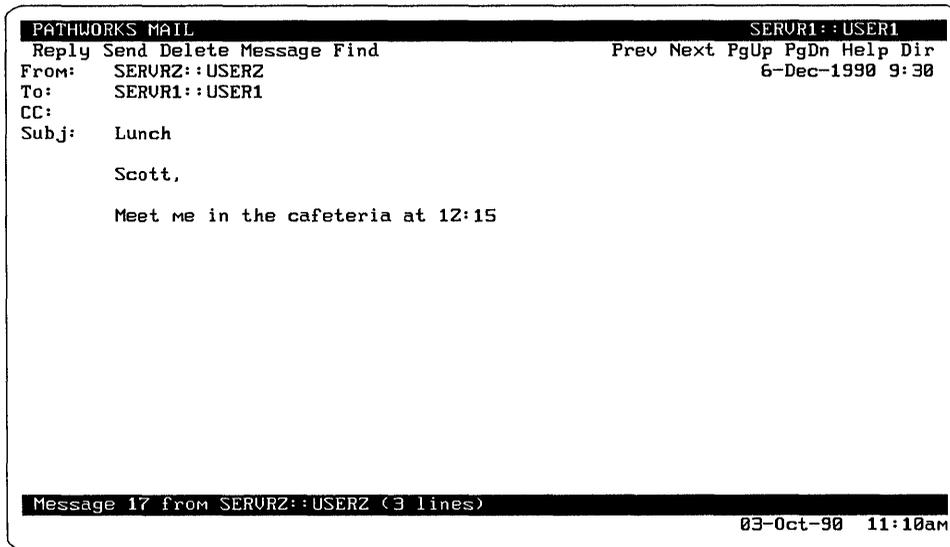
If there is another page to the mail message, press Return to display the next page.

If you have more messages to read, choose **Next** to read the next message.

To return to the Browser, choose **Dir**.

Reading New Mail

If you receive a new message while you are in Mail, the personal computer beeps and the Browser status line provides information about the new message.

To read your new message:

1. In the Read menu, choose **New messages** to display the new message.

2. If there is more than one new message, select **Next** to read the others.

3. To exit a message you are reading, select **Dir**.

Checking for New Mail

Mail lets you check for new messages any time you are in the Browser:

1. In the Folder menu, choose **Check for new Mail**.

2. Check the status line. It displays the number of messages you have, or tells you there is no new mail.

If you have new mail, the first new message is displayed on the screen.

Sending Mail

You can send mail in many different ways. Mail lets you:

- Reply to a message you are reading
- Send a new message
- Include a file in the message
- Forward mail
- Use distribution lists

Replying to Mail

While you are reading a message, you can reply to the sender as follows:

1. With the message still on the screen, in the Send menu, select **Reply to current message**.

   Mail displays the original message and a space for you to enter your reply. Use Ctrl/PgUp and Ctrl/PgDn to scroll through the message.

   Figure 9–5 shows an example of the Mail reply screen.

Figure 9–5 Replying to a Mail Message

```
╭─────────────────────────────────────────────────────────────────╮
│ ▐PATHWORKS MAIL▌                                    SERVR1::USER1 │
│  Deliver Save Include                 ViewUp ViewDn Help Cancel   │
│ From:    SERVR1::USER1                          1-Dec-1990 10:10  │
│ To:      SERVR2::USER2                                            │
│ CC:                                                               │
│ Subj:    Lunch                                                    │
│                                                                   │
│          Scott,                                                   │
│                                                                   │
│          Meet me in the cafeteria at 12.15                       │
│                                                                   │
│                                                                   │
│ ▐Message 6 from SERVR2::USER2 (1 lines)▌                          │
│ To:      SERVR2::USER2                                            │
│ Subj:    Re: Lunch                                               │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│ ▐Mail Composition Window▌                                        │
│                                           03-Oct-90   10:41am     │
╰─────────────────────────────────────────────────────────────────╯
```
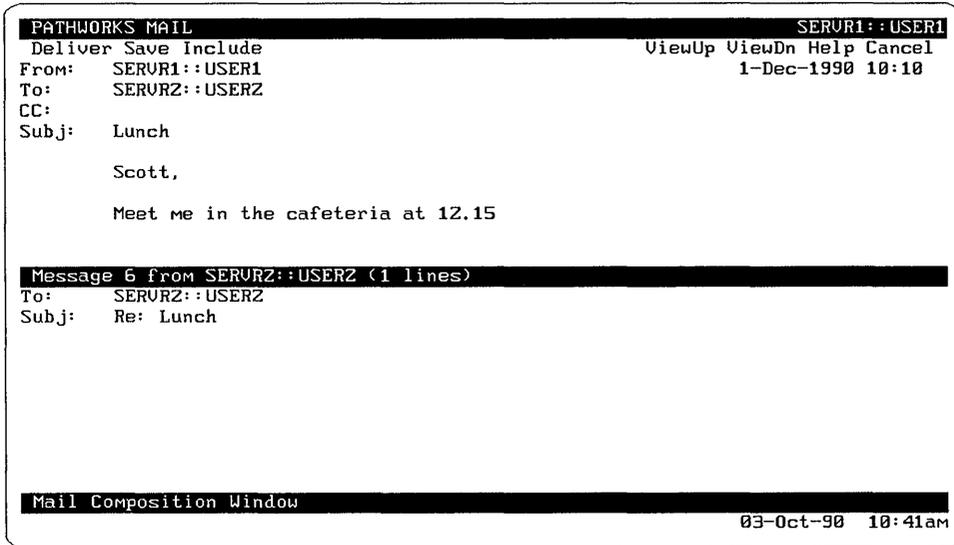
2. Enter your reply.

3. Send your reply by pressing $\boxed{\text{Ctrl/Z}}$.

    Pressing $\boxed{\text{Ctrl/Z}}$ also closes the composition window and re-displays the original message.

    To cancel sending the message, press $\boxed{\text{Ctrl/C}}$. Mail returns to the Browser.

—————————————— **Note** ——————————————

$\boxed{\text{Ctrl/C}}$ cancels any mail operation.

Sending a New Message

To send mail to another user, you must know the user's **mail address**. A mail address consists of a user's node name and user name.

To send new mail:

1. Select the Send menu, and choose **Send new message**.

2. At the To prompt, enter the address, for example:

   SERVR2::USER2

   You can send mail to more than one address. Separate addresses with a comma. For example:

   SERVR2::USER2,SERVR1::USER5,SERVR7::USER3

3. At the Subject prompt, enter the message's subject.

4. Type your message.

_____ **Note** _____

The message always looks exactly as you format it. Be careful not to type beyond the margins of the screen.

