

CTOS

**Executive
User's Guide**

UNISYS

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**CTOS[®]
Executive
User's Guide**

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CTOS III 1.0
CTOS II 3.4
CTOS I 3.4
CTOS/XE 3.4
Standard Software 12.2
Priced Item

August 1992

Printed in USA
4357 4557-200

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About This Guide

This user's guide introduces some commonly used Executive utilities and features. It describes the types of tasks you can perform with the Executive and includes procedures for using Executive commands to perform those tasks.

Who This Guide Is For

This user's guide is intended for anyone who needs to use the Executive application. It does not require previous knowledge of any other product. If you have never used a workstation, however, you may find it helpful to work through *Introduction to CTOS® Systems*, a computer-based training package, before you use this manual.

What Is New in This Edition

This new edition of the *CTOS Executive User's Guide* documents the new window-interface SignOn application. In addition, this guide has been reorganized; see "Organization," below.

Organization

This user's guide is divided into the following sections:

Section 1. Getting Started

This section contains information that was formerly covered in the *Getting Started With Your Workstation* training package. It teaches you how to boot a workstation, use the keyboard and mouse, and sign on. It also provides an introduction to using Context Manager and explains the concept of a CTOS cluster.

Section 2. Using the Executive

This section explains what the Executive application is and describes how to issue commands.

Section 3. Understanding the File System

This section contains detailed information about storing, retrieving, and locating files on your workstation.

Section 4. Using Commands

This section describes many tasks you can perform with the Executive, as well as several features you can use to perform these tasks efficiently.

Section 5. Troubleshooting

This section explains some common problems you might encounter and how to solve them.

Glossary

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Conventions

The following conventions are used throughout this guide:

- New terms appear in *italics* the first time they are used. Usually their meanings become clear in context, but all italicized terms are defined in the glossary.
- Names of fields also appear in italics, for example, *[Password]* field.
- Command names are shown in bold type, for example, **Volume Status** command.
- Characters or words for you to type are also shown in bold type, for example, type **Yes**.
- Names of keys appear in small uppercase bold type, for example, **FINISH** or **GO**.
- Keystroke combinations, such as holding down the **CODE** key while pressing another key, are separated by a hyphen, for example, **CODE-DELETE**.
- The hand symbol (☞) indicates a shortcut or tip.

Where to Find More Information

The Executive is packaged with Standard Software as part of the CTOS operating system. The following products are included in the documentation set for Standard Software:

CTOS Computer-Based Training: Introduction to CTOS Systems

This interactive online training package presents lessons and exercises to familiarize new users with basic workstation and Executive operations.

CTOS Executive Reference Manual

This manual provides detailed information about the Executive commands that are packaged with Standard Software.

CTOS System Administration Guide

This manual describes how to configure and maintain CTOS computer systems.

CTOS Editor User's Guide

This guide describes how to use the Editor application to create or modify ASCII text files.

CTOS Status Codes Reference Manual

This manual lists error codes in numerical order and describes their meanings.

Section 1

Getting Started

What Is a Workstation?

Your workstation is a computer that you use to replace or enhance some of the manual aspects of your job. It is made up of *hardware*, which is the equipment itself, and *software*, which are the programs you use to do your work.

Your Workstation's Hardware

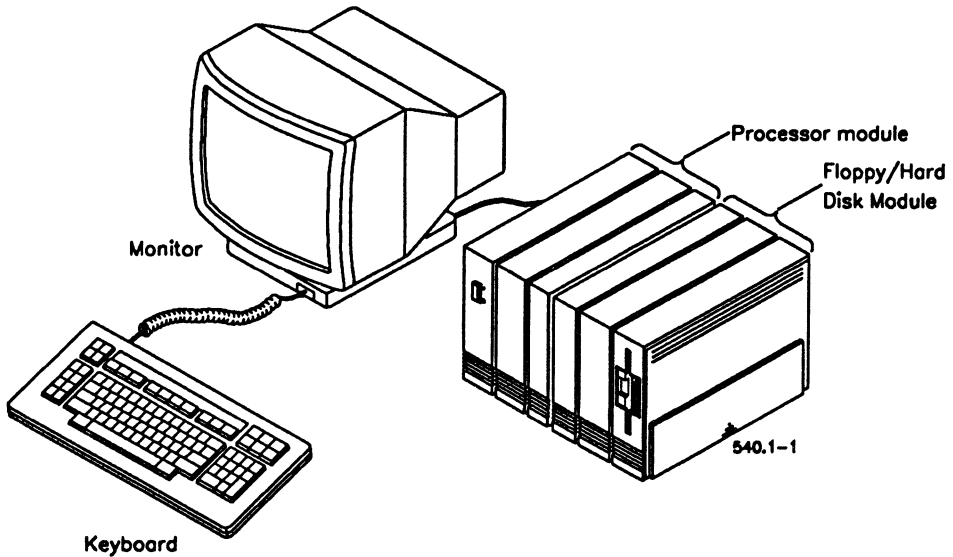
Workstations are available in a variety of models. Figure 1-1 shows a typical CTOS workstation. All workstations have a processor, a keyboard, and a video monitor. Many workstations are also equipped with a hard disk, a floppy disk drive, a mouse, or other combinations of modules and cartridges, which provide additional capabilities and features.

Your Workstation's Software

A writer uses a word processing program to take the place of a paper and pencil. An accountant uses a spreadsheet program instead of a ledger. Word processing and spreadsheet programs are called *applications*. Another application, called the Executive, provides commands to help you manage your workstation's data. Most people use a number of different applications on their workstations.

In addition to application programs, your workstation's software includes an *operating system*, called CTOS; it controls all programs and devices on the system.

Figure 1-1. CTOS Workstation



Booting a Workstation

When you press the On switch, your workstation goes through a series of events, which include performing a self-test and loading the operating system, before it is ready to use. The terms *boot* or *bootstrap* are commonly used to describe that sequence of events.

At some work places, you may leave your workstation turned on at all times; at others, you may turn it off at the end of your shift. In either case, it is a good idea to be familiar with the booting procedure. If there is a power failure, turn your workstation off immediately and then reboot it when power is restored.

To boot your workstation, follow these steps:

1. Locate the On/Off switch and the Reset button on your workstation (see the user's guide for your workstation).
2. If the switch is On, press the Reset button; if the switch is Off, move it to the On position.

In a few moments, the following appears on your screen. (Do not be alarmed if this takes several seconds or longer; the amount of time varies from workstation to workstation.)

```
*****
```

```
L .....
```

As your workstation boots, various pictures and text appear on the screen, accompanied by flashing lights on the keyboard and other workstation components. When the booting sequence is complete, a SignOn form appears. The procedure for signing on to a workstation is described later in this section.

Using the Keyboard

If you are just beginning to use a computer keyboard, be careful to use the correct keys when you type numbers. On a printed page, the numeral one (1) and lowercase letter el (l) look almost identical. To your workstation, however, they are different. The same is true of the numeral zero (0) and the capital letter oh (O).

In addition, the **SHIFT LOCK** key works differently on a computer keyboard than on a typewriter. On a computer, **SHIFT LOCK** affects only the alphabetic keys. You must keep the **SHIFT** key depressed to type punctuation marks that are located in the uppercase position.

Typing Combination Keystrokes

A computer keyboard contains keys that are not found on a typewriter keyboard. Among those keys are the **CODE** key and the **ACTION** key. They are called control keys and are used in combination with some other key to carry out a specific function.

To issue a combination keystroke, you hold down the control key and then press the additional key that carries out a function. For example, try this exercise:

1. On the Executive command line, type any characters (for example, **abcd**).
2. Hold down **CODE**.
3. Press **DELETE**.

Notice that the characters you typed on the command line are cleared.

☛ Most fields in the Executive and other applications can be cleared by pressing **CODE-DELETE**.

In some cases, the **SHIFT** key is also used as a control key. For example, you may be instructed to type **CODE-SHIFT-RIGHT ARROW**. In such a case, you keep both control keys depressed while you press the key that carries out the function.

Positioning the Cursor

On your screen, a cursor shows you where the next character will appear when you type it. On most workstations, the keyboard cursor is a flashing underline character or a solid box. You use the following keys to move the cursor:

Down one line	RETURN, NEXT, DOWN ARROW, or TAB
Up one line	UP ARROW
One character right	RIGHT ARROW
One character left	LEFT ARROW
Five characters right	SHIFT-RIGHT ARROW
Five characters left	SHIFT-LEFT ARROW
First character in a field	CODE-LEFT ARROW
Last character in a field	CODE-RIGHT ARROW

Note: *LEFT ARROW and RIGHT ARROW move only when characters are present on the line where the cursor is positioned.*

Correcting Typing Errors

Typing errors are easily corrected with the following keys:

- To erase the character to the left of the cursor, press **BACKSPACE**.
- To erase the word to the left of the cursor, press **CODE-BACKSPACE**.
- To erase the character where the cursor is positioned, press **DELETE**.

Using a Mouse

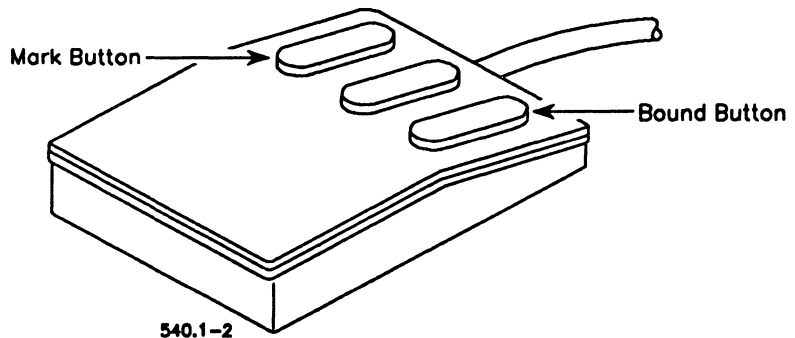
The mouse is an electronic pointing device that plugs into your keyboard. When you slide the mouse around on your desk, an arrow-shaped or rectangular cursor moves on your screen. With some commands and applications, the mouse can be used in place of a keyboard.

The Mouse Buttons

Your mouse has either two or three buttons. On a right-handed mouse, your index finger rests on the leftmost button, and your second or third finger rests on the rightmost button. The leftmost button is called **Mark** and the rightmost button is called **Bound**, as shown in Figure 1-2.

In general, **Mark** is used to select a function, while **Bound** and the middle button are used for other purposes, depending on the application you are using.

Figure 1-2. Three-Button Mouse, Right-Handed



You use the mouse buttons in the following ways:

Click	Depress a button and immediately release it.
Double click	Click a button twice in rapid succession.
Press	Keep a button held down.
Drag	Hold down a button and move the mouse at the same time.

Making Selections With the Mouse

When you use the mouse with the Executive, you make selections from menus and forms on the screen. To make a selection with the mouse, follow these steps:

1. Position your right hand so that your index finger rests on the **Mark** button.
2. Move the mouse on your desktop until the cursor (or, in some cases, a highlight bar) is positioned on the item you want to select.
3. Click the **Mark** button.

In some cases, double clicking the **Mark** button is required to select and then activate an item. See the documentation for individual applications and commands for more detailed information.

For information about using a mouse to draw with, see the documentation for your graphics application.

Configuring a Left-Handed Mouse

If you are left-handed, the mouse buttons can be reversed by adding the following entry to your user configuration file:

```
:LeftHanded:Yes
```

For more information, ask your system administrator, or see "Customizing User Environments," in the *CTOS System Administration Guide*.

Signing On

Before you can use the Executive or any other application, you need to *sign on* to your workstation. When you sign on, you enter a user name and, if required, an access password. Your user name determines the commands and applications that are available for you to use.

Different users, who may share the same workstation, can have varying levels of access, depending on how their user names are set up. For more information about user names, see "Customizing User Environments," in the *CTOS System Administration Guide*.

After your workstation boots, a SignOn screen appears. Depending on the configuration of your workstation, you may see either the conventional or the window-interface SignOn screen. Both screens, with procedures for signing on, are described below.

Signing On With the Conventional SignOn Screen

The conventional SignOn screen contains text, followed by a form for you to fill in, as shown in Figure 1-3.

Figure 1-3. Conventional SignOn Screen

User name	Enter a user name, an application name or leave this line blank to display a command prompt.
Password	Enter your assigned password (optional).
Day/Date/Time	Enter the current day, date and time (if not already set).
Environment	Enter the name of the user environment (optional).

540.1-3

Then press the GO key.

User name (e.g. Pam)

Password

Date/Time (e.g. Fri Dec 13, 1991 10:00am)

User environment

To sign on, follow these steps:

1. Type your user name on the first line of the SignOn form.
2. Press **RETURN**.
3. Type your password on the second line of the SignOn form.
4. Press **RETURN**.
5. Type the date and time on the third line of the SignOn form. Follow the example shown in the SignOn form when you enter them.
6. Press **GO**.

***Note:** The User environment field is optional and has been intentionally left out of this procedure. For information about it, see the CTOS System Administration Guide or ask your system administrator.*

☞ On some workstations, you can sign on simply by pressing **GO**. Try that if you do not have a user name.

If the system does not recognize a valid user name, check for blank spaces before the user name in the SignOn form. To correct this condition, press **CODE-DELETE** to clear the line; then retype the user name.

Signing On With the Window Interface

The window-interface SignOn screen is pictured in Figure 1-4. The purpose of a window interface is to provide a predictable look and feel for commands and applications, so that they are easy to learn and use. Many CTOS-based applications are now being designed with a window interface.

Figure 1-4. Window-Interface SignOn Screen

SignOn

User name	Enter a user name, an application name or leave this line blank to display a command prompt.
Password	Enter your assigned password (optional).
Day/Date/Time	Enter the current day, date and time (if not already set).
Environment	Enter the name of the user environment (optional).

Select LOGIN to display the SignOn form.

540.1-4

The following procedure provides brief instructions for signing on with the window interface. For detailed information about using the window interface, see *CTOS XVT Character User Interface, Getting Started*.

1. Position the cursor on the LogIn pushbutton. (The boxes surrounding LogIn, About, and Help are called pushbuttons.)

Most likely, the cursor is already properly placed; if it is not, use one of the following methods to position it:

- Move the mouse pointer to the LogIn pushbutton; then click **Mark** on the mouse.
- Press **TAB** to move the cursor to the LogIn pushbutton.

2. Press **RETURN**.

The following form is displayed. The cursor should be flashing in the *Name* field. If it is not, press **TAB** to position it.

```

+-----+
| Login |
+-----+
| OS Version III vCistrLfs 1.0 |
| Date/Time Aug 24, 1992 10:00 AM |
| Name [-] |
| Password [ ] |
| Date/Time [ ] |
| Environment [ ] |
| OK Cancel Help |
+-----+

```

540.1-A

3. Type your user name.
4. Press **TAB**.
5. Type your password.
6. Press **TAB**.
7. Type in the date and time, using a three-character abbreviation for the month, as shown in the following example:

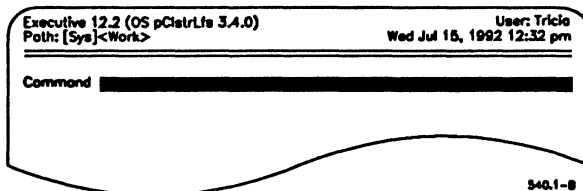
Aug 24, 1992 10:00 AM

8. Press **RETURN**.

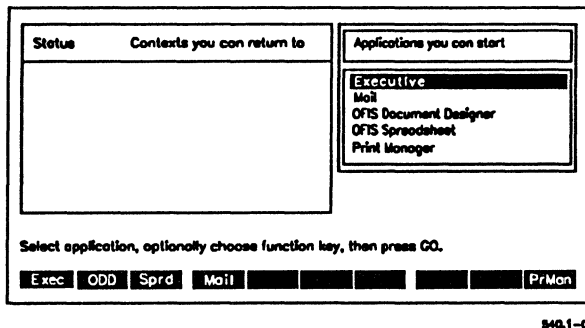
Note: *The Environment field is optional and has been intentionally left out of this procedure. For information about it, see the CTOS System Administration Guide or ask your system administrator.*

After you sign on, either the Executive or the Context Manager screen appears, as pictured below. If the Executive screen appears, it is ready to use (see Section 2, "Using the Executive"). If the Context Manager screen appears, you start the Executive with Context Manager, as described in the following section.

Executive Screen



Context Manager Screen



Using Context Manager

Context Manager is a powerful feature that allows your workstation to run several applications at the same time. A sample Context Manager screen is pictured in Figure 1-5. Notice that it is divided into two boxes:

- The box on the right tells you which applications you can start with Context Manager.
- The box on the left tells you which applications you have already started.

Figure 1-5. Context Manager Screen

Status	Contexts you can return to	Applications you can start
		Executive Mail OFIS Document Designer OFIS Spreadsheet Print Manager

Select application, optionally choose function key, then press GO.

Exec	ODD	Sprd	Mail					PrMan
------	-----	------	------	--	--	--	--	-------

540.1-C

Starting the Executive With Context Manager

To start the Executive with Context Manager, follow these steps:

1. Use the **DOWN ARROW** and **UP ARROW** keys to position the highlight on Executive (see Figure 1-5).
- ☞ Pressing **RETURN** or **NEXT** also moves the highlight down one line at a time.
2. Press **GO**.

Starting Other Applications With Context Manager

After you have started the Executive (or any other application), you can switch back to the Context Manager screen and start another application. To do so, follow these steps:

1. While the Executive screen is displayed, press **ACTION**.
2. Then, while holding **ACTION** down, press **GO**.
3. Press **RIGHT ARROW** to move the highlight to the “Applications You Can Start” box.

4. Move the highlight to the application you want to start.
5. Press **GO**.

See also your Context Manager manual for more detailed information.

Switching Contexts

When two or more applications are running on your workstation with Context Manager, you can switch from one application to another by pressing **ACTION-NEXT**.

To return to the Context Manager screen, press **ACTION-GO**.

Exiting Applications

You exit most applications by pressing **FINISH**. In some cases, your work is automatically saved when you exit, in others, it is not. Always check the documentation to find out how to properly save before you exit any application.

See “Exiting,” in Section 4, for information about exiting the Executive.

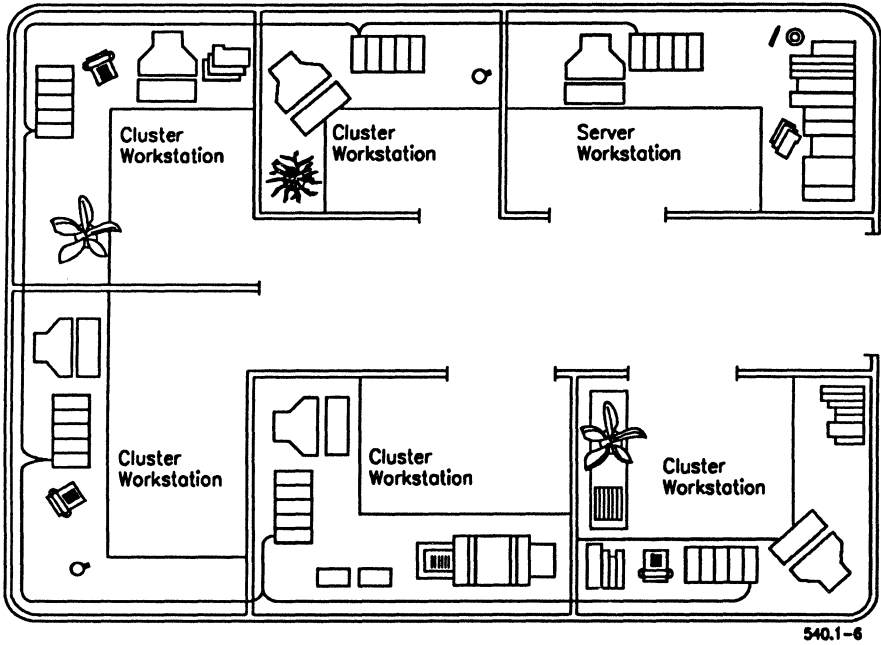
Using the Cluster

Your workstation may be part of a group of workstations connected to a server. The server can be either a workstation similar to your own or a larger system called a shared resource processor (SRP). The group of workstations and the server to which they are connected is called a cluster, as shown in Figure 1-6.

From your cluster workstation, you have access to disks that are located on the server. Co-workers can use disks on the server to share the files and applications that are stored there. The server also provides access to printers and other devices such as modems or tape drives.

The way in which servers are used varies greatly from workplace to workplace. Check with your system administrator for specific information about the server in your cluster. See “Using Files on the Server,” in Section 3, for information about accessing disks on your server.

Figure 1-6. Workstations in a Cluster



Section 2

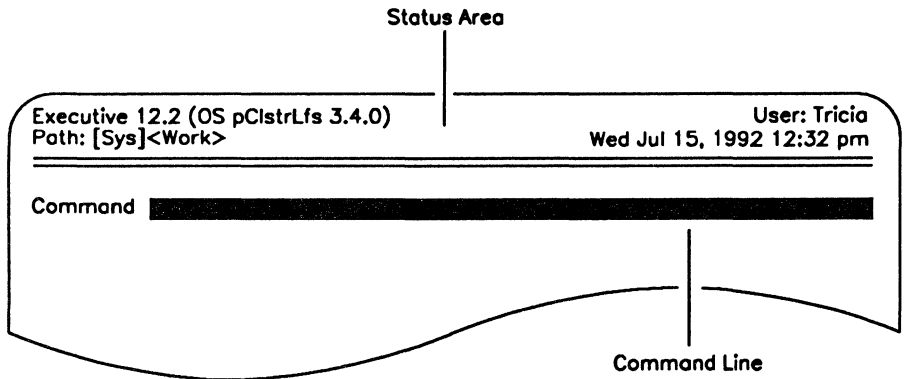
Using the Executive

Introducing the Executive

The Executive is a utilities tool kit for your workstation. A utility is a command that carries out a specific task, such as copying files or backing up a disk. You use Executive utilities, in conjunction with your other applications, to manage the file system and to obtain information about the status of your workstation. In addition, you can use the Executive to start most other applications.

The Executive screen is pictured in Figure 2-1 and described below.

Figure 2-1. Executive Screen



540.2-1

The status area displays the following information about your workstation:

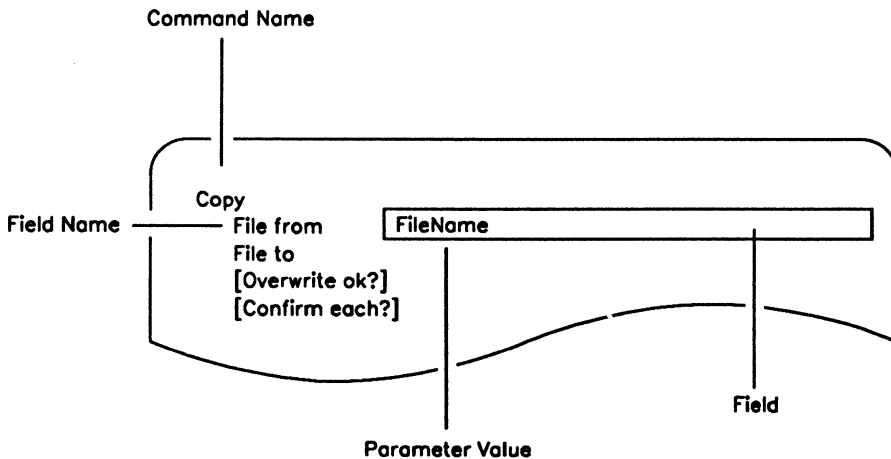
- Name and version number of the Executive
- Name and version number of the operating system
- User name you signed on with
- Default path setting (explained in Section 3)
- System date and time

The Command line is the Executive's "ready" prompt. When the Command line appears, you can issue commands to the Executive. Instructions for issuing commands are included later in this section.

Using Command Forms

When you issue a command, you use a command form to supply information to the Executive. Each command has its own command form. The Copy command form shown in Figure 2-2.

Figure 2-2. Command Form



540.2-2

- A *field* is the line where you supply information about how you want the command to be carried out. All fields start out blank.
- A *field name* tells you what kind of information to supply in each field.
- A *parameter value* is the information you supply by typing characters or words into a field.

There are three types of fields: mandatory, optional, and query. Certain conventions are used in field names to help you determine what type of parameter value to enter. Field types and field name conventions are described below.

Mandatory Fields

Most command forms contain *mandatory fields*, which you must fill in before you can execute the command. Field names for mandatory fields are not enclosed in brackets. In the **Copy** command form, the first and second fields, *File from* and *File to*, are mandatory (see Figure 2-2).

If you leave a mandatory field blank, an error message appears, for example:

```
Parameter on line 1 is invalid or missing
```

Optional Fields

Most command forms also contain *optional fields*. Field names for optional fields are enclosed in square brackets ([]). In the **Copy** command form, *[Overwrite ok?]* and *[Confirm each?]* are optional fields (see Figure 2-2).

When you leave an optional field blank, the Executive uses a default value. A default is a predetermined value that allows the command to be executed in one particular way. The *CTOS Executive Reference Manual* lists the default values for each command.

Optional fields may not always be optional on your own workstation, though. For example, the *[Password]* field, which is present in many command forms, is always optional because a password itself is an optional feature on your workstation. Depending on how your workstation is set up, however, a password may be required for you to carry out a command.

Query Fields

Some field names appear as questions and define *query fields*. Field names for query fields end with a question mark (?). The only possible response to a query field is **Yes** or **No** (Y or N also work).

Query fields are always optional and, with very few exceptions, the default value is No. In the **Copy** command form, *[Overwrite ok?]* and *[Confirm each?]* are query fields (see Figure 2-2).

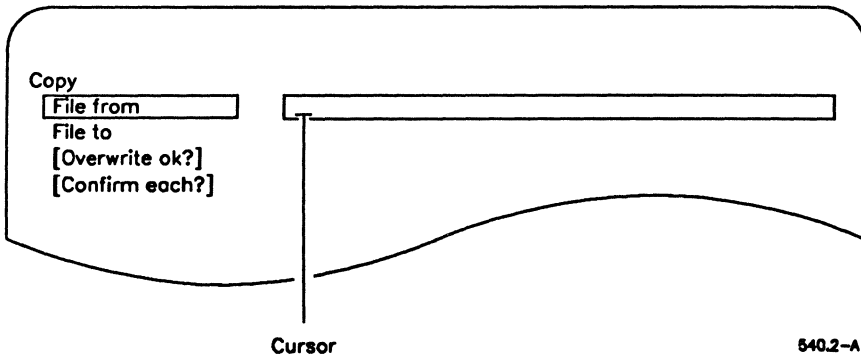
Issuing a Command

The procedure for issuing commands is described in the following steps:

1. Type the name of the command on the Command line, as shown in the following example:

Command Copy

2. Press RETURN to display the command form.



3. Position the cursor on the first field you want to fill in.
To move the cursor down, press RETURN, NEXT, or DOWN ARROW.
To move the cursor up, press UP ARROW.

4. Type the parameter value for that field; then, move on to the next field.

The command is not being executed at this point, so you can move the cursor, make corrections, or change parameter values. To move the cursor from side to side (after characters have been typed in a field), use **LEFT ARROW** and **RIGHT ARROW**. To delete characters to the left of the cursor, press **BACKSPACE**. To delete the character where the cursor is positioned, press **DELETE**.

☞ To delete all characters in a field, press **CODE-DELETE**.

5. Press **GO** to execute the command. (It does not matter where the cursor is positioned when you press **GO**.)

Note: Some commands do not have a command form. In those cases, you are prompted to press **GO** after you have pressed **RETURN**.

Abbreviating Command Names

Many commands have long names to describe their functions. However, you do not need to type the entire command name when you issue most commands.

To abbreviate a command name, type as much of it as is necessary to make it different from any other command name. Most command names can be abbreviated in several different ways. Table 2-1 provides some suggestions. When command names contain more than one word, each word can be abbreviated by separating word portions with a space.

If more than one command begins with the letters you type, the Executive displays a list of those commands. For example, if you type **Cre** for the **Create Directory** command, a list similar to the one below is displayed:

Commands are:

Create Configuration File

Create File

Create Directory

Create Message File

Compare the command names; then, type enough of the command name to make it unique, for example, **Cre D** for **Create Directory**.