_____

5. If necessary, press F1 for Help.

6. Send the message by pressing Ctrl/Z.

Including a File in a Message

You can send a file as part of a mail message as follows:

1. Select **Send new message**.

2. Complete the To and Subject fields.

3. While you are writing the message, put the cursor where you want to insert the file.

4. Choose **Include** from the menu.

5. At the prompt on the bottom of the screen, enter the name of the file you want to include.

   Mail includes the file in the message.

6. Send the message and the file by pressing Ctrl/Z.

Mail displays:

```
Mail sent OK
```

Forwarding Mail

Mail lets you forward your mail to other users. You can send it as is or you can add to the message.

To forward mail:

1. Make sure you make the message you want to forward the current message.

2. Choose **Forward current message** from the Send menu. The message is displayed in a composition window.

3. At the prompts, enter the address to which you want to forward the message and the subject description.

4. If you want to add to the message, enter your comments before or after the original message in the space provided.

5. Press Ctrl/Z to send the message you are forwarding and close the composition window.

Using Distribution Lists

Distribution lists let you send a message to different users at the same time.

You can specify distribution lists in Mail by using a:

- Local distribution list stored on your personal computer

- Remote distribution list stored on the mail server

Both of these lists must have the following characteristics:

- Each line contains a single name.

- Comments in the file start with an exclamation mark (!).

- The file extension is .DIS, .TXT, or .LIS. The default is .DIS.

The following example shows the nodes and users in the
GROUP.DIS file:

```
!Writers
SERVR1::USER2
SERVR1::USER6
!Engineers
SERVR3::USER1
SERVR3::USER4
SERVR3::USER5
!Managers
SERVR1::USER22
SERVR3::USER3
```

If you store your mail files on your personal computer (local mail),
you can send a message to the group of users by entering the
distribution list name with an "at" sign (@). For example, to send
a new message to users listed in GROUP.DIS, enter:

```
To:  @GROUP
```

If you store your mail files on a remote server, begin the
distribution list name with a "number" sign (#) to send the
message. For example, enter:

```
To:  #GROUP
```

Respond to the remaining Mail prompts and enter your message
as usual.

Using Mail Folders

*Mail folders help
you organize
your mail
messages.*

Mail lets you organize your messages in folders by topic. Each
folder name must be different.

This section describes how to:

- Create new folders

- Use folders by moving messages into them

- Display a list of folders to locate messages

Creating a New Folder

You create a new folder by moving a message into the folder.
Folders exist in Mail only if they contain messages.

To create a new folder:

1. Make the message you want in your new folder the current
   message.

2. In the Message menu, choose **Mark**. Mail marks the message with an asterisk (*).

3. In the Group menu, choose **Move marked messages to**. Mail displays the Folder list, as shown in Figure 9–6.

Figure 9–6 Mail Folder List

```
┌─────────────────────────────────────────────────────────────────┐
│ PATHWORKS MAIL                                      SERVR1::USER1 │
│ Read Send Folder Message Filter Group Other        PgUp PgDn Help Quit │
│▶   1  22-May-90            SERVR1::USER1 │ MYREPORT.TXT       [ 469] │
│    2  22-May-90            SERVR1::USER1 │ MYFILE.EPS for kathy  [1149] │
│   3┌─ Name        #Msgs   Description ────────────────────────┐1127] │
│   4│ ▶ (New Remote Folder)                                    │1149] │
│   5│   MAIL          ** Remote Folder **                      │1097] │
│   6│   MISC          ** Remote Folder **                      │1057] │
│   7│   WASTEBASKET   ** Remote Folder **                      │1706] │
│   8│                                                          │ 280] │
│    │                                                          │      │
│    │                                                          │      │
│    │                                                          │      │
│    │                                                          │      │
│    └──────────────────────────────────────────────────────────┘      │
│                                                                   │
│                                                                   │
│                                                                   │
│ Directory of remote folder SERVR1 [8 messages]                    │
│ Select or type a folder name & press ENTER.       03-Oct-90  10:42am │
└─────────────────────────────────────────────────────────────────┘
```

Mail displays the **Move specified messages to folder** prompt at the bottom of the screen.

4. Select **New Remote Folder**. At the prompt, enter the new folder name. Limit the folder name to 15 characters, and do not include spaces.

5. Mail creates the new folder.

You can create up to 300 mail folders. You set the maximum number of mail folders with MAILSETU.

Moving Messages

The procedure for moving messages from one folder to another is similar to the one for creating a new folder.

To move a message:

1. Make the message you want to move the current message.

2. In the Message menu, choose **Mark**.

   Mail marks the message, and the status line tells you which message is marked. You can mark as many messages as you want.

3. In the Group menu, choose **Move marked messages to**. A list of folders is displayed.

4. Click on the folder you want. The message is moved into that folder.

—————————————— **Note** ——————————————

Choose **Copy** to save the same message in more than one place.

_____

Displaying the Folder List

To display the list of Mail folders, in the Folder menu select **Display folder list**. Mail displays a folder list similar to the one shown in Figure 9–6.

—————————————— **Note** ——————————————

If you move or delete all the messages in a folder, Mail automatically deletes the folder. The folder name is not displayed in the Mail folder list.

_____

Extracting Mail

Save files in your DOS directory with the EXTRACT command.

You can **extract** a message out of Mail, and save it as a file in your DOS directory. For example, if someone mailed you the file REPORT.TXT, you can extract it and save the file in your directory.

To extract mail:

1. Make the message current.

2. In the Message menu, choose **Extract**.

3. At the Mail prompt, enter a name for the file. Specify a path for the directory if you want the file to go into a different directory from the one you were in when you entered Mail. A **path** is a listing of the drives and directories your personal computer searches through to find a file when you enter a command at the DOS prompt.

   For example, to extract REPORT.TXT into the subdirectory DESKTOP, enter:

   ```
   Extract specified messages to: C:\DESKTOP\REPORT.TXT
   ```

Mail copies the file to the specified directory.

Deleting Messages

Mail indicates messages are marked for deletion by preceding them with the letter D. A marked message is then removed with the PURGE command.