Table 2-1. Command Name Abbreviations

Command Name	Possible Abbreviation
Create Directory	Cre Dir
Delete	Del
Files	Fll
Format Disk	F D
Logout	Logo
Remove Directory	R D or Rem Dir
Rename	Ren
Restore Archive	R A or Res Arc
Selective Archive	S A or Sel Arc
Volume Archive	V A or Vol Arc
Volume Status	V S

Section 3

Understanding the File System

What Is the File System?

The *file system* is the information stored on your workstation's disks. Whenever you use your workstation, you are using the file system.

The information on your disks is organized in *files*. Some files contain programs, others contain the documents, spreadsheets, and pictures you create with applications. Files are stored in *directories*, which are subdivisions of space for storing groups of similar files. Directories and the files they contain are stored on *volumes*, which are the disks located inside your workstation. Figure 3-1 gives you an idea of how files and directories are organized on a disk.

File Specifications

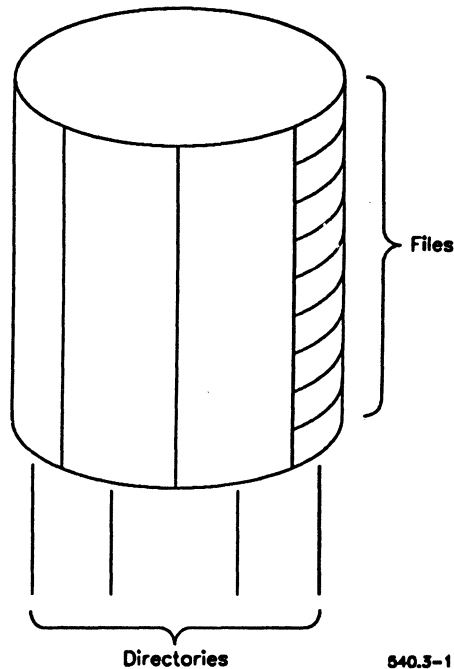
Each file has a name that is unique on your workstation. This unique name is called a *file specification*. It is made up of the volume (disk) and directory where the file is stored, as well as the name of the file itself. File specifications consist of three parts and are written in the following format:

[Volume]<Directory>FileName

Example:

[Sys]<Work>Chapter1

Figure 3-1. Organization of a Volume (Disk)



Each part of the file specification contains information about where the file is located:

- | | |
|--------------------------|---|
| <i>[Volume]</i> | Identifies the volume where the file is located. The volume name is surrounded by square brackets ([]). |
| <i><Directory></i> | Identifies the directory in which the file is stored. The directory name is surrounded by angle brackets (< >). |
| <i>FileName</i> | Identifies the individual file itself. The file name is not surrounded by brackets. |

When you issue a command, such as **Copy** or **Delete**, the file specification tells the Executive where the file is located. The Executive then locates the file by searching first for the volume, then the directory, and finally the file itself.

Using the Path Setting

You don't always need to type lengthy file specifications into command forms. The *path* setting at the top left of the status area contains the volume and directory portions of a file specification (see Figure 2-3), for example:

```
Path: [Sys]<Work>
```

The path setting is your *default* or *active* volume and directory. This means that the path setting can be substituted for the volume and directory portions of a file specification. If the file you want to use is stored in your default path, you only need to type the file name itself in the command form, for example:

```
Delete
File list      Chapter1
[Confirm each?] _____
```

The Executive automatically adds the default volume and directory in front of the file name to complete the file specification. For example, if your path setting is *[Sys]<Work>*, the Executive assumes that the file specification for "Chapter1" is *[Sys]<Work>Chapter1*. This can be a significant timesaver for you.

Overriding the Path Setting

To use a file that is not stored in your default path, you override the path setting by typing a file specification in the command form, for example:

```
Delete
File list      [Sys]<MoreWork>Proposal
[Confirm each?] _____
```

The Executive then ignores the default path setting and uses the volume and directory that you typed in the file specification. File specifications that are explicitly typed in command forms always override the default path setting.

You can change your path setting with the **Path** command; see "Path Setting," in Section 4.

Using Partial File Specifications

You can use partial file specifications in command forms. For example, if a file is located on your default volume but not in your default directory, you can abbreviate the file specification, for example:

```
Delete  
File list          <Work>Chapter1  
[Confirm each?]  _____
```

Remember the following guidelines as you begin to use file specifications:

- Use *FileName* alone when a file is stored in your default path.
- Use *<Directory>FileName* when a file is located on your default volume but is not in your default directory.
- Use *[Volume]<Directory>FileName* when a file is not located on your default volume (for example, if it is located on a floppy diskette or a hard disk at the server).
- If you begin the file specification with a volume name, you must follow with a directory name, and then a file name. For example, *[Volume]FileName* is not a valid file specification.

Using Passwords

Many workstations and servers are password protected to restrict or limit their use. When you sign on to your workstation, you have the option of entering a password. The password that you enter when you sign on becomes your default or active password. This means that the password is in effect for all commands you execute until you change it or remove it with the **Path** command (see “Path Setting,” in Section 4), or until you log out (see “Exiting,” in Section 4).

Sometimes you may need to use a password that is different from the one you signed on with, for example, to access a disk on the server. In that case, you can temporarily override the default password by appending a password in the file specification.

To append a password to a file specification, type a circumflex (^) after the file name; then type the password. To provide confidentiality, password characters appear as pound signs (#) when you type them, as shown below:

```
[Volume]<Directory>FileName^#####
```

To find out how passwords are implemented at your work place, ask your system administrator. See “Implementing System Security,” in the *CTOS System Administration Guide*, for information about assigning passwords.

Using Network Nodes

Some workstations communicate with other systems via the BNet networking application. With BNet, or a subset of its services, you can access disks on other systems, both in your own cluster and in other clusters. Check with your system administrator to find out whether a network is installed on your cluster.

Workstations and servers communicating via BNet are called *nodes*. You can access files stored on other nodes in your network by using a node name in the file specification. Node names are surrounded by braces ({}) and precede *[Volume]*, as shown below:

{Node}[Volume]<Directory>FileName

{Node} can also be included in your default path setting; see “How to Set the Default Path,” in Section 4.

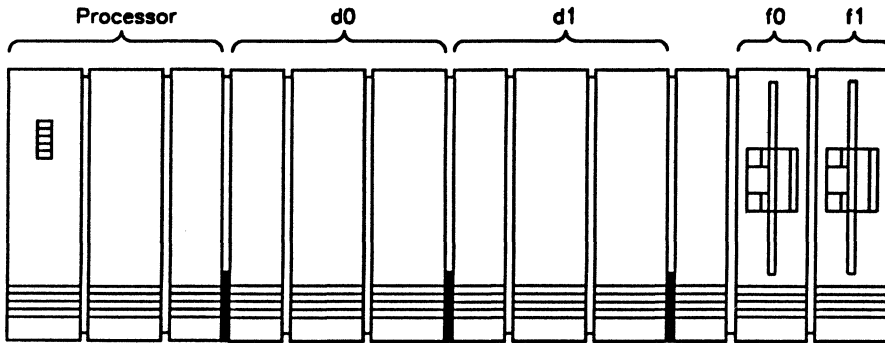
Volume and Device Names

The storage devices on your workstation or shared resource processor (SRP) can be called disks, devices, drives, or volumes. Sometimes the use of these terms is confusing. To understand them better, think of a floppy diskette. The magnetic material inside the covering of the floppy is the *disk*. The slot on your workstation into which you insert the floppy is the *drive*. Disks contain information; drives are mechanical devices that store and retrieve information on disks. Hard disks and hard disk drives are similar, except that they are permanently installed inside your workstation.

To function as a *volume*, a disk must be *initialized*, which makes it usable on your workstation (see “Initializing Disks,” in Section 4). When you initialize a disk, you give it a name, which becomes the volume name.

A *device* name indicates the position of each disk drive on your workstation. For example, if you have one floppy drive, its device name is *f0*; if you have a second floppy drive, its device name is *f1*. Hard disk drives are named *d0*, *d1*, and so on, as pictured in Figure 3-2.

Figure 3-2. Device Names on a Workstation



540.3-2

When you fill in command forms, you can use either the volume or device name to designate the disk you want to use. Many users prefer device names because they are shorter to type.

[Sys]<Sys>

Every workstation and SRP has a *[Sys]* volume. *[Sys]* is a pseudonym for the disk that contains the operating system and other files that are used when the system boots. (*[Sys]* also has ordinary volume and device names; see “Volume and Device Names,” earlier in this section).

The operating system is stored in the *<Sys>* directory on the *[Sys]* volume. Usually *[Sys]<Sys>* also contains application programs and configuration files. The following suffixes identify some of the files that reside in *[Sys]<Sys>*. Changing or removing any of these files will alter the way a workstation is set up or operates.

<i>.bin</i>	Binary message files
<i>.cmds</i>	Executive command files
<i>.config, .cnfg, or .cfg</i>	Configuration files
<i>.img</i>	Operating system files

<i>.jcl</i>	Batch files written in job control language (JCL)
<i>.lib</i>	Libraries used by applications programs
<i>.run</i>	Executable programs
<i>.sub</i>	Submit files
<i>.sys</i>	Operating systems, request files, or configuration files
<i>.user</i>	User configuration files

Volume and Directory Naming Rules

Volume and directory names can be up to 12 characters long and can contain letters, numbers, periods (.), and hyphens (-). Do not use spaces in volume or directory names. See also “Restrictions in Volume, Directory, and File Names,” later in this section.

File Naming Rules

File names can be up to 50 characters long and can contain letters, numbers, periods (.), and hyphens (-). For example:

Staff.memo

Book-Chap1

6-90.status

Do not, however, use a single period (.) or double periods (..) as a file name. Do not use spaces in file names.

See also “Restrictions in Volume, Directory, and File Names,” later in this section.

Restrictions for Volume, Directory, and File Names

The following characters are used for special purposes by the operating system. Do not use them in volume, directory, or file names.

- < > Angle brackets are used in file specifications (see “File Specifications,” earlier in this section).
- ' The apostrophe, also called a single quotation mark, is used to designate keyboard-literal symbols and to enter parameter values containing spaces (see “Entering Multiple-Word Parameter Values” and “Typing Symbols,” in Section 4).
- * The asterisk is a wild-card character (see “* and ? Wild-Card Characters,” in Section 4).
- @ The at-symbol designates the contents of a file as a parameter value (see “Listing Files,” in Section 4).
- \ The backslash is used for MS-DOS file specifications with ClusterShare and PC emulator software.
- { } Braces are used in file specifications (see “File Specifications,” earlier in this section).
- ^ The circumflex is used to append a password to a file specification (see “File Specifications,” earlier in this section).
- ! The exclamation point is used in path settings and file specifications to designate a volume located on the server.
- ? The question mark is a wild-card character (see “* and ? Wild-Card Characters,” in Section 4).
- [] Square brackets are used in file specifications (see “File Specifications,” earlier in this section).
- / The slash is reserved for use with hierarchical file systems.
- ~ The tilde is an exclusionary wild-card character (see the *CTOS Executive Reference Manual*).

The following suffixes have special meanings to certain applications. Do not use them when naming your own files:

- old* When you save a file with a text-editing application, the previous version (as it existed before your most recent editing session) is stored in a *-old* file.
- new* When you begin to edit a file with some applications, a temporary *-new* file is created.
- .ts* Text editing applications create and use typescript (*.ts*) files to recover your work in case of a power failure or other system problem.
- .tmp* Many commands and applications create temporary (*.tmp*) files during execution.

See the documentation for your text-editing application for more information about *-old*, *-new*, and *.ts* files. See “Cleaning Up a Disk,” in Section 4, for information about deleting *.tmp* files.

Using File Prefixes and Suffixes

File prefixes and suffixes are just what their names imply: the beginning and ending portions of a file name. Frequently a prefix or suffix is separated from the body of the file name by a period (.) or a hyphen (-).

The following file name is divided into three portions: a prefix, *Pubs*, defining a department; a body, *StaffMtg*, defining the contents of the file; and a suffix, *Renee*, defining the individual who created the file.

Pubs.StaffMtg.Renee

File suffixes and prefixes make it easy for you to locate groups of files with the Files command and to perform other commands, such as Copy, on groups of files. See “* and ? Wild-Card Characters,” in Section 4, for information about issuing commands on groups of files.

Using Files on the Server

From your workstation, you have access to disks located on the server, so that you can use the directories and files that are stored there. To use a disk on the server, type an exclamation point (!) in front of the volume or device name, as shown in the following example:

[/!d0]<Dir>FileName

The exclamation point is frequently referred to as *bang*, and saying “bang Sys” means *[/Sys]*, which is the system volume on the server.

You need to use the exclamation point only if your own workstation and the server both have a volume or device with the same name. For example, if your workstation has a *[d0]* and the server also has a *[d0]*, you must specify *[/!d0]* to use that disk on the server. However, if your workstation has no *[d1]* but the server does, simply typing *[d1]* gives you access to that disk on the server.

Similarly, if your workstation has no disks, you don't need to type the exclamation point. Diskless workstations automatically use a disk on the server.

Section 4

Using Commands

Tasks You Can Perform

You can use Executive utilities to perform tasks such as the following:

Backing up disks	To store archive copies of your work for protection from damage or system failure
Cleaning up disks	To maximize disk storage space
Copying files	To make duplicate copies of your work
Creating directories	To create electronic file cabinets, in which you organize your files
Deleting files	To remove obsolete files from your disks
Exiting	To log out of the Executive application
Initializing disks	To prepare disks for use on your workstation
Installing software	To add or update applications
Listing directories	To find out what directories are available on your disks
Listing files	To find out what files are stored in your directories
Moving files	To move files to different directories
Path setting	To change your default path
Printing	To print ASCII text files
Renaming files	To change the names of files
Screen setting	To change the characteristics of your screen

Procedures and commands for performing these tasks are included in alphabetical order on the following pages.

Special Features

The following features make the Executive a powerful tool for performing the tasks described above:

- | | |
|--------------------|--|
| * and ? wild-cards | For executing commands on more than one file |
| Macros | For performing more than one task with one command |
| Redo key | For repeating the previous command |

Instructions for using these features are also included in alphabetical order in this section.

What to Do Next

Begin anywhere you'd like, to look up a task or feature. For instance, you can start with a tour of your file system, as described in the following steps:

1. Read "Listing Directories," later in this section, and perform the procedures to find out about the directories on your disks.
2. Read "* and ? Wild-Card Characters" and "Listing Files," later in this section. Perform the procedures for experimenting with wild-card characters, which prepare you for using many other Executive commands.

You will find that this section contains useful concepts, procedures, and tips for using the Executive efficiently. When you need information contained elsewhere in this guide or in another manual, you are referred there.

* and ? Wild-Card Characters

Wild-card characters (sometimes called *metacharacters*) are one of the most powerful features of the Executive. A wild card is a special character that you use in command forms to substitute for all or part of a file or directory name. When you use a wild card, the Executive searches for every name that matches the characters you have typed, except for the wild card. You can use wild cards to locate files or directories when you can't remember exactly what you named them, to reduce typing in command forms, and to execute a command on a group of files.

Wild-card characters are the asterisk (*) and the question mark (?). The * wild card matches any, all, or no characters in a file or directory name; the ? wild card matches only one character. For example, "ab*z" matches all file names beginning with "ab" and ending with "z", regardless of how many characters are in between. In contrast, "ab?d" matches only those file names containing exactly one character between "ab" and "d".

Wild cards are easy to understand once you begin to use them. The following exercises demonstrate a few techniques for using wild cards with the Executive. The **Files** command, used in the exercises, displays the names of files that are stored on your workstation. See "Listing Files," later in this section, for more information about the **Files** command.

Using the * Wild Card

The * wild card matches a string of characters in a file or directory name. The following exercises, using the **Files** command, display groups of file names that the Executive locates with the * wild card.

* and ? Wild-Card Characters

Displaying All Files In a Directory

You can use the * wild card to specify all files in a directory.

1. On the Command line, type **Files**; then press **RETURN** to display the command form.
2. Fill in the command form as shown below:

```
Files
[File list (*)]           [Sys]<Sys>*
[Details?]               _____
[Print file]             _____
[Suppress sort?]        _____
[Max columns]           _____
[Sort by suffix?]       _____
[Suppress error message?] _____
```

3. Press **GO**.

When you use the * wild card in this manner, it matches every file name. Notice the file names that are displayed on the screen; many of them have suffixes such as ".run," which you will use in the next procedure.

4. Press **NEXT PAGE**, as prompted, to display all the files.

Displaying Groups of Files

You can use the * wild card to match a selected group of file names.

1. On the Command line, type **Files**; then press **RETURN**.
2. Fill in the command form as shown below:

```
Files
[File list (*)]           [Sys]<Sys>*.run
[Details?]               _____
[Print file]             _____
[Suppress sort?]        _____
[Max columns]           _____
[Sort by suffix?]       _____
[Suppress error message?] _____
```

3. Press GO.

When you use the * wild card in this manner, it matches every file name ending with the characters ".run".

4. Press NEXT PAGE, as prompted, to display all the files.

Using the ? Wild Card

The ? wild card matches exactly one character in a file or directory name. The following exercise demonstrates how to use the ? wild card.

1. On the Command line, type Files; then press RETURN.
2. Fill in the command form as shown below:

```
Files
[File list (*)]           [Sys]<Sys>Request.?.sys
[Details?]               _____
[Print file]             _____
[Suppress sort?]        _____
[Max columns]           _____
[Sort by suffix?]       _____
[Suppress error message?] _____
```

3. Press GO.

The ? wild card matches every file name that contains one, and only one, character between the periods.

To match exactly two characters, you use two ? wild cards, as shown in the following example:

```
Files
[File list (*)]           [Sys]<Sys>Request.??sys
[Details?]               _____
[Print file]             _____
[Suppress sort?]        _____
[Max columns]           _____
[Sort by suffix?]       _____
[Suppress error message?] _____
```

Try the above example; only file names with two characters between the periods will be displayed. If no file names match this wild card pattern (and there may not be any), nothing is displayed, and the Command line returns to the screen.

Using Combinations of Wild Cards

You can use up to eight wild cards in a command form field. The following exercise shows you how to use a combination of wild cards to locate file names ending with a period followed by exactly four characters.

1. On the Command line, type **Files**; then press **RETURN**.
2. Fill in the command form as shown below:

```
Files
  [File list (*)]           [Sys]<Sys>*.????
  [Details?]               _____
  [Print file]              _____
  [Suppress sort?]         _____
  [Max columns]             _____
  [Sort by suffix?]        _____
  [Suppress error message?] _____
```

3. Press **GO**.

Figure 4-1 shows how various wild cards and character combinations match a group of file names.

Figure 4-1. Wild Card Matches

File Names ↓	Wild Card Patterns as Typed In the Command Form				
	Da*	*.ltr	*.memo	*.???	Davi?.*
.memo			X		
.ltr		X		X	
Davies.ltr	X	X		X	
Davis.ltr	X	X		X	X
Davis.memo	X		X		X
Dzinsky.memo			X		

540A-1

Using Wild Cards in Volume and Directory Names

Wild cards cannot be used in volume or device names. However, both * and ? wild cards can be used in directory names. For example, <*90> specifies every directory name ending with the number “90.”

Use <*> to specify every directory. For example, <*>* specifies every file in every directory on the default volume, as shown below:

```
Files
[File list (*)]           <*>*
[Details?]               _____
[Print file]              _____
[Suppress sort?]         _____
[Max columns]            _____
[Sort by suffix?]        _____
[Suppress error message?] _____
```

Preventing Disasters

Take special care when using wild cards to delete files. For example, specifying <*>* (shown above) with the **Delete** command would delete every file on your disk.

Such an accident can happen if you inadvertently type a space in a file specification containing wild cards. The following example shows the correct way to enter a file specification containing wild cards. Notice that there is no space after <*>*.

```
Delete
File list           <*>*-old
[Confirm each?]    _____
```

- ☞ If you are hesitant to delete groups of files with wild cards, first try testing your wild card entries with the **Files** command. This displays the group of files that will be deleted if you use the same wild card entry with the **Delete** command.

See “Cleaning Up a Disk” and “Deleting Files,” later in this section, for more information about the **Delete** command.

Wild Card Expansion in Command Forms

When using certain commands, such as **Delete** or **LCopy**, wild cards are expanded in the command form. This means that the matched file names are displayed within the parameter field soon after you press **RETURN** or **GO**. Usually, though, the field is too small to contain the entire list. In this case, the beginning and end of the list are displayed, separated by ellipsis points (. . .), as shown in the following example:

```
Delete
File list      File1 File2 File3...File9 File10
[Confirm each?]
```

If the list of files is long, the expansion process can take several seconds. If no file names are matched by the wild cards, the field becomes blank after you press **RETURN** or **GO**.

- ☛ By pressing **RETURN** instead of **GO** when you have completed a field containing wild cards, you can determine whether the wild cards are matching file names as you expect them to. This is particularly helpful when using the **Delete** command.

Backing Up Disks

You perform backups to protect your system from disk failure, sabotage, or physical damage. It is a good idea to back up your system every day. The following method works well for many users:

1. Once a week, perform a complete backup of each disk on the system.
2. Each day between complete backups, perform an incremental backup of the files you have added or modified since performing the complete backup.

When you perform backups, the specified files are written to an *archive dataset* on floppy diskettes, a hard disk, or a tape. Archive datasets combine the contents of many files into a more compact form. It is faster to back up to an archive dataset than to copy each file individually. Archive datasets also require less storage space than individually stored files.

Backups are usually stored on floppy diskettes or tapes because they can be removed from the system and securely stored. Many work places provide fireproof cabinets or off-site storage for this purpose.

Backups can also be stored on a hard disk. For example, disks on cluster workstations can be backed up to a disk on the server. Although this provides protection against disk failure, it is not adequate protection from physical disasters, such as fires, floods, or earthquakes.

Archive Commands

The Executive provides the following archive commands:

Volume Archive	Use this command to back up the contents of an entire disk. A procedure for using this command is included in this section.
Selective Archive	Use this command to back up selected directories or files.
Restore Archive	Use this command to restore an archive dataset back onto a disk.

The archive commands can be used in many different ways. See the **Volume Archive** and **Selective Archive** commands in the *CTOS Executive Reference Manual* for alternatives to the backup methods described here.

Two additional backup commands, **Daily Archive** and **Weekly Archive**, are also included with the Executive. They provide simplified command forms, keep track of the incremental date, and optionally clean up the disk before executing the backup. Check with your system administrator to find out whether these commands are implemented at your work place.

What You Will Need

To perform a backup, you will need the following supplies:

- Backup diskettes or a tape

If you are backing up to diskettes, you will need several initialized floppies. The number you need depends on how much disk space you will be backing up. In general, allow one diskette per 1,000 sectors of hard disk space. See "Listing Directories," later in this section, for information about calculating disk space.

If you are backing up to tape, one tape will probably be sufficient. See "Backing Up and Restoring Data," in the *CTOS System Administration Guide*, or ask your system administrator.

- Labels and a felt-tip pen

The first time you use the backup diskettes or tapes, label them with the volume or device name, the date, and the type of backup (for example, "Complete Backup"), and a sequential number to signify the order in which they are used.

Each time you reuse the backup set, change the date accordingly.

Note: *Before you can back up to tape, the Sequential Access Service must be properly installed. See "Using Tape Drives," the CTOS System Administration Guide, or ask your system administrator.*

How to Back Up an Entire Disk

Before you begin the backup procedure, you may need to do the following:

- Delete extraneous files from the disk (see “Cleaning Up a Disk,” later in this section).
- If you are backing up a server, disable the cluster. This prevents users from changing or adding files during the backup. (See the **Disable Cluster** command in the *CTOS Executive Reference Manual*.)

To perform the backup, follow these steps:

1. On the Command line, type **Volume Archive**; then press **RETURN** to display the command form.
2. Fill in the fields described below:

Volume or device name. Enter the volume or device name of the disk you want to back up.

[Volume or device password]. If your disk is password protected, enter the volume password.

[Archive dataset]. If you are backing up to diskettes, enter **[f0]<Sys>FileName** (where *FileName* is any name you choose to identify the archive dataset). If you are backing up to tape, enter the name of the tape drive; the default is *[QIC]*. (If you don’t know the name of your tape drive, ask your system administrator.)

Example:

```

Volume Archive
Volume or device name           d1
[Volume or device password]     #####
[Incremental from]              _____
[Suppress backup?]              _____
[Suppress verification?]        _____
[Archive dataset ([QIC])]       [f0]<Sys>Vol1
[Delete existing archive dataset?] _____
[Print file]                    _____
[Display structures?]           _____
[Verify write?]                 _____
[Suppress confirmation?]        _____
    
```

3. *Optional step.* Fill in additional fields according to your needs.

The **Volume Archive** command form contains optional fields, most of which you can leave blank. One commonly used option is described below:

[Delete existing archive dataset?]. If you are reusing the archive diskettes or tape, specify **Yes**. The new backup will then overwrite the existing backup. Use the diskettes or tapes in sequential order, as they are numbered.

See the **Volume Archive** command in the *CTOS Executive Reference Manual* for a description of all fields.

4. Insert the diskette or tape into the appropriate drive.
5. Press **GO** to begin the command.

☞ The following prompt appears each time the screen fills with command output, and the backup stops until you respond to it:

Press **NEXT PAGE** or **SCROLL UP** to continue

To eliminate the pause so that the backup runs without input from you, press **CODE-NEXT PAGE** after the backup begins.

As each diskette or tape becomes full, you are prompted to mount another. Continue changing diskettes or tapes and pressing **GO** until the backup is complete. You are informed when the backup is complete.

How to Perform an Incremental Backup

An incremental backup archives all files created after a specified date and time. It takes less time to perform and requires less backup media than a complete volume backup. It is a good idea to perform an incremental backup each day between complete volume backups. For example, if you back up your entire system each Friday, do incremental backups Monday through Thursday.

You will need a separate set of diskettes or tapes for the incremental backups. Do not use the same set of backup media for both incremental and complete volume backups.

To perform an incremental backup, follow the procedure for a complete volume backup, filling in the date of the last complete backup into the **Volume Archive** command form. In the following example, all files created or modified after 12:00 midnight on July 27 1992, are backed up:

```

Volume Archive
Volume or device name           d1
[Volume or device password]    #####
[Incremental from]              Jul 27, 1992
[Suppress backup?]              _____
[Suppress verification?]        _____
[Archive dataset ([QIC])]       [f0]<Sys>Incr1
[Delete existing archive dataset?] _____
[Print file]                    _____
[Display structures?]           _____
[Verify write?]                 _____
[Suppress confirmation?]        _____

```

Restoring Archive Datasets

You use the **Restore Archive** command to restore the contents of an archive dataset back onto a disk. It is most commonly used to restore an entire disk; however, you can also restore individual directories and files. The **Restore Archive** command also provides an option for listing the contents of an archive dataset; by using this option, you can locate the files you want to restore.

If you ever need to restore an entire disk, you restore the most recent complete backup first; then you restore the incremental backup, which updates any files you added or modified after the complete backup was performed. See "Backing Up and Restoring Data," in the *CTOS System Administration Guide*, for more detailed information.

Cleaning Up a Disk

Many applications create temporary files that are no longer needed after you have saved your work and finished the application. To keep them separate from your own files, temporary files are stored in a special-purpose *dollar sign* directory. The name of the dollar sign directory is <\$000>. It does not appear when you execute the **Volume Status** command unless you specifically ask to see it. To increase the disk storage space available for your own work, delete the files in the dollar sign directory on a regular basis.

The following steps describe how to delete temporary files from the dollar sign directory. You do not need to be concerned about removing files that are still needed; if a file is in use, it will not be deleted.

Caution

If the following procedure is not executed correctly, you could delete many files that you do not intend to delete. If you make such an error, immediately press **ACTION-FINISH** to stop the **Delete** command.