To mark a message you want to delete:

1. Make the message you want to delete current.

2. In the Message menu, choose **Delete**. Mail marks the message with the letter D.

3. To display a list of all messages marked for deletion, choose **Deleted messages** in the Filter menu.

To completely remove the messages you marked for deletion, go to the Other menu, and choose **Purge deleted messages**.

_____ **Caution** _____

Messages that have been purged cannot be retrieved.

_____

Mail deletes the marked messages, and displays a message that it has purged them.

Suspending Mail

Mail lets you suspend your Mail session to return to the DOS prompt as follows:

1. In the Other menu, choose **Suspend Mail**.

   Mail is suspended, and the DOS prompt is displayed.

2. To return to Mail, at the DOS prompt, enter:

   C:\> Exit

The Mail screen is redisplayed.

Exiting Mail

To exit Mail and return to the system prompt, select **Quit**.

Mail returns you to the DOS prompt.

Getting Help

Mail provides online help for all Mail functions.

To get help:

1. Select Help.

2. Then either:

   • Use the mouse to click on the topic

     or

   • Use the arrow keys to highlight a topic and press Return.

   Mail displays a window with information about the topic you selected.

3. Use the direction keys to move forward and backward through the Help windows.

4. To return to the previous screen, or to exit Help, press ESC.

Figure 9–7 shows an example of a Help window.

Figure 9-7 Mail Help

```
PATHWORKS  MAIL                                                SERVR1::USER1
 Read Send Folder Message Filter Group Other           PgUp PgDn Help Quit
►  ┌─MAIL Help Topics ─────────────────────────────────────────┐0[1469]
   │ ║ Introduction                                             ║.[1149]
   │ ║                                                          ║0[1127]
   │ ║ 1.1  Mail Modes                                          ║0[1149]
   │ ║ 1.2  Mail Capabilities                                   ║0[1097]
   │ ║ 1.3  Starting Mail                                       ║,[1057]
   │ ║                                                          ║,[1706]
   │ ║ 1.3.1  Using Mail's Command Prompt                       ║ [ 280]
   │ ║ 1.3.2  Moving Around in the Browser                      ║
   │ ║ 1.3.3  Checking for New Mail                             ║
   │ ║ 1.3.4  Getting Help                                      ║
   │ ║ 1.3.5  Reading Your Mail                                 ║
   │ ║ 1.3.6  Filtering Mail Messages                           ║
   │ ▼ 1.3.7  Editing Mail Messages                             ║
   └──────────────────────────────────────────────────────────┘




 Directory of remote folder USER1 [8 messages]
 Select item to get help on, or press ESC to exit      03-Oct-90   10:44am
```

Broadcast Messages

Broadcast messages are sent to and from users on the network.
You can send and receive broadcast messages on your personal
computer. A broadcast message is always brief (it is limited to 128
characters).

The RCV utility (or the TRCV utility for the TCP/IP transport)
lets you receive broadcast messages and mail notification. The
BCAST utility lets you send messages.

─────────────────────── **Note** ───────────────────────

The RCV or TRCV utility must be loaded when you
configure your personal computer.

──

When you receive a broadcast message, it is displayed at the
bottom of the screen. Unlike mail messages, broadcast messages
cannot be replied to.

The following example shows a typical broadcast message.

```
FROM --SERVR1::SYSTEM
The network will be closed down all weekend.
See the system administrator if this is a problem.

<Alt Q Quit>      <Alt N Next>      <Msg-3>
```

The broadcast message includes:

- The sender's node name and user name. In the example, the message was sent by the system manager.

- The key sequence necessary to remove the message (Quit), Alt/Q.

- The key sequence necessary to see the next message, if any, Alt/N .

- The number of messages if there are more than one. In the example, there are three messages.

Reading a Broadcast Message

If you receive more than one broadcast message at a time, you can flip through the messages. Broadcast retains as many as 10 messages at a time; after that, new messages supersede the old.

For example, if you received four broadcast messages, and you want to read them later, press Alt/Q. To recover the messages you received, enter:

```
C:\> RCV /D
```

Sending a Broadcast Message

You can send broadcast messages to be displayed on the personal computers you specify.

For example, to broadcast a message to USER1, USER2, and USER12, at the DOS prompt, enter:

```
C:\> BCAST USER1, USER2, USER12 Meeting in Conference Room at 2:00 P.M.
```

For more information about sending broadcast messages, ask your system administrator. Or refer to the *Client Commands Reference*.

A

International — Multilingual Support

PATHWORKS for DOS software supports seven languages:

- American English
- Dutch
- French
- German
- Italian
- Spanish
- Swedish

_____ **Note** _____

For any language except American English, your system administrator

_____

You can switch languages at any time with PATHWORKS for DOS. You can also use the PATHWORKS applications such as Mail, SEDT, SETHOST, and PC DECwindows Motif, in any of the seven languages available without having to connect to a different server or reboot your personal computer.

_____ **Note** _____

Not all applications are provided in all languages.

_____

When you are using a specific language in PATHWORKS, the prompts, menus, and commands are presented in that language. In addition, some applications let you change the keyboard to provide all the necessary alphabetic and accented characters for writing in that language.

When you log in to PATHWORKS, the language that you use as your primary language is established by the system administrator when your user account is set up on the server. If you want to change your primary language at any time, consult your system administrator.

If you do not log in to PATHWORKS (and therefore do not access your user profile), the default language is English.

In either case, use the following procedure to switch to another language.

Switching to a Different Language

You can switch among the available languages and use different applications in different languages.

To use a different language:

1. If you have not already done so, connect to a system file service; for example PCSAV41.

2. Enter the LANG command. For example, if you want to use French, enter:

   `C:\> LANG FR`

   This command automatically puts the FR subdirectory on your path.

   Your personal computer becomes a French-language personal computer.

3. Start an application such as:

   - MAIL

   - SETHOST

   - PC DECwindows Motif

   You can now use the French version of the application.

The commands for the seven languages are:

Language	Command
American English	LANG US
Dutch	LANG NL
French	LANG FR
German	LANG DE
Italian	LANG IT
Spanish	LANG ES
Swedish	LANG SE

Returning to Your Primary Language

Once you are finished using an alternate language, you can change back to the primary language.

For example, if your primary language was Dutch, enter the following command to change back to that language:

```
C:\> LANG NL
```

This command removes the other language from your path and your default primary language is returned.

Specifying Languages for Different Applications

You can specify different languages for different PATHWORKS applications. When you leave the application, you are returned to your primary language. For example, you can use MAIL in Spanish, SETHOST in French, and SEDT in English.