1. On the Command line, type **Delete**; then press **RETURN** to display the command form.
2. Fill in the *File list* field as shown below:

```
Delete
File list      <$000>*
[Confirm each?] _____
```

3. Double check the command form to make sure that it is filled in *exactly* as shown. (Notice that there is *no space* between the directory specification and the asterisk.)
4. Press **RETURN**; this expands the wild cards and displays a partial list of the files that will be deleted. Check the command form to make sure that only dollar sign directory files are displayed, for example:

```
Delete
File list      <$000>00007>DdBi...007>Submit0.tmp
[Confirm each?] _____
```

At this point, you can optionally enter **Yes** in the *[Confirm each?]* field. By doing so, you will be prompted for confirmation before each file is deleted. Although this makes the disk cleanup procedure take longer, it is an additional safeguard against deleting unexpected files.

5. Press **GO** to execute the command.

Watch carefully as the command begins deleting files. If you notice that unexpected files are being deleted, immediately press **ACTION-FINISH** to terminate the command.

- ☞ You can quickly create a macro for the disk cleanup procedure. Macros can save time and reduce errors for frequently used procedures. To learn how to create a macro, see “Macros,” later in this section.

See “Deleting Files,” later in this section, for more information about the **Delete** command. See the documentation for your other applications to find out about additional files that can be deleted regularly.

Copying Files

You can copy files on your own workstation, to and from the server, and to and from network nodes. You use file specifications to designate the files you want to copy and where you want them copied to (see “File Specifications,” in Section 3).

How to Copy a File

Follow these steps to copy a file from one volume and directory to another.

1. On the Command line, type **Copy**; then press RETURN to display the command form.
2. Fill in the fields described below, using file specifications that pertain to your own workstation.

File from specifies the file you want to copy.

File to specifies the name of the duplicate copy you want to make.

Example:

```
Copy
File from      [f0]<Work>FirstDraft
File to        [d0]<MyDir>FirstDraft
[Overwrite ok?]
[Confirm each?]
```

- ☛ To give the copy you are making a name that is different from the original file, specify a different name in the *File to* field.
3. *Optional step.* Fill in the remaining fields according to your needs.

The **Copy** command form contains two optional fields, which are described below:

[Overwrite ok?]. Overwrite means to replace the contents of an existing file, which destroys what was originally there. The Executive does not automatically overwrite existing files. If you know in advance that you want to overwrite a file, specify **Yes** in *[Overwrite ok?]*. If you leave this field blank, you will be prompted to confirm or deny overwriting the file. To prevent overwriting, specify **No**.

[Confirm each?]. If you are using wild cards and are not sure you want to copy all matched files, specify **Yes**. The Executive then prompts you for confirmation before copying each file that matches the wild cards.

4. Press **GO** to execute the command.

If the Executive requires confirmation before copying a file, the following prompt is displayed:

```
File FileName already exists. Overwrite?
(Press GO to continue, CANCEL to deny, FINISH to exit)
```

Press **GO** to copy the file, **CANCEL** to go on to the next file, or **FINISH** to terminate the command.

Using Wild Cards to Copy Files

The **Copy** command is especially well suited to wild cards (see “* and ? Wild-Card Characters,” earlier in this section). By using wild cards, you can copy many files while executing the command once. The following examples show you a few ways to use wild cards with the **Copy** command.

You can copy all the files in one directory to another directory. The following example copies all files in the <Memos> directory on a floppy diskette to your default path.

```
Copy
File from      [f0]<Memos>*
File to
[Overwrite ok?]
[Confirm each?]
```

You can use file suffixes (or prefixes) to copy groups of files with wild cards. The following example copies all files ending with “.boss” from your default path to the <Memos> directory on a floppy diskette.

```
Copy
File from      *.boss
File to        [f0]<Memos>*.boss
[Overwrite ok?]
[Confirm each?]
```


Copying Files

You can also add or change a file suffix (or prefix) when you copy with wild cards. The following example adds a suffix to every file name that is copied, while the portion matched by the wild card remains the same.

```
Copy
File from      Section*
File to        [f0]<Memos>Section*.done
[Overwrite ok?]
[Confirm each?]
```

Invalid Use of Wild Cards

Keep in mind the following rule when using wild cards with the Copy command: the number and placement of wild cards in the *File from* and *File to* fields must match.

The following example does not adhere to this rule; two wild cards are used in the *File from* field, while only one wild card is used in the *File to* field.

```
Copy
File from      [f0]<*>*
File to        *
[Overwrite ok?]
[Confirm each?]
```

You might think that the above example would copy everything from a floppy to your default path, but it doesn't work that way. To copy all files in all directories, you must match the directory specification in both the *File from* and *File to* fields, as shown in the following example:

```
Copy
File from      [f0]<*>*
File to        <*>*
[Overwrite ok?]
[Confirm each?]
```

When you do this, however, directories with the same names must exist on both the disk you are copying from and the disk you are copying to. Remember this rule if wild cards don't seem to work as expected.

Copying Files on the Server

To copy a file to or from the server, type an exclamation point (!) in front of the server's volume or device name, as shown in the following example:

```
Copy
File from      [!d1]<Templates>FormLetter
File to        [d0]<Work>FormLetter
[Overwrite ok?]
[Confirm each?]
```

See also "Using Files on the Server," in Section 3.

Using the LCopy Command

You can also copy files with the **LCopy** command. Some users prefer **LCopy** because it requires less typing in the command form for certain operations.

The following examples demonstrate the difference between the **Copy** and **LCopy** commands. With **Copy**, you type the file name separately in both the *File from* and *File to* fields, as shown below.

```
Copy
File from      [d0]<MyDir>Outline
File to        [!d2]<HisDir>Outline
[Overwrite ok?]
[Confirm each?]
```

With the **LCopy** command, however, you type the file name once. You specify the from volume and directory and the to volume and directory in separate fields, as shown below.

```
LCopy
File list      Outline
[File prefix(s) from] [d0]<MyDir>
[File prefix(s) to]   [!d2]<HisDir>
[File suffix(s)]
[Overwrite ok?]
[Confirm each?]
[Continue on error?]
[Verify copy?]
```

The following pages show several ways to use the **LCopy** command. See the **LCopy** command in the *CTOS Executive Reference Manual*.

Using Wild-Card Characters With the LCopy Command

When using wild-card characters with the **LCopy** command, sometimes you must use a full file specification in the *File list* field. For example, if the files you want to copy are not stored in your default path, you enter the volume and directory in the *File list* field rather than the *[File prefix(s) from]* field, as shown in the following example:

```
LCopy
File list                [f0]<Dir>*
[File prefix(s) from]   _____
[File prefix(s) to]     [d0]<MyDir>
[File suffix(s)]        _____
[Overwrite ok?]         _____
[Confirm each?]         _____
[Continue on error?]    _____
[Verify copy?]          _____
```

You do so because wild cards are expanded in the **LCopy** command form. (For information about wild card expansion, see “* and ? Wild-Card Characters,” earlier in this section). Expansion takes place in your default path if you do not use a file specification in the *File list* field.

You can also use the **LCopy** command to copy all the files from a floppy diskette into a single directory on another disk, as shown in the following example. You cannot do this with the **Copy** command, as explained earlier in this section.

```
LCopy
File list                [f0]<*>*
[File prefix(s) from]   _____
[File prefix(s) to]     [d0]<MyDir>
[File suffix(s)]        _____
[Overwrite ok?]         _____
[Confirm each?]         _____
[Continue on error?]    _____
[Verify copy?]          _____
```

More Features of the LCopy Command

The path setting is the default value for *[File prefix(s) from]* field. If the files you are copying are in your default path, you can leave that field blank, as shown in the following example:

```

LCopy
File list                               Outline
[File prefix(s) from]                   _____
[File prefix(s) to]                      [!d2]<HisDir>
[File suffix(s)]                         _____
[Overwrite ok?]                          _____
[Confirm each?]                          _____
[Continue on error?]                     _____
[Verify copy?]                           _____

```

Similarly, if you are copying a file from a different directory to your default path, you can leave the *[File prefix(s) to]* blank, as shown in the following example:

```

LCopy
File list                               Outline
[File prefix(s) from]                   [f0]<HomeWork>
[File prefix(s) to]                      _____
[File suffix(s)]                         _____
[Overwrite ok?]                          _____
[Confirm each?]                          _____
[Continue on error?]                     _____
[Verify copy?]                           _____

```

You can use either full or partial file specifications in the LCopy command form, as shown in the following example:

```

LCopy
File list                               Outline
[File prefix(s) from]                   <MyDir>
[File prefix(s) to]                      [!d2]<HisDir>
[File suffix(s)]                         _____
[Overwrite ok?]                          _____
[Confirm each?]                          _____
[Continue on error?]                     _____
[Verify copy?]                           _____

```

The *[File prefix(s) from]* and *[File prefix(s) to]* fields are not limited to volume and directory specifications; you can also use these fields to add or remove a file prefix (see “File Prefixes and Suffixes,” in Section 3).

Copying Files

The following example adds a file prefix; the original file is named "Outline"; the copy will be named "ManualOutline."

LCopy	Outline
File list	_____
[File prefix(s) from]	<MyDir>
[File prefix(s) to]	[!d2]<HisDir>Manual
[File suffix(s)]	_____
[Overwrite ok?]	_____
[Confirm each?]	_____
[Continue on error?]	_____
[Verify copy?]	_____

Creating Directories

When a volume (disk) is initialized, a directory named <Sys> is automatically created. <Sys> contains information about the disk and, if located on the /Sys/ volume, many other files that your workstation requires to function properly. (For more information about the <Sys> directory, see “[Sys]<Sys>,” in Section 3.)

When you install applications, other special purpose directories are sometimes created. Do not use such directories for storing your working files. See the release documentation for your applications to find out about restrictions for such directories.

To create new directories for your personal use, you use the **Create Directory** command. Some users keep all their files in one large directory, while others prefer several smaller directories. Most disks can accommodate many directories, so you can organize your directories and files to suit your needs. If you are using a disk on the server, check with your system administrator for conventions or restrictions that apply to your work place.

The Executive is the only application you can use to create new directories. The directories you create with the Executive are used to store the files you create and work on with your other applications.

How to Create a Directory

The following steps describe the procedure for creating a new directory on the default volume.

1. On the Command line, type **Create Directory**; then press RETURN to display the command form.
2. Fill in the *New directory name(s)* field, using a name that you choose for the new directory, as shown in the following example:

Create Directory	
New directory name(s)	<u>NewDir</u>
[Default protection level (15)]	_____
[Maximum number of files (75)]	_____
[Password for new directory]	_____
[Volume password]	_____

Directory names can be up to 12 characters long and can contain any combination of letters, numbers, periods (.), and hyphens (-). Do not use spaces in directory names. See also "Restrictions for Volume, Directory, and File Names," in Section 3.

☞ Notice that you do not need to type angle brackets (< >) around the directory name. When used as individual entries in command forms, directory names do not require brackets, as they do when used in file specifications.

3. *Optional step.* Fill in the remaining fields according to your needs.

The **Create Directory** command contains optional fields. One commonly used option is described below. See the **Create Directory** command in the *CTOS Executive Reference Manual* for complete information about all the fields.

[Maximum number of files]. Use this field to specify the size of your new directory. Notice that the default value is 75 files. If you want the directory to hold more (or less) than 75 files, enter a specific number, such as 200. *After a directory has been created, its size cannot be changed.*

4. Press **GO** to execute the command.

If a volume password is required, the following message appears:

```
Access denied (Error 219)
```

The password requirement is a configurable option, which may be implemented on some workstations. Check with your system administrator if you are not able to create a directory without the volume password.

After you create a new directory, you can verify its presence with the **Volume Status** command (see "Listing Directories," later in this section).

To use a new directory, you can change your default path (see "Path Setting," later in this section) or use the name of the new directory as part of a file specification.

Creating a Directory on a Different Volume

You can create a directory that is not located on your default volume, for example, on a floppy diskette. To do so, you enter the volume or device name and a name for the new directory, as shown in the following example. Notice that the volume name is enclosed in square brackets.

Create Directory

New directory name(s)

[f0]NewDir

[Default protection level (15)]

[Maximum number of files (75)]

[Password for new directory]

[Volume password]

Deleting Files

You can delete files you no longer need with the **Delete** command. The **Delete** command is frequently used to minimize duplication on your disks and to reduce the “clutter” that occurs as you use applications.

In some situations, older files are archived to floppy diskettes or tapes for permanent storage. They can then be deleted from your hard disk so that disk space can be reclaimed for future work. You can identify the last date that a file was modified with the **Files** command; see “Listing Files,” later in this section.

Many applications create temporary files, which can be deleted. To find out how to remove temporary files, see “Cleaning Up a Disk,” earlier in this section.

Caution

Although **Delete** is an important and frequently used command, use it carefully, particularly when you use wild-card characters to delete a group of files. In some cases, though, you can recover deleted files with the **Undelete** command. For more information, see the **Undelete** command in *CTOS Executive Reference Manual*, or ask your system administrator.

To delete a file, follow these steps:

1. On the Command line, type **Delete**; then press **RETURN** to display the command form.
2. Fill in the *File list* field, as shown in the following example, using the name of a file you want to delete.

```
Delete  
File list      [f0]<OldDir>ObsoleteFile  
[Confirm each?] _____
```

You can use full or partial file specifications, including wild-card characters.

3. *Optional step.* Fill in the optional field according to your needs.
The **Delete** command form contains only one optional field, which is described below.

[Confirm each?]. If you are using wild cards and are not sure that you want to delete all matched files, specify **Yes**. The Executive then prompts you for confirmation before deleting any file that matches the wild card pattern.

4. Press **GO** to execute the command.

If you specified **Yes** in the *[Confirm each?]* field, the following prompt appears for each file name before the delete operation is carried out:

Delete *FileName?*

(Press **GO** to continue, **CANCEL** to deny, **FINISH** to exit)

Press **GO** to delete the file, **CANCEL** to proceed to the next file (the currently displayed file name will not be deleted), or **FINISH** to terminate the command.

Exiting

You can exit the Executive by logging out, which is the opposite of signing on. After logging out, you must sign on again before you can use your workstation.

If you log out while using Context Manager, you are informed whether other applications are still running on your workstation. At that point, you can choose to cancel or proceed with the logout operation. Logging out while applications are still running can cause you to lose some of your work. See your Context Manager manual for more information.

If you are using Context Manager, you can exit the Executive without logging out. A special command terminates the Executive application and returns you to the Context Manager screen. If you want to use the Executive again later, you can simply restart it with Context Manager.

How to Log Out

To log out, follow these steps:

1. On the Command line, type **Logout**. (There is no command form.)
2. Press **GO** to execute the command.

If applications are still running with Context Manager, the following prompt appears:

```
Warning:  There are active contexts.  Press GO to logout  
or CANCEL to deny.
```

At this point, you can press **CANCEL** to terminate the logout operation or **GO** to log out. Remember that your work is not automatically saved when you log out.

How to Finish the Executive

If you are using Context Manager, you use the **Exit Executive** or **Finish Executive** command to finish the Executive. To determine which command to use, press the **HELP** key and check the alphabetical list of command names.

To execute the command, follow these steps:

1. On the Command line, type the appropriate command name (either **Exit Executive** or **Finish Executive**).
2. Press **GO**.

The command exits from the Executive application and returns to the Context Manager screen. To use the Executive again, you can restart it with Context Manager. See your Context Manager manual for more information.

Initializing Disks

Before you can use a new disk, it must be *initialized*, which prepares it for use on a CTOS workstation. After a disk is initialized, it becomes a *valid volume*, which means that it is recognized by the CTOS operating system.

Procedures for initializing both floppy and hard disks are included in this section. For more detailed information, see “Adding Hard Disks” in the *CTOS System Administration Guide*.

How to Initialize a Floppy Diskette

To initialize a floppy diskette, follow these steps:

1. On the Command line, type **Format Disk**; then press **RETURN** to display the command form.
2. Fill in the fields described below:

Device name. Enter the name of the floppy drive you will use to initialize the diskette, for example, *f0*. (See “Volume and Device Names,” in Section 3, for information about disk drive names.)

New volume name. Choose a name for the volume and enter it here. Use a combination of letters, numbers, periods (.), and hyphens (-) up to twelve characters in length.

Example:

```
Format Disk
Device name           f0
[Device password]    _____
[Current volume password] _____
[New volume name]    Floppy
[New volume password] _____
[Configuration file] _____
[Format template]    _____
[Device template]    _____
[Print file]         _____
[Overwrite ok?]      _____
[Bad spot file]      _____
[Recalculate defaults?] _____
```

Although the command form contains many fields, you do not need to fill in all of them. See the **Format Disk** command in the *CTOS Executive Reference Manual* for a complete description of each field.

3. Press **GO** to begin the command.

You are prompted to insert a diskette as follows:

Please insert disk to be initialized.

Press **GO** to confirm, **CANCEL** to deny, or **FINISH** to finish the utility.

4. Insert a blank diskette into the floppy drive. (See the *CTOS Media User's Guide*.)
5. Press **GO**.

It takes about three minutes to initialize a floppy. You are informed when initialization is complete.

Note: Be sure to use the correct type of diskette for your floppy drive; see the *CTOS Media User's Guide*.

How to Initialize a Hard Disk

The following procedure shows a simple method for initializing a workstation hard disk. It does not, however, initialize a system volume (*/Sys/*), nor does it necessarily initialize the disk optimally for your purposes. For more detailed information, see the **Format Disk** command in the *CTOS Executive Reference Manual*.

Caution

The following procedure destroys all data stored on the disk.

1. On the Command line, type **Format Disk**; then press **RETURN** to display the command form.
2. Fill in the fields described below:

Device name. Enter the device name of the disk you want to initialize.

[Device password]. Enter the device name again in this field. It will appear on the screen as pound signs (#), as shown in the example below.

[New volume name]. Choose a name for the volume and enter it here. Use a combination of letters, numbers, periods (.), and hyphens (-) up to twelve characters in length.

[Device template]. Enter the disk type in this field. On most workstations, the disk type is a single letter, such as H, labeled on the bottom of the module. If no disk type is labeled, leave the field blank.

Example:

```
Format Disk
Device name           d1
[Device password]    ##
[Current volume password]
[New volume name]    Volumel
[New volume password]
[Configuration file]
[Format template]
[Device template]    H
[Print file]
[Overwrite ok?]
[Bad spot file]
[Recalculate defaults?]
```

Although the command form contains many fields, you do not need to fill in all of them. See the **Format Disk** command in the *CTOS Executive Reference Manual* for a complete description of each field.

3. Press **GO**.

The length of time it takes to initialize a hard disk depends on its size. You are informed when initialization is complete.

Installing Software

Software applications are supplied on floppy diskettes or quarter-inch cartridge (QIC) tapes. Before you can use an application, you must install it with the **Installation Manager** command. This command places the programs and commands for the application onto your hard disk.

What You Will Need

A software installation package consists of the following items:

- *Distribution media* is a set of diskettes or a tape cartridge containing the software product.
- *Release documentation* is a document or electronic file containing installation instructions and information about the product.

Before you begin the installation procedure, read the release documentation to determine whether you are using the proper hardware and operating system software for the application.

How to Install an Application

To install a software application, follow these steps:

1. Insert the distribution media. (See the *CTOS Media User's Guide*.)
2. On the Command line, type **Installation Manager**; then press GO.

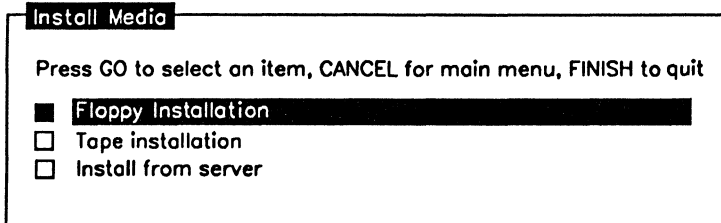
The Software Operation menu appears:

```
Software Operation
-----
Press GO to select menu item, CANCEL or FINISH to quit
■ Install new software
□ Show installed software
□ Remove installed software
```

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3. Position the highlight on **Install new software**, as shown above; then press **GO**.

The **Install Media** menu appears:



Install Media

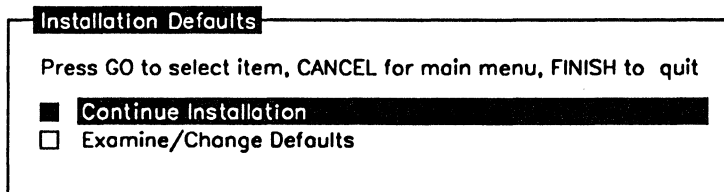
Press GO to select an item, CANCEL for main menu, FINISH to quit

- Floppy installation**
- Tape installation
- Install from server

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4. Position the highlight on the installation media you intend to use, as described below:
 - If you are installing from diskettes, select *Floppy installation*.
 - If you are installing from a QIC tape, select *Tape installation*.
 - If you are installing from the server, select *Install from server*.
5. Press **GO**.

The **Installation Defaults** menu appears:



Installation Defaults

Press GO to select item, CANCEL for main menu, FINISH to quit

- Continue Installation**
- Examine/Change Defaults

540.4-C

6. Position the highlight on *Continue Installation*; then press **GO**.

The installation begins. Additional instructions may appear on the screen during the installation procedure. Whenever the installation pauses, you must enter a response to continue the installation. You are informed when the installation is complete.

For information about changing the installation default parameters, see the **Installation Manager** command, in the *CTOS Executive Reference Manual*.

Installing From the Server

After your system administrator installs certain applications on the server, you can install them from the server onto your cluster workstation. This is convenient because you do not need to locate separate distribution media, and it installs only the commands and programs that are needed on a cluster workstation.

To use this option, follow these steps:

1. When the Install Media menu is displayed, position the highlight on *Install from server*; then press **GO**.

A list of applications you can install from the server is displayed.

2. Position the highlight on the application you want to install; then press **GO**.

An Installation Safeguard

Some applications provide a safeguard that backs up the current version of the application you are updating. The backup includes programs and configuration files you might not know about. If the installation should fail, you can restore the application to your system, exactly as it was before you began the installation procedure. This means that you can continue working with the older version while you or your system administrator investigates the cause of the problem. See "Installing Applications," in the *CTOS System Administration Guide*, for information about installation errors.

To select the backup option, follow these steps:

1. While the Installation Defaults menu is displayed, position the highlight on *Examine / Change Defaults*; then press **GO**.

The following form is displayed.

Installation Parameters		
Fill in or modify, press GO to accept, CANCEL to dismiss		
Public	Yes	No
Verbose	Yes	No
Backup previous version	Yes	No
Save copy of backup	Yes	No
Save defaults in user file	Yes	No
Press Y or N, or use arrow keys		

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2. Position the highlight on *Backup previous version*; then press **Y**.
3. Press **GO** to continue the installation.

See the **Installation Manager** command, in the *CTOS Executive Reference Manual*, for a description of the other installation parameters.

Listing Directories

To display the names of directories that are available on your disks, you use the **Volume Status** command. It displays the volume and device name of a disk, and a list of all the directories, along with their sizes and protection levels. You can also use **Volume Status** to find out how much storage space you have used on a disk.

Figure 4-2 shows you how information is displayed by the **Volume Status** command.

Figure 4-2. Volume Status Display

Status of volume TFS-0		Device d0		
Initialized	Jan 19, 1992	3:14 PM		
Last modified	Aug 13, 1992	1:16 PM		
	Unused	Reserved	CTOS Volume Total	Used
Sectors	53866	0	131072	58%
File headers	3929	0	7679	35%
Directory	Protection	~Max Files		
DD	15	75		
Exec	15	75		
GPS	15	75		
Installed	15	1500		
Project-1	15	200		
Project-2	15	150		
Project-3	15	75		
SPL	15	75		
Sys	5	2850		
WP	15	75		

540.4-2

Different Kinds of Directories

All initialized disks contain a directory named `<Sys>`, as shown in Figure 4-2. For a description of the `<Sys>` directory, see “[Sys]<Sys>,” in Section 3.

The directories named `<DD>`, `<GPS>`, `<Installed>`, `<SPL>`, and `<WP>`, shown in Figure 4-2, are special purpose directories, which are created when you install applications. See “Creating Directories,” earlier in this section, for more information about special purpose directories.

The other directory names listed in Figure 4-2 are examples of directories that a user might create. You can create your own directories with the **Create Directory** command (see “Creating Directories,” earlier in this section).

Disk Space Information

To find out how much storage space remains on your disk, check the *Sectors* and *File headers* fields, directly above the list of directory names.

<i>Sectors</i>	Displays how many unused sectors of storage space remain on the disk, the total number of sectors the disk contains, and the percentage of disk space currently in use. To roughly translate sectors into megabytes, divide the number of sectors by 2,000.
<i>File headers</i>	Displays the number of unused file headers remaining on the disk, the total number of file headers the disk contains, and the percentage of file headers currently in use. Each file requires a file header to mark its place on the disk.

See also the **Volume Status** command in the *CTOS Executive Reference Manual* for more detailed information.

How to List Directories

To display the directories on your *[Sys]* volume, follow these steps:

1. On the Command line, type **Volume Status**; then press RETURN to display the command form.
2. Fill in the *[Volume or Device name]* field as shown below:

```
Volume Status
  [Volume or device name]           Sys
  [Details?]                        _____
  [Print file]                       _____
  [Directory spec (*)]               _____
  [Include temporary directories?]  _____
```

Notice that you do not need to type square brackets ([]) around the volume or device name. When used as individual entries in command forms, volume and device names do not require brackets, as they do when used in file specifications.

Wild-card characters cannot be used in this field; the **Volume Status** command is executed on one disk at a time.

- ☞ Notice that this first field, along with all the others, is optional. If you leave this field blank, **Volume Status** is executed on the volume displayed in your path setting.

3. *Optional step.* Fill in the remaining fields according to your needs.

The remaining fields are seldom used when listing directories. One that you might find useful, however, is described below. See the **Volume Status** command in the *CTOS Executive Reference Manual* for details about the other fields.

[Directory spec ()].* If you want to display a partial list of directories, enter a directory specification. You can use wild-card characters, for example, **Project**, to display information about all directories that match that wild card pattern (see “* and ? Wild-Card Characters,” earlier in this section.)

4. Press GO.

The **Volume Status** display appears, as shown in Figure 4-2.

Listing Directories on the Server

You can display information about disks on the server by adding an exclamation point (!) in front of the volume or device name, as shown in the following example:

```
Volume Status
[Volume or device name]      !Sys _____
[Details?]                   _____
[Print file?]                 _____
[Directory spec (*)]         _____
[Include temporary directories?] _____
```

Listing Files

The disks on your workstation have the capacity for storing a large number of files. Many system and program files are already stored on your disks, and as you use applications, you quickly accumulate many more. (For information about system and program files, see “[Sys]<Sys>,” in Section 3.

The **Files** command helps you keep track of your files when you can’t remember exactly what you have named them or the directories where they are stored.

You can use the **Files** command to list all files in your default path, all files on a disk, a single file, or groups of files. See “* and ? Wild-Card Characters,” earlier in this section; it covers several ways to use wild card characters with the **Files** command.

How to List Files

To list a group of file names, follow these steps:

1. On the Command line, type **Files**; then press **RETURN** to display the command form.
2. Fill in the *[File list (*)]* field as shown below:

```
Files
  [File list (*)]                [Sys] <Sys>*.txt
  [Details?]
  [Print file]
  [Suppress sort?]
  [Max columns]
  [Sort by suffix?]
  [Suppress error messages?]
```

- ☞ Notice that the *[File list (*)]* field, along with all the others, is optional. The default is all files in your default directory. So, to list all files in your default directory, you do not need to fill in the command form. Simply type **Files** on the Command line and press **GO**.

3. *Optional step.* Fill in the remaining fields, according to your needs.

The remaining fields are seldom used to locate groups of files, however, two you might find useful are described below. See the **Files** command in the *CTOS Executive Reference Manual* for information about the other fields.

[Details?]. To display detailed information about a file (or group of files), enter **Yes**. Detailed information includes the length of the file in characters and sectors, the date it was last modified, and the protection level. See the *CTOS Executive Reference Manual* for more information.

[Sort by suffix?]. To display file names grouped by suffix, enter **Yes**. For this command, a suffix is a group of characters preceded by a period (.). For example, "txt" is the suffix in the file name *Template.txt*.

4. Press **GO**.

The Executive searches the <Sys> directory on your [Sys] volume for every file that ends with ".txt" and displays the list on the screen. If your default path is not [Sys]<Sys>, the volume and/or directory for each file is also displayed. When you are searching for files in your default path, the volume and directory specifications are not displayed.