To use an application in another language, enter the language command followed immediately by the application name.

For example, to use MAIL in Spanish, enter:

```
C:\> LANG ES MAIL
```

Or, to use SETHOST in French, enter:

```
C:\> LANG FR SETHOST
```

When you exit the application, your primary language or the language you were previously using is restored.

Glossary

The terms that appeared in the text of this book in **boldface** are explained in this glossary. Additional computer-related terms are also explained here.

access (v.)

To use a resource, such as a printer, directory, or disk drive.

access control (n.)

The mechanism for validating the right to use a resource or service, such as a connection, logon, or file access, stored on or connected to a server. A user name and password combination is the most common means of access control.

access control entry (ACE) (n.)

In a VMS access control list (ACL), one identifier and its associated access rights to a service or resource. See also *access control list*.

access control list (ACL) (n.)

In the VMS environment, a list that defines users' rights to use a resource, file, or service.

account (n.)

A set of information on a computer system that allows users access to a multiuser or networked computer. It includes the user's name, often a password, other identifiers, a list of services and privileges the user is allowed, and files belonging to the user.

ACE (n.)

See *access control entry*.

ACL (n.)

See *access control list*.

actual length (n.)

The length of a VMS file in bytes as determined by the file server. See also *estimated length*.

Address Resolution Protocol (ARP) (n.)

A TCP/IP utility that lists the hardware (or IP) addresses and their corresponding Ethernet addresses for nodes on the Internet.

alias (n.)

An alternate name for a resource, such as a service, used to refer to several identical resources by the same name. It is also used to refer to the same service by alternate names.

alphanumeric (adj.)

Pertaining to the characters A through Z and zero (0) through nine (9).

ambiguous device name (n.)

The next available device name for the type of device to which users can connect.

API (n.)

See *application programming interface*.

append path (n.)

A search path that is used to tell DOS where to search for executable files in the directory structure. See also *search path* and *path name*.

application (n.)

A program used for a particular kind of work, such as word processing or database management.

application disk service (n.)

A virtual disk that contains application software. See also *disk service*.

application file service (n.)

A file service that contains application software.

application package (n.)

A set of software application programs that can be used individually or can be shared.

application programming interface (API) (n.)

A standard or proprietary software interface with a network or operating system. Examples of APIs are NETBIOS and Basic LAN Manager.

area (n.)

In networking, a group of interrelated nodes.

ASCII (n.)

American Standard Code for Information Interchange. A set of 8-bit, binary numbers representing the alphabet, punctuation, numerals, and other symbols used to represent text.

Also, a file that is in binary format. See also *binary*.

asynchronous communication (n.)

The method of transmitting data one character at a time over a serial interface. Asynchronous communication can work locally or through a modem. Timing between bits is constant; timing between characters is variable. (Also called start-stop transmission.)

back up (v.)

To copy the contents of an entire disk, directory, or file.

backup (n.)

A copy of the contents of an entire disk, directory, or file.

BCAST (n.)

See *Broadcast utility*.

binary (adj.)

Pertaining to a numbering system that uses a base of 2; it uses only two digits, 1 and 0.

Also, a file type that is in binary format. See also *ASCII*.

boot (v.)

(Short for bootstrap.) To run or initiate a program that loads the operating system into memory and starts or restarts the computer.

boot image (n.)

The minimum set of instructions needed to start and run a computer, including device drivers, directory structures, and memory management; also, the file containing these instructions.

boot media (n.)

The diskette, hard disk, or virtual disk that contains the startup files. See also *key diskette* and *network key disk*.

broadcast message (n.)

A message sent to personal computer users on the network. Users cannot respond to this message.

Broadcast utility (n.)

A program that enables one-way communication to personal computer users on the network.

Browser (n.)

Part of the Mail application. The Browser is a directory of mail or mail folders through which you can look to find a particular message.

buffer (n.)

A temporary storage place in volatile memory for data. An example is the paste buffer in the SEDT text editor.

button (n.)

An on-screen control that users can click on to choose an action or option or to set a state.

click (v.)

To quickly press and release a mouse button.

click on (v.)

To quickly press and release the mouse button while the pointer is on an active object.

client (n.)

A personal computer or workstation, connected to the network with PATHWORKS, that can access resources on a server. A client can have DOS, OS/2, or Macintosh software.

Hardware or software that receives resources from a server. See also *server.*

client profile (n.)

Files created by the configuration process that contain information to start the client workstation and that define the workstation's hardware and software components.

close (v.)

In printing, to send an application's print request to the printer assigned to the application.

command (n.)

An instruction issued to a computer operating system or application.

command line (n.)

That area of the screen in which commands are entered and displayed.

common file service (n.)

A file service used to store files that many users can share and update. An example of a common file service is PCCOMMON.

computername (n.)

In LAN Manager, a server or workstation. A computer is known on the network by its unique computername.

configuration (n.)

The set of hardware, hardware options, and software on a computer or network.

configure (v.)

To select, install, and customize hardware and software for a computer or network.

connectivity (n.)

In a network, the ability to connect one node to another node.

context file (n.)

An ASCII file that contains information about network connections.

CTERM (n.)

Digital Command Terminal. A network protocol that provides local and wide area network services to computers for VT terminal emulation. CTERM is one of the possible protocols used in the SETHOST and VT320 terminal emulator utilities. See also *SETHOST*, *LAT*, *NET* and *Telnet*.

current directory (n.)

The directory in which you are currently working. Sometimes called the default directory.

current focus (n.)

In the LAN Manager Screen, the server or workstation that is the focus of activity.

current folder (n.)

In Mail, the folder in which you are currently working.

In Macintosh Mail, the current folder is the directory.

current message (n.)

In the Mail Browser, the message to which the right-pointing cursor is pointing.

In Macintosh Mail, the current message is highlighted.

cursor (n.)

The blinking line or shape on the screen that indicates where the next user input will be displayed.

DECnet (n.)

Digital networking software that runs on server and client nodes in both local area and wide area networks. With DECnet, different types of computers that have different operating systems can be connected, and users can access information and services on a remote computer.

DECnet is a networking protocol and transport. See also *TCP/IP.*

DECnet link (n.)

A virtual or logical connection between a client and a server or between two nodes in the network.

DECnet node database (n.)

The file that contains information about the network nodes with which a computer communicates.

default (n.)

The value assumed by a program if a value is not supplied by the user.

DEPCA (n.)

Digital Ethernet Personal Computer Adapter. An Ethernet controller used to connect personal computers to the network as clients. (Also called DEC EtherWORKS.)

destination (n.)

The drive, file, or media to which a user is copying or moving information. Also called target. See also *source*.

device (n.)

A hardware component that performs a specific function. A keyboard is an input device; a printer is an output device; a terminal is an input/output device. See also *logical device*.

device driver (n.)

See *driver*.

dialog box (n.)

A window displayed in response to user action that presents choices for further action. You must choose an action to continue working.

Digital Data Communications Message Protocol (DDCMP) (n.)

A workstation configuration that lets a workstation run asynchronous communications. See also *asynchronous communications*.

directory (n.)

A list of a set of files stored on a storage device such as a file service or disk.

disk server (n.)

A network program that allocates space on a VMS disk where users can store, create, and maintain files. This space is called a virtual disk. Disk services are available only on VMS servers accessed with the DECnet transport. See also *disk service* and *virtual disk*.

disk service (n.)

A service located on a VMS server that looks like a VMS file on a server, and lets users access it as if it were a local DOS disk drive. The service may contain more than one DOS file. A disk service gives multiple users fast access to read-only files, and gives one user fast access to read-write files. See also *disk server*.

distribution list (n.)

A file that contains the node names and user names of the people to whom you want to send mail messages.

dos2ult (n.)

An ULTRIX utility that converts ASCII files from a DOS format to an ULTRIX format. See also *ult2dos*.

double click (v.)

To click the mouse button twice rapidly while the cursor is on an active object.

drag (v.)

To move an object by pointing at it with the pointer, pressing and holding down a mouse button, and moving the mouse.

driver (n.)

A background software program typically dedicated to the control of a device or resource on a personal computer. For example, a mouse requires a mouse driver.

DWDOS286 (n.)

One of the X servers for PC DECwindows Motif X server. See also *DWDOS386* and *X server*.

DWDOS386 (n.)

One of the X servers for PC DECwindows Motif X server. See also *DWDOS286* and *X server*.

echo (v.)

To repeat received data to the sender. For example, when the user presses keys on the keyboard, the keystrokes are echoed as characters on the screen. See also *line echo*.

end node (n.)

A network node that sends and receives network messages but cannot route packets intended for other nodes.

Ethernet address (n.)

An alphanumeric string, six bytes in length, that identifies a node on the Ethernet. The string is six pairs of hexadecimal digits, separated by hyphens, (for example, AA–00–04–00–91–27).

Ethernet controller (n.)

A variety of network controller for the transmission and reception of data between a workstation or server and the Ethernet network. For example, a DEPCA is an Ethernet controller for a personal computer that is connected to the network. See also *network controller*.

FAL (n.)

File Access Listener. A DECnet utility that runs on your personal computer and monitors the network for requests from other users for your files.

File Access Listener (n.)

See *FAL*.

file line (n.)

In SEDT, the first line on the screen. The file line contains information about the displayed file.

file server (n.)

A network program that lets a client connect to available file and printer services.

file service (n.)

Directories, subdirectories, and files on a file server. Users can use network commands from a client to access a file service and then store and retrieve data. A file service provides read/write access to applications and services for many users simultaneously. See also *shared directory*.

File Transfer Protocol (FTP) (n.)

A TCP/IP utility that lets you transfer binary and text files to and from any host computer supporting TCP/IP.

folder (n.)

In Mail, a group of messages.

Folder Browser (n.)

In Mail, the screen that contains the names and descriptions of all folders.

form (n.)

In printing, a characteristic that specifies the physical layout of the page. Types of forms are landscape, portrait, and enhanced.

format (v.)

In the context of disks, to divide a disk into tracks and sectors, label those tracks and sectors for future reference, and create a directory structure in order to make the disk ready to accept new data and programs. The type of formatting done depends upon which operating system will use the disk. Formatting a disk destroys any data previously stored on the disk.

generic queue (n.)

A logical name for a physical queue. See also *physical queue*.

group (n.)

In system administration, a collection of users who have the same access to file services. Once users have accounts, they can be assigned to a group. With one command, the system administrator can assign and modify access for all users in the group.

help line (n.)

In Mail, a line describing a command. The help line is directly below a selected command on the menu bar.

highlight (n.)

A box, shading, reverse video, or other graphic technique used to emphasize a menu option, current selection, text, or a current location of the input focus.

host system (n.)

A computer, such as a server, that provides services to clients.

hot key (n.)

A key you press to display and choose options in a pulldown menu. Each hot key is a letter displayed in bold type.

icon (n.)

A graphics symbol that represents an application, object, process, or window.

icon bar (n.)

In DECwindows Motif, the portion of the Window Manager that contains the icons for all open applications.

icon box (n.)

In DECwindows Motif, the window that contains icons representing the available applications.

initial workstation diskette (n.)

The first key diskette created for the workstation as part of the client installation procedure. Copy the initial key diskette before modifying it to create key diskettes for other workstations. See also *key diskette*.

Internet (n.)

A group of networks that includes regional networks and local networks at universities and commercial institutions. See also *DECnet* and *TCP/IP*.

Job Spawner (n.)

A DECnet utility that runs as a background task and handles requests to your personal computer from other DECnet utilities.

keyboard mapping (n.)

The definition of keys stored in a file and used by an application. The file associates the key you press with the application's interpretation of that key.

key diskette (n.)

A diskette that is used to start up the personal computer or workstation and make network connections. The key diskette stores files with configuration information, optional user-specific information, and some DOS utilities. The key diskette is a type of boot media. See also *boot media* and *initial workstation diskette*.

keycode (n.)

The hexadecimal number assigned to a key for identification, regardless of how the key is defined or mapped.

keysym files (n.)

Files containing keyboard mapping information.

LAD (n.)

Local area disk. Digital's virtual disk software on a local area network. LAD provides high-performance disk services to DOS and OS/2 clients connecting to a VMS server. See also *virtual disk*.

LAN (n.)

Local area network. A self-contained network that offers a high-speed, reliable communication channel. LANs span a limited distance, such as a building or cluster of buildings, but can be connected to WANs with bridge devices.

landscape (adj.)

In printing, pertaining to a VMS form in which the text or image is parallel to the long side of the paper. See also *enhanced* and *portrait*.

LAN Manager (n.)

A software program from Microsoft that manages network tasks and coordinates communication between clients and servers.

LAN Manager Screen (n.)

LAN Manager's menu-oriented screen interface that lets you manage connections to network services.

LAST (n.)