Creating File Lists to Use as Parameter Values

You can use the **Files** command to create a file that contains a list of file names. Such a file can be used as a parameter value by programmers when compiling and linking source files, or by system administrators for software installations or selective backups. When you use a file list as a parameter value, it is called an *at-file*.

What Is an At-File?

An at-file is an ASCII text file that contains a parameter value. (ASCII text files contain no special formatting characters.) At-files are frequently used when a parameter value is too long to be typed into a field. An at-file can contain a single item or a group of items, such as a list of file names.

The material that follows describes how to create a file list by using the Files command. Such a file list can later be used as an at-file. However, at-files can also be created with a text editor and can contain any valid parameter value, not just a file list. See “At-Files,” in the *CTOS Executive Reference Manual*, for more detailed information.

Creating an At-File With the Files Command

To create a file list with the Files command, you fill in the command form in a particular way. The following command form is an example:

```
Files
  [File list (*)]           *.stuff
  [Details?]
  [Print file]             Stuff.flc
  [Suppress sort?]
  [Max columns]           1
  [Sort by suffix?]
  [Suppress error messages?]
```

- In the *[File list (*)]* field, enter the file specification for the group of file names you want in your file list. The example shown above would list all files ending in *.stuff* in your default path.
- In the *[Print file]* field, enter a name for the file that will be created by the Files command. This file will contain your file list. The suffix “.flc”, shown in the example above, is a common convention for identifying files containing file lists.
- In the *[Max columns]* field, enter the numeral 1, as shown above. To be usable as a parameter value, file lists must be created in a one-column format. (If you leave this field blank, the default is as many columns as fit on the screen.)

When you execute the command, the file list is displayed on the screen, as well as written to the file you specified in the *[Print file]* field of the command form (for example, *Stuff.flc*, as shown above).

Using an At-File

The file you create, as described above, is a text file containing the file list you specified in the **Files** command form.

To use it as an at-file, you put an at symbol (@) in front of the file specification when you type it in a command form, as shown in the following example:

```
LCopy
File list           @Stuff.fl$
[File prefix(s) from] _____
[File prefix(s) to]  _____
[File suffis(s)]    _____
[Overwrite ok?]     _____
[Confirm each?]     _____
[Continue on error?] _____
[Verify copy?]      _____
```

Remember that you did not use the @ symbol in the **Files** command form when you created the file list. The @ symbol is not part of the file name, but a special symbol that instructs the Executive to replace the file name with the contents of the file itself.

When you press RETURN, the file name of the at-file (in this case, *Stuff.fl\$*) is replaced with the contents of the file. The beginning and end of the text file appear in the command form, separated by an ellipsis (. . .). This signifies that the contents of the file are too large for the field. The entire content of the file is used by the command, however. Figure 4-3 demonstrates how an at-file is expanded in a command form.

You can use the @ symbol with full or partial file specifications, as shown in the following examples:

```
@[d0]<Programs>Stuff.fl$
```

```
@<Programs>Stuff.fl$
```

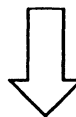
```
@Stuff.fl$
```

See "At-Files," in the *CTOS Executive Reference Manual* for more information about at-files.

Figure 4-3. Using an At-File in a Command Form

LCopy
 File list
 [File prefix(s) from]
 [File prefix(s) to]
 [File suffix(s)]
 [Overwrite ok?]
 [Confirm each?]
 [Continue on error?]
 [Verify copy?]

When you press RETURN,
 the contents of the text file
 replace the name of the
 at-file in the File list field.



LCopy
 File list A.file B.file C.file D.file . . . W.file X.file Y.file Z.file

 [File prefix(s) from]
 [File prefix(s) to]
 [File suffix(s)]
 [Overwrite ok?]
 [Confirm each?]
 [Continue on error?]
 [Verify copy?]

540.4-3

Macros

In computer terminology, *macro* is defined as “a single computer instruction that stands for a sequence of operations.” That is an accurate description of Executive macros.

Macros are user defined, meaning that you, the user, create them. The following types of macros are easy to create and use on your workstation:

- Function key macros for single commands
- Recorded macros for groups of commands

Macros are stored by user name. This means that several users who share the same workstation can create their own customized macros. It also means, though, that macros you create while signed on as “Sam,” for example, will not be available when you sign on as “Jones.”

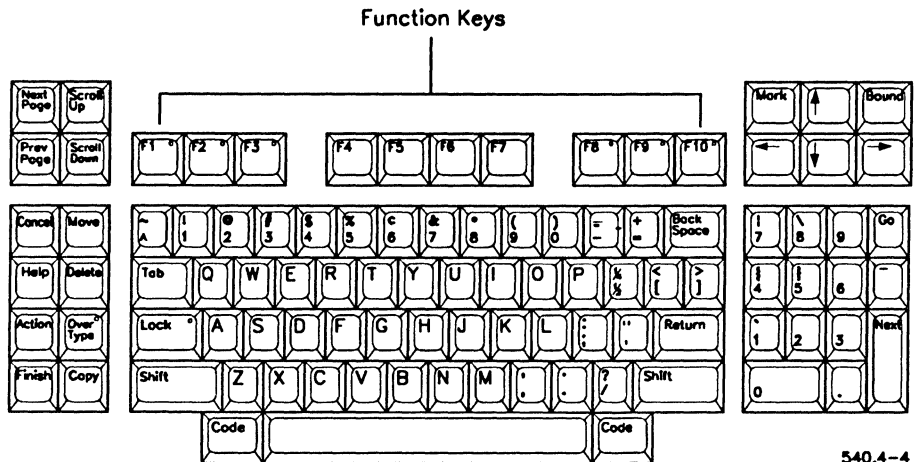
Function Key Macros

The function keys are labeled **F1**, **F2**, and so on, across the top of the keyboard, as shown in Figure 4-4. When using the Executive, only the **F1** (Redo) key has a preassigned function; see “Redoing a Command,” later in this section.

It is quick and easy to assign your own macros to **F2** through **F10**. A procedure for a sample macro is included below.

Note: The keyboard pictured in Figure 4-4 is an example only. Exact keyboard layouts vary from workstation to workstation.

Figure 4-4. Function Keys



540.4-4

How to Assign a Macro to a Function Key

The following procedure creates a macro for the **Files** command to display all files on a floppy diskette. You can create similar macros for other commands.

To create a function key macro, follow these steps:

1. On the Command line, type **Files**; then press **RETURN** to display to the command form.
2. Fill in the command form as shown below:

```
Files
[File list (*)]           [f0]<*>*
[Details?]                _____
[Print file]              _____
[Suppress sort?]         _____
[Maximum columns]        _____
[Sort by suffix?]        _____
[Suppress error messages?] _____
```

3. To create the macro, hold down the **CODE** key; then press **F2**.

This assigns the command and parameter value to function key **F2**. You can assign commands to other function keys, except **F1**, in the same manner.

4. After creating the macro, press **GO** to execute the command or **CANCEL** to clear the command. Either way, the macro is stored on function key **F2**.

To use the macro you just created, insert a floppy diskette that contains files into drive *[f0]*; then press **F2**. The command form, as you previously filled it in, is displayed. Press **GO** to execute the command.

Changing a Function Key Macro

You can change the macros you assign to your function keys. For example, you do not have to keep the macro you created in the previous procedure. To assign a different macro, simply repeat the procedure with a different command. When you press **CODE-F2** again, the old macro is overwritten, and the new macro is assigned.

Recorded Macros

You can use the record feature of the Executive to create macros that execute more than one command. *Record* means to store command names, parameter values, and other keystrokes in a submit file. You can then *replay* the file, which reexecutes the recorded commands.

How to Record a Macro

The following procedure shows you how to combine the steps for backing up a disk into a recorded submit file. You do not need to perform a backup to create this macro.

Before you begin, become familiar with the following commands, which you are going to record:

- **Video** (see “Screen Setting,” later in this section).
- **Delete** (see “Cleaning Up a Disk,” earlier in this section).
- **Volume Archive** (see “Backing Up Disks,” earlier in this section).

To record the macro, follow these steps:

1. While the Command line is displayed, press **CODE-MARK**.
2. Type a single letter of your choice, for example, **b**.
 - ☞ You will use this letter later to replay the macro, so it's a good idea to assign a letter that you can associate with the macro. For example, in this exercise, the letter "b" stands for "backup."

Notice that the message "Recording" appears in the status area of the screen. While the Executive is recording, everything you type is stored as a macro.

3. Perform steps a through d below to record each command.
 - a. Use the **Video** command, as shown below, to eliminate the pause that occurs before information is scrolled off the screen:

```
Video
  [Suppress pause between pages?]      yes
  [Screen time out in minutes (current)]                     
  [Foreground color (current)]                             
  [Narrow characters?]                                     
  [Background color (current)]                             
```

After filling in the command form, press **GO**. The command is executed and recorded in the macro.

- b. Use the **Delete** command to remove temporary files from the disk, as shown below:

```
Delete
  File list      <$000>*
  [Confirm each?]                     
```

After filling in the command form, press **GO**. Once again, the command is executed and recorded.

- c. Fill in the **Volume Archive** command form, as shown below, using the volume or device name of the disk you want to back up:

Volume Archive	
Volume or device name	d0
[Volume or device password]	####
[Incremental from]	
[Suppress backup?]	
[Suppress verification?]	
[Archive dataset ([QIC])]	[f0]<Sys>Sample
[Delete existing archive dataset?]	yes
[Print file]	
[Display structures?]	
[Verify write?]	
[Suppress confirmation?]	

Press GO. At this point, you can proceed with the backup, or you can press FINISH if you do not want to perform the backup. Either way, the **Volume Archive** command is recorded.

- d. Execute the **Video** command again, with no parameter values, to turn the screen pause back on.
4. While the Command line is displayed, type **CODE-BOUND** to stop recording.

The "Recording" message is removed from the screen.

How to Replay a Recorded Macro

To replay a macro, type **CODE-LETTER**, for example, **CODE-b**, for the macro you just recorded.

Commands, parameter values, and other keystrokes will be played back as you typed them when you recorded the macro. While a macro is executing its commands, the message "Replaying" appears in the status area of the screen.

Another Way to Record Macros

You can also record macros with the **Record** command and replay them with the **Playback** or **Submit** command. Using this method, you can store macros in any directory with any file name you assign. See the *CTOS Executive Reference Manual* for information about using the **Record**, **Playback**, and **Submit** commands.

Learning More About Macros

Macros are executed by the Executive's *submit* facility, which reads command input from a text file. By combining commands, escape sequences, and variables, it is possible to design submit files that function as programs on your workstation. See the **Submit** command in *CTOS Executive Reference Manual*, to learn about the following features:

- Displaying messages on the screen
- Pausing to wait for operator input
- Entering variable parameter values
- Creating commands to execute submit files

Moving Files

You can move a file or group of files from one disk or directory to another with the **Move** command. For example, if one of your directories becomes full, you can create a larger directory and then move your files to it.

How to Move a File

To move a single file from one volume to another, follow these steps.

1. On the Command line, type **Move**; then press **RETURN** to display the command form.
2. Fill in the fields described below:

File list. Enter the name of the file you want to move.

[File prefix(s) from]. Enter the volume and directory in which the file is currently located.

[File prefix(s) to]. Enter the volume and directory to which you want to move the file.

Example:

```
Move
File list           Orders
[File prefix(s) from] [d0]<Pending>
[File prefix(s) to]  [d1]<Complete>
[File suffix(s)]
[Overwrite ok?]
[Confirm each?]
[Continue on error?]
[Verify copy?]
```

3. *Optional step.* Fill in the remaining fields, according to your needs.

The **Move** command contains optional fields. Two commonly used options are described below. See the **Move** command in the *CTOS Executive Reference Manual* for detailed information about all fields.

[Overwrite ok?]. This option applies only if a file with the same name already exists in the directory to which you want to move the file. Enter **Yes** to overwrite an existing file, **No** to preserve an existing file. Leave this field blank to be prompted by the Executive before an existing file is overwritten.

[Confirm each?]. If you are using wild cards and are not sure you want to move all matched files, enter **Yes**. The Executive then prompts you for confirmation before moving each file that matches your wild-card pattern.

4. Press **GO** to start the command.

If the Executive requires confirmation before moving a file, the following prompt is displayed:

```
File FileName already exists. Overwrite?
(Press GO to continue, CANCEL to deny, FINISH to exit)
```

Press **GO** to move the file, **CANCEL** to go on to the next file, or **FINISH** to terminate the command.

Moving Groups of Files With Wild Cards

You can move groups of files by using wild card characters in the command form. When you use wild cards, however, the **Move** command expands them as soon as you press **RETURN** to move the cursor to the next field (see “* and ? Wild-Card Characters,” earlier in this section). To allow for wild-card expansion, do one of the following:

- Before you issue the **Move** command, set your path to the volume and directory where the files you want to move are located.
- Specify the volume, directory, and file specifications for the files you want to move in the File list field of the command form, as shown in the following example. It is not necessary to specify them again in the *[File prefix(s) from]* field.

```
Move
File list [d0]<Pending>*
[File prefix(s) from] _____
[File prefix(s) to] [d0]<Complete>
[File suffix(s)] _____
[Overwrite ok?] _____
[Confirm each?] _____
[Continue on error?] _____
[Verify copy?] _____
```

Path Setting

The path setting is displayed in the status area of the screen, for example:

Path: [d0]<Work>

This is the default volume and directory used by the Executive when you execute commands. For detailed information about the default path, see "Using the Path Setting," in Section 3.

The path setting always includes a volume or device name and a directory name. Optionally it can also include a node, a file prefix, and a password. The path setting follows the same sequence and conventions as a file specification: the node name is enclosed in braces ({ }), the volume or device name in square brackets ([]), and the directory name in angle brackets (< >). A file prefix is placed after the directory name; a password does not appear on the screen. You can change all or any part of the path setting with the **Path** command.

How to Set the Default Path

To change your default path, follow these steps:

1. On the Command line, type **Path**; then press **RETURN** to display the command form.
2. Fill in the fields described below, using parameter values that pertain to your own workstation.

[Volume]. Enter the volume or device name you want to use in your default path setting. If you do not want to change the volume (you'll frequently want to change the directory only), leave this field blank and press **RETURN** to move the cursor to the next field.

[Directory]. Enter the name of the directory you want to use in your default path setting, as shown in the following example:

```
Path
[Volume]                dl
[Directory]             Products
[Default file prefix]
[Password]
[Node]
```

3. *Optional step.* Fill in the remaining fields, as described below, according to your needs.

[Default file prefix]. You can assign a file prefix (your initials or a date, for example) to the default path, which is automatically added to the beginning of *FileName* parameter values. The default file prefix appears as part of your path setting, as shown in the following example:

Path: [d0]<Work>1-90.

The default file prefix is not used, however, when you override the path setting with a file specification (see “Overriding the Path Setting,” in Section 3).

[Password]. Use this field to change the password that you entered when you signed on (see “Using Passwords,” in Section 3). You might need to change your password to use a disk on the server or another node.

[Node]. To change your path to another node, enter the node name (see “Using Network Nodes,” in Section 3). Node names appear as part of the path setting, as shown in the following example:

Path: {Sales}[d0]<Work>

4. Press GO.

The path you set appears in the status area of the screen, including node, volume, directory, and file prefix. Passwords do not appear in the path setting.

Entering a Nonexistent Path

If you specify a volume or directory that does not exist or a node that you do not have access to, a message similar to the following appears:

Warning: Current logged in volume does not exist.

Double check your parameter values, and try it again.

Entering a Path Parameter in the Wrong Field

Entering a parameter value in the wrong field can also set a nonexistent path. For example, if you accidentally enter “Srvrword” (a password for the server) in the *[Node]* field, a node specification appears in your path setting, as shown below:

```
{Srvrword} [d1] <Work>
```

To remove a node, file prefix, or password from your path setting, execute the **Path** command again, typing a pair of single quotation marks (') in the field you want to clear, as shown in the following example:

Example:

```
Path
  [Volume] _____
  [Directory] _____
  [Default file prefix] _____
  [Password] _____
  [Node] _____
```

Printing

Most of your printing needs are served by the applications you use, such as OFIS Document Designer. The files created by most applications contain special formatting characters for printing various fonts, graphics, and page formats. Such files are printed by issuing print requests from within your applications program. For more information, see the documentation for the applications you use.

With the Executive, printing is limited to ASCII text files. ASCII text files contain the standard ASCII character set (letters, numbers, punctuation, and a return symbol), but no special formatting characters. ASCII text files are usually created with the Editor application and include the following types of files:

- Programming source code files
- Configuration files
- Unformatted text files

Generic Print System

Many clusters, particularly those equipped with laser printers, use the Generic Print System (GPS). GPS is required for printing with certain applications. Check with your system administrator to find out whether GPS is installed on your cluster.

If GPS is installed on your cluster, you can use the Print Manager to print ASCII text files. The Print Manager is an application for installing printers, issuing print requests, and monitoring printer status. You can start it by issuing the **Print Manager** command from the Executive.

To print an ASCII text file with the Print Manager, you select a printer by positioning the highlight and then pressing F1 (Print). A form appears, in which you type the name of the file you want to print. You then press GO to print the file. See *Using the Print Manager* for a complete description of this application.

Printing With the Executive

If GPS is not installed on your cluster, you use Executive commands to print ASCII text files. In most cases, you can also use these commands in conjunction with GPS; for example, the **Format** command, described below, provides some features that are not available with the Print Manager.

If your workstation is connected to an established cluster, your printers are probably installed and ready to use. Check with your system administrator or an experienced user to find out what queue or device names to use for the printers on your cluster.

See the *CTOS Generic Print System Administration Guide* for complete information about spooled and direct printing.

The Format Command

With the **Format** command, you can specify certain formatting characteristics when you print ASCII text files. For example, you can set margins and page lengths with the **Format** command. You can use this command when you use the Editor application to create simple documents, such as letters or memos. When you print a file with **Format**, a temporary file is created so that formatting characters are not added to the original file.

The following procedure describes how to print an ASCII file with default formatting characteristics. See also the **Format** command in the *CTOS Executive Reference Manual*.

1. On the Command line, type **Format**; then press RETURN to display the command form.
2. Fill in the fields described below, using parameter values that pertain to your own workstation.

File list. Enter the name of the file (or files) you want to format and print.

[Print to]. Enter the queue name (for spooled printing) or device name (for direct printing) of the printer you want to use.

Example:

Format	
File list	<u>Boss.memo</u>
[Print to]	<u>[SplB]</u>
[Confirm each?]	_____
[Title]	_____
[First page to format]	_____
[Last page to format]	_____
[Suppress page numbers?]	_____
[Suppress date?]	_____
[Suppress time?]	_____
[Double-space?]	_____
[Left margin (10 spaces)]	_____
[Text width (65 spaces)]	_____
[Page length (66 lines)]	_____
[Top margin (6 lines)]	_____
[Bottom margin (6 lines)]	_____
[Tab width (8 spaces)]	_____
[Suppress page ejects between files?]	_____

3. Press GO.

The Print Command

To print an unformatted ASCII file on a spooled printer, you use the **Print** command, as described in the following procedure. See also the **Print** command in the *CTOS Executive Reference Manual*.

1. On the Command line, type **Print**; then press RETURN to display the command form.
2. Fill in the fields described below, using parameter values that pertain to your own workstation.

File list. Enter the name of the file (or files) you want to format and print.

[Queue name (SPL)]. Enter the queue name of the spooled printer you want to use.

Example:

Print	
File list	FileName
[Queue name (SPL)]	[SplB]
[Number of copies]	
[Delete after printing?]	
[Special forms name]	
[Print wheel name]	
[Printing mode]	
[Align form?]	
[After date time]	
[Security mode?]	
[Priority]	
[Confirm each?]	

3. Press GO.

The Copy Command

To print an unformatted ASCII file to a direct printer, you use the **Copy** command, as described in the following procedure. See also the **Copy** command in the *CTOS Executive Reference Manual*.

1. On the Command line, type **Copy**; then press **RETURN** to display the command form.
2. Fill in the fields described below, using parameter values that pertain to your own workstation.

File from. Enter the name of the file (or files) you want to format and print.

File to. Enter the device name of the direct printer you want to use.

Example:

Copy	
File from	FileName
File to	[Lpt]
[Overwrite ok?]	
[Confirm each?]	

3. Press GO.

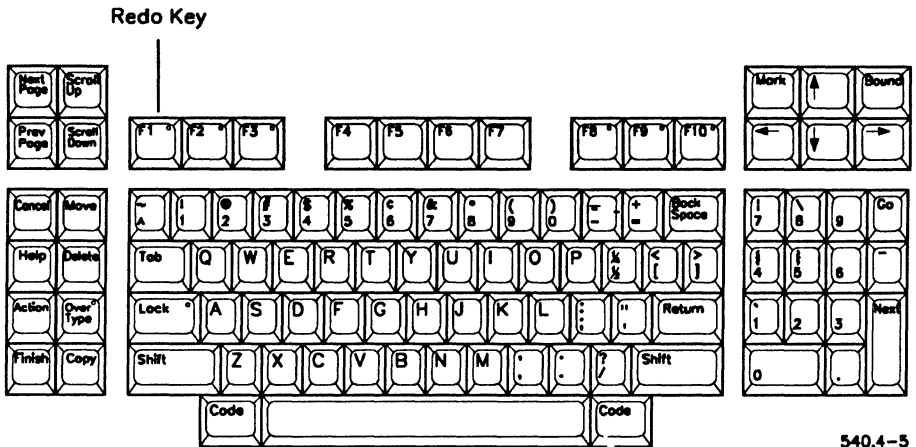
Redoing a Command

To perform the same task several times consecutively, you can use the redo key. When you are using the Executive, redo is the F1 function key, as shown in Figure 4-5.

Pressing F1 displays the last command form you used, containing the parameter values you previously filled in. You can change parameter values before reexecuting the command, or leave them as they are.

Note: *The keyboard pictured in Figure 4-5 is an example only. Exact keyboard layouts vary from workstation to workstation.*

Figure 4-5. Redo Key



540.4-5

How to Redo the Previous Command

Try using redo with the **Files** command, as described in the following procedure.

1. On the Command line, type **Files**; then press **RETURN** to display the command form.
2. Fill in the command form with the parameter values shown below:

```
Files
[File list (*)]           [Sys]<Sys>*.user
[Details?]                yes
[Print file]              _____
[Suppress sort?]         _____
[Max columns]             1
[Sort by suffix?]        _____
[Suppress error messages?] _____
```


3. Press **GO** to execute the command.
4. To use the redo feature, press **F1** (Redo).

The **Files** command form, with the parameter values you previously filled in, is displayed.

5. *Optional step.* Change one or all of the parameter values.

At this point, you can reexecute the command with the current parameter values, or you can make changes. For example, you could change the *[File list (*)]* parameter value as shown below:

```
Files
[File list (*)]           [Sys]<Sys>*.sub
[Details?]                yes
[Print file]              _____
[Suppress sort?]         _____
[Max columns]             1
[Sort by suffix?]        _____
[Suppress error messages?] _____
```

-  To move the cursor to the end of the parameter value, press **CODE-RIGHT ARROW**. Then use **BACKSPACE** to delete “user,” and type **sub** in its place.
6. Press **GO** to reexecute the command.

Suppressing Redo

You can preserve a redo sequence while you execute other commands. For example, if you filled in a lengthy command form, such as **LCopy**, but the command failed because you specified a nonexistent directory, you might want to execute **Volume Status** to find out the name of the directory.

To save the **LCopy** command form, which you previously filled in, press **SHIFT-GO** (instead of **GO**) when you execute **Volume Status**. This suppresses redo; you can then redisplay the **LCopy** command form by pressing **F1** (Redo).

You can, if necessary, execute many subsequent commands with **SHIFT-GO**. The last command that was executed with the **GO** key alone remains stored on the redo key.

Using the Extended Redo Feature

You can scroll back through the filled-in command forms of previously issued commands. To do so, press **CODE-UP ARROW** continuously until the command form you are interested in is redisplayed. This is called extended redo and can be used in conjunction with **F1** (Redo). For example, suppose you have just issued the **Files** command, followed by **Copy** and then **Delete**. To reissue **Delete**, you would press **F1**; to reissue **Copy**, you would press **CODE-UP ARROW** once; to reissue **Files**, you would press **CODE-UP ARROW** twice.

To expand wild-card characters when you redisplay a command form with the extended redo feature, press **DOWN ARROW**.

If you scroll back through too many commands forms, press **CODE-DOWN ARROW** to scroll the other direction.

Renaming Files

You can change the name of a file or group of files with the **Rename** command. The **Rename** command works in a manner similar to the **Copy** command; in fact, the command forms are identical. The difference is that **Rename** does not make a duplicate copy. After you execute **Rename**, there is still only one file, but its name has been changed.

How to Rename a File

To rename a file, follow these steps:

1. On the Command line, type **Rename**; then press **RETURN** to display the command form.
2. Fill in the fields described below:

File from. Enter the current name of the file you want to rename.

File to. Enter a new name for the file you want to rename.

Example:

```
Rename
File from      CurrentFileName
File to        NewFileName
[Overwrite ok?]
[Confirm each?]
```

3. *Optional step.* Fill in the remaining fields according to your needs.

The **Rename** command form contains the following optional fields:

[Overwrite ok?]. This option applies if a file with the name you specified in *File to* already exists. Enter **Yes** to overwrite an existing file, **No** to preserve an existing file. Leave this field blank to be prompted by the Executive before an existing file is overwritten.

[Confirm each?]. If you are using wild cards and are not sure you want to rename all matched files, enter **Yes**. The Executive then prompts you for confirmation before renaming each file that matches your wild-card pattern.

4. Press GO.

If you requested confirmation before renaming a file, the following prompt is displayed. If you used wild cards, this can happen several times:

```
File FileName already exists. Overwrite?
(Press GO to continue, CANCEL to deny, FINISH to exit)
```

Press GO to rename the file, CANCEL to go on to the next file, or FINISH to terminate the command.

Using Wild-Card Characters to Rename Files

You can rename a group of files by using wild-card characters with the Rename command. For example, you can change all file names ending with ".prelim" to end with ".final," as shown in the following example:

```
Rename
File from      *.prelim
File to        *.final
[Overwrite ok?]
[Confirm each?]
```

See “* and ? Wild-Card Characters,” earlier in this section, for more information about wild cards.

Changing Uppercase and Lowercase Characters

When you create a file with any application, the file name is stored exactly as you typed it, for example, “roughdraft.chap1.” When you display file names with the **Files** command, they appear with uppercase and lowercase characters, as you typed them when you created the files. If you would prefer to see uppercase and lowercase letters, for example, “RoughDraft.Chap1,” when you execute the **Files** command, you can change capitalization with the **Rename** command.

Renaming Files

Example:

```
Rename
File from   roughdraft.chap1
File to     RoughDraft.Chap1
[Overwrite ok?] _____
[Confirm each?] _____
```

Although the Executive and other applications are not case sensitive, capitalization conventions can help you to keep track of your files.

Setting Screen Attributes

You can set certain screen attributes with the **Video** command. For example, all workstations provide the following options:

- Screen timeout turns off your screen display when you haven't used your workstation for a certain length of time.
- Pause suppression prevents commands from stopping after each screenful of output.

On color monitors, you can also set color attributes. Foreground color, which affects text, command fields, and so on, can be selected on all color monitors. Background color is available on certain hardware configurations only. See the **Screen Setup** and **Video** commands in the *CTOS Executive Reference Manual*.

Note: *The Screen Setup and Video commands apply to the Executive application only. Likewise, screen attributes that you set with other applications, such as OFIS Spreadsheet, are not retained when you exit to the Executive.*

How to Suppress Screen Pauses

Before command information is scrolled off the top of the screen, the following prompt is displayed:

Press Next Page or Scroll Up to continue

For many commands, this is a necessary feature, for example, when displaying a long list of files with the **Files** command. In some cases, though, it is convenient to suppress the pause, for example, when you are performing a backup that you want to leave unattended.

To suppress the pause, follow these steps:

1. On the Command line, type **Video**; then press **RETURN** to display the command form.

Setting