Local Area System Transport. The network protocol used by the virtual disk server to send and receive data between computers. LAST provides LAN services to LAD drives.

LAT (n.)

Local area transport. A character-oriented communications protocol that operates on a LAN to permit communication between nodes and other devices such as terminals, printers, and modems. See also *LAN* and *SETHOST*.

LATCP (n.)

LAT Control Program. A utility that allows the management of LAT services from the client.

LAT node (n.)

A computer that has LAT software and can offer services, access services, or both. A LAT node can be either a PC, a terminal server or a service node. See also *service node* and *terminal server*.

LAT service (n.)

Any service offered on the LAT; a terminal service is the most common type of LAT services.

learning mode (n.)

In some text editors, a process that defines a sequence of keystrokes and associates them with a single key. Learning mode enables the text editor to automate repetitive edits.

line echo (n.)

A state in which whatever is displayed on the client screen is simultaneously sent to the default printer. The screen display is echoed on the printed page. See also *echo*.

link (n.)

The logical network connection to a computer or to an application.

list box (n.)

A part of a dialog box that displays a list, such as a list of available files, from which you can select.

local (adj.)

Stored on or connected to a client computer, such as a file or a printer. Local is the opposite of being available over a network. See also *remote*.

local area disk (n.)

See *LAD*.

Local Area Transport (n.)

See *LAT*.

local boot (n.)

A process in which a client operating system is loaded and started locally from either the hard disk or a key diskette. See also *remote boot*.

local printer (n.)

A printer that is connected directly to a client. See also *remote printer*.

logical (adj.)

Nonphysical. For example, logical can refer to a name in the software that represents a hardware device. Sometimes called a logical name. See also *logical device*.

logical device (n.)

A software name that identifies a hardware device for use by an application or program.

log file (n.)

A text file that contains messages describing events that occur during operation. Log files are updated frequently during operation and are useful for tracing system operation and errors. Log files are created by file servers, X servers, and many applications and utilities.

log on (v.)

To enter a user name and a password that identify the user and start the session. (Also called log in.)

LPT1, LPT2, LPT3, LPT4 (n.)

The default logical device names for local parallel printers. LPT1 is the default logical identification for the client local printer port.

Mail (n.)

A utility that lets users exchange messages with other users on the network.

mail address (n.)

In Mail, a user's node name and user name.

marked message (n.)

In Mail, a message you designate with the "Mark a message" command. Certain Mail processes can be run on the group of marked messages.

MB1, MB2, MB3 (n.)

Mouse button 1, mouse button 2, mouse button 3, respectively. Usually, MB1 is the left mouse button, MB2 the center button, and MB3 the right button; however, users can redefine the setup.

menu (n.)

A pull-down or pop-up list of available options. A menu takes the place of typed commands.

message (n.)

In Mail, text you create with an editor that you can then send to other users on the network. Also, text sent to you by another user.

message area (n.)

The last line on the SEDT screen. The SEDT editor uses this line to display prompts and informational messages.

message box (n.)

A dialog box that displays warnings and questions requiring immediate action, the current status of work in progress, and error messages.

message flag (n.)

In Mail, a code displayed next to a message indicating the status of that message.

mode line (n.)

In SEDT, the second line from the bottom of the screen. This line displays the current or default state of SEDT options.

modem (n.)

Shortened form of Modulator/Demodulator. A device that converts computer signals into signals that can be sent and received over a telephone line.

mouse (n.)

A pointing device that, when moved across a surface, causes a corresponding movement of the pointer on the screen. A mouse can have one or more buttons.

move (v.)

In DECwindows Motif, to delete text from one location and to put it in another location in the same window, another window, or another application.

multicast (adj.)

Pertaining to a type of network addressing that enables a node to send messages to any node on the network that has been configured to recognize a multicast address. See also *Broadcast message* and *service announcement*.

NCP (n.)

See *Network Control Program*.

NDIS (n.)

The Network Device Interface Specification written jointly by Microsoft Corporation and 3Com Corporation. By supporting NDIS, Digital enables any personal computer vendor's Ethernet controller to work under PATHWORKS for DOS software.

NetBEUI (n.)

NETBIOS Extended User Interface. NetBEUI is a local area network transport that lets users share resources. See also *DECnet* and *TCP/IP*.

NETSTAT (n.)

A TCP/IP utility that shows the status of the network.

network (n.)

A group of servers, clients, and devices that are connected to each other by communications lines to share information and resources.

network adapter (n.)

See *network controller*.

network controller (n.)

A combination of hardware, firmware, and software that controls the transmission and reception of data between a workstation or server and the network. For example, a DEPCA is an Ethernet network controller that connects a personal computer to the network. Also known as a *network adapter*.

Network Control Program (NCP) (n.)

A DECnet utility used to monitor, manage, and configure network nodes.

Network File Transfer (NFT) (n.)

A DECnet utility used to transfer files on a DECnet network.

network path (n.)

A means of identifying and locating services on the network. A network path consists of the server name and service name.

network topology (n.)

The configuration of wires, cables, and nodes in a network.

NFT (n.)

See *Network File Transfer*.

node (n.)

An individual computer, such as a server or client, that can communicate with other computers in a network.

node address (n.)

A unique numerical identification of a node in a network. A node address includes the area and node number.

node name (n.)

A name uniquely identifying a node within a network. The node name must be alphanumeric and contain at least one alphabetic character.

In DECnet, a valid node name is one to six characters in length. An example of a DECnet node name is SERVR7.

In TCP/IP, a valid node name is one to sixteen characters in length, separated from its domain specification by a period. An example of a valid TCP/IP node name (including a domain specification) is alberteinstein.princeton.edu.

node number (n.)

A number uniquely identifying a specific node in the area.

nontransparent file access (n.)

File access through protocol stack utilities such as NFT or FTP.

options menu (n.)

In DECwindows Motif, a menu that allows users to customize aspects of the application.

panning (v.)

To move parts of the virtual screen area into your viewing area with your pointing device.

parallel (adj.)

In data transmissions, pertaining to a method of information transfer in which all bits in a character are transmitted simultaneously, rather than sequentially, on different lines or channels. See also *serial*.

parallel port (n.)

The hardware component used to connect a client to a device that uses parallel data transmission, such as a parallel printer.

parallel printer (n.)

A printer that has a parallel data communications interface. See also *parallel port*.

parameter (n.)

One or more variables that are passed to a program or command before execution. A parameter can be a file specification, option, or device name.

In the following example, filename.txt and LPT1: are parameters of the NET PRINT command:

```
NET PRINT filename.txt LPT1:
```

See also *qualifier*.

partition (n., v.)

A section of a hard disk (*noun*).

To divide a hard disk into sections (*verb*).

password (n.)

A string of characters that uniquely confirms the identity of a user to the system. See also *user name*.

paste buffer (n.)

A temporary storage area that holds text after it has been cut or copied from a document.

path name (n.)

A default, predefined sequence of directories to be searched when a program or utility looks for a file. Directory names in the path are separated by semicolons. See also *search path*.

personal computer (n.)

See *client*.

personal file service (n.)

A file service that contains a user's DOS data and text files as well as server files. A personal file service is protected from other users by a user name and a password.

physical queue (n.)

A name that corresponds to the physical terminal line for a printer port. See also *generic queue*.

PING (n.)

A TCP/IP utility that lets you know if a specific node can be reached.

point (v.)

To position the pointer where you want the next action to occur.

pointer (n.)

A symbol on the screen that moves in reflection of the movement of the mouse. In many windows interfaces, the shape of the pointer indicates the type of operation being performed.

pop (v.)

In DECwindows Motif, to move a window or icon to the front or top of a stack.

pop-up menu (n.)

In Mail, a menu that is displayed when you choose certain options on the menu bar.

In DECwindows Motif, a context-sensitive menu that appears at the pointer position when you press the mouse button defined for the pop-up menu function.

portrait (adj.)

In printing, pertaining to a VMS form in which the text or image is parallel to the short side of the paper. A standard business letter is in portrait mode. See also *enhanced* and *landscape*.

printer service (n.)

The availability of a printer that is connected to a server. From the client, users run network commands to access a print service and print files. A file server makes a print service available to clients. See also *shared printer*.

print queue (n.)

A list to which files are added to be printed on a specific printer.

privileges (n.)

The level of access to the system or service that a user is allowed. Also, a characteristic assigned to a user or program that determines what operations the user or program can perform.

profile (n.)

A set of information about a client or a user. The profile provides information the server may require to recognize the client or the user.

prompt (n.)

A request to the user from the software for information or an input signal.

prompt line (n.)

In Mail, the line at the bottom of the screen that asks you for information.

protection code (n.)

In the VMS operating system, a means of specifying who has rights to a particular file and the type of rights, for example, read or write.

protocol (n.)

A set of rules that governs the format and timing of messages sent and received over a communication link. For example, DECnet and TCP/IP are network protocols.

protocol stack (n.)

See *protocol*.

public file services (n.)

File services to which users connect using the default account without specifying a username and password. Users connecting in this way are automatically allowed access to public services.

pull-down menu (n.)

A menu that is displayed when you position the pointer on a menu name in the menu bar and press a mouse button.

In Mail, a menu containing commands that are displayed when you click on the menu name and hold MB1.

push (v.)

In DECwindows Motif, to move a window to a lower position or to the bottom position in a stack.

push button (n.)

In DECwindows Motif, a rectangular box on the screen labeled with the name of a command to be performed. Push buttons enable you to execute commands quickly.

qualifier (n.)

A portion of a command that modifies the action by setting or selecting one of several options. For example, in the following command, /COPIES is a qualifier with a value of 3.

```
NET PRINT filename.txt LPT1: /COPIES=3
```

See also *parameter*.

read-write access (n.)

The privilege to copy (read) or save to (write) a file, application, or disk area.

redirect (v.)

To assign a logical device name, which is a local representation of a physical device on the network.

redirector (n.)

The software that interprets instructions for operating system drives and sends these instructions to remote network services.

remote (adj.)

Stored on or connected to a server or other computer and available to a client over the network only. Remote is the opposite of local. See also *local*.

remote printer (n.)

A printer connected to a server on the network. See also *local printer*.

resource (n.)

A service that is available to the client. A source of information or an available means to complete a task. Examples of network resources are applications, file services, disk services, and printers. Resources can be either local or remote.

right-pointing cursor (n.)

In Mail, a pointer in the Browser that points to the current message.

ruler line (n.)

In SEDT, the line above the text area containing the SEDT ruler tab and margin settings.

script (n.)

A text file containing a series of commands that performs the commands automatically.

scroll bar (n.)

In DECwindows Motif, a component along the side and/or across the bottom of a window that contains a slider and stepping arrows. The scroll bar allows you to move the work area over a block of information that is too large to be displayed at one time. See also *slider* and *stepping arrow*.

search path (n.)

The series of directories and subdirectories that DOS follows to locate a file. See also *path name*.

serial (adj.)

In data transmission, pertaining to a method of data transfer in which bits of information are sent one at a time on a single channel. In the PATHWORKS environment, serial transmission is always asynchronous. See also *asynchronous communication* and *parallel*.

serial port (n.)

The hardware component that connects the personal computer or workstation to a serial communication device, such as a modem, terminal, or serial printer. See also *serial*.

serial printer (n.)

A printer that has a serial communications interface. See also *serial* and *serial port*.

server (n.)

A computer running software that controls access to resources such as file, printer, disk, or communication services. See also *client*.

service (n.)

The availability of files, devices, or disks that let clients access resources on the network or on a server. A service enables a client to use resources on a printer, on the network, or on a server. See also *disk service, file service, print service, shared resource*, and *virtual disk service*.

service name (n.)

A label (name) the user or system administrator gives to a file, printer, or disk service to make any one of these services available to other users. For example, PCCOMMON is the service name of the common file service.

session (n.)

The logical link between a client or terminal and a server.

SETHOST (n.)

A terminal emulator. With SETHOST, clients can establish terminal sessions to host systems and act as terminals connected to a host computer.

shared communication device (n.)

In LAN Manager, a communication device available on the network. See also *communication service.*

shared directory (n.)

In LAN Manager, a file service available on the network. See also *file service.*

shared printer (n.)

In LAN Manager, a printer available on the network. See also *printer service.*

shared resource (n.)

In LAN Manager, a service available on the network. See also *service.*

share-level security (n.)

In LAN Manager, a type of security that limits access to each shared resource by requiring a password. The password is assigned to the resource rather than to the user. See also *user-level security.*

sharename (n.)

In LAN Manager, a network service name.

slider (n.)

In DECwindows Motif, a movable element within the scroll bar that enables users to move he work area area over a block of information that is too large to be displayed at one time. See also *scroll bar* and *stepping arrow.*

source (n.)

The drive, file, or media from which the user is copying or moving information. See also *destination* and *target.*

special characters (n.)

Any characters other than A through Z, 0 through 9, _, and $. Special characters include characters used in languages other than English, punctuation marks, and some monetary units. (Also called multinational characters.)

spool (n., v.)

Shared Peripheral Operation On Line. The process of sending data to a peripheral device *(noun)*.

To store data input or output between devices that operate at different speeds so the devices can operate efficiently. An example is spooling a print job from a fast computer to a slower printer *(verb)*.

spooler (n.)

A program that stores data until the data is ready for processing or printing.

station address (n.)

An address on a PATHWORKS client containing the client's node name and node address.

stepping arrow (n.)

In DECwindows Motif, a component of the scroll bar used to move a window incrementally through information that is too extensive to be displayed at one time. See also *scroll bar* and *slider*.

stream (adj.)

Pertaining to a type of VMS file in which each record ends with a carriage return and line feed.

string (n.)

In a command line, an entry that contains more than one number or word and is enclosed in parentheses or quotation marks. Often, the words in a string are joined with underscores. In the following example, a string follows the equals sign:

```
NET PRINT/NOTE=(Final_draft_of_fiscal_report).
```

submenu (n.)

A menu that is subordinate to the main menu. It is associated with a pull-down or pop-up menu and is displayed in response to dragging the pointer over the submenu icon.

synchronous communication (n.)

A method of transmitting data using a timing signal. The timing signal synchronizes the transmitter and the receiver, eliminating the need for stop bits and providing efficiency in data transfer.

target (n.)

The drive, file, or media to which the user is copying or moving information. (Also called the destination.) See also *source*.

TCP/IP (n.)

Transmission Control Protocol/Internet Protocol. A set of protocols that governs the transport of information between computers and networks of dissimilar types. The Internet is a group of networks that includes regional networks and local networks at universities and commercial institutions. TCP/IP is an alternative to the DECnet network transport. See also *DECnet*.

terminal emulator (n.)

A program that lets you use the client as if it were a terminal connected to a host computer. The SETHOST utility is a terminal emulator.

terminate-and-stay-resident (TSR) (n.)

A program that stays in memory, running in the background, even after the user closes the application.

text area (n.)

In SEDT, the area between the ruler line and the mode line. See also *file line*, *mode line* and *ruler line*.

text-entry field (n.)

In DECwindows Motif, a dialog box option that allows you to enter text in a defined area.

toggle button (n.)

In DECwindows Motif, a square on-screen button for choosing one of two alternate states.

Token Ring (n.)

A combination of hardware, software, and firmware that controls the transmission of data between clients and servers on a network. The Digital Token Ring product consists of the DEC TRN Controller (DEQRA); device driver software; and firmware containing diagnostics, installation, and IVP (installation verification procedure).

Token Ring network (n.)

A LAN architecture in which a single control token is passed around the network ring to control communication between the stations. This ensures that only one station is transmitting on the ring at any time. See also *DECnet* and *TCP/IP*.

Transmission Control Protocol/Internet Protocol (n.)

See *TCP/IP*.

transparent (adj.)

Pertaining to a function that is invisible in operation. A user sees the results, but not the function.

transport (n.)

Network software that routes user data to its destination and controls the flow of data.

TSR (n.)

See *terminate-and-stay-resident*.

ult2dos (n.)

An ULTRIX utility that converts ASCII files from an ULTRIX format to a DOS format. See also *dos2ult*.

UAF (n.)

See *user authorization file*.

UIC (n.)

See *user identification code*.

ULTRIX server (n.)

In PATHWORKS, a VAX, MicroVAX, or RISC computer that runs the ULTRIX operating system and PATHWORKS for ULTRIX, the server software that offers clients network resources such as files, applications, and remote printing. Sometimes called an NFS server.

USE (n.)

A network utility that lets you manage your connections to servers, services, and applications.

user authorization file (UAF) (n.)

A VMS file that contains information specifying each user's access rights. See also *access control list* and *user identification code.*

user identification code (UIC) (n.)

A number that determines the type of access (read, write, execute, or delete) for files, mail, and common system commands a user is or is not permitted. See also *access control list* and *user authorization file.*

user-level security (n.)

In LAN Manager, a type of security in which a user account is set up for each user. Each user can access specific resources as defined for that user. See also *share-level security.*

user name (n.)

The name a user types when logging in to the system. The combination of the user name and password uniquely identifies a user account to the system. See also *password.*

user profile (n.)

Information provided to the server that may be required to recognize the user.

utility (n.)

A general-purpose program included in a system to perform common tasks.

virtual (adj.)

Having the attributes, but not the actual form, of something. For example, a virtual disk is space on a VMS disk that functions as if it were a DOS disk.

virtual disk (n.)

Space the disk server program sets aside on a VMS disk. The virtual disk, actually a VMS container file, functions like a DOS-formatted disk. Users can connect to the virtual disk through a DOS drive and can store, create, and maintain DOS files. See also *local area disk.*

virtual disk service (n.)

The availability of a virtual disk to clients over the network. At a client, users can make use of a virtual disk service with network commands and can then store data on and retrieve data from the virtual disk. A virtual disk server makes a virtual disk service available to clients.

VMS server (n.)

A VAX or MicroVAX computer running PATHWORKS for VMS, the VMS operating system and PATHWORKS server software offering clients network resources such as files, routers, remote printing, and applications.

VT320 terminal emulator (n.)

In Microsoft Windows, an application that lets you use your computer as if it were a terminal connected to a host computer. See also *terminal emulation*.

WAN (n.)

Wide area network. Two or more standard or extended LANs that are joined by DECnet routers, gateways, or Packet System Interface (PSI) software.

window (n.)

An area within a display that is specifically defined and dedicated to a certain application or portion of an application.

window manager (n.)

In DECwindows Motif, the software that manipulates windows on the screen. Examples of window managers are the X Window Manager and the Motif Window Manager.

workstation (n.)

See *client*.

wrap (v.)

To continue a long text line or command on the next line of the screen.

X client (n.)

A DECwindows Motif or X Window System application.

X server (n.)

The primary component of PC DECwindows Motif. It processes display requests from X applications and manages the screen. The X server also manages input from devices such as the mouse and keyboard and provides the input to the appropriate application. There are two X servers available with PC DECwindows Motif: DWDOS286 and DWDOS386. See also *X client, DWDOS286* and *DWDOS386*.

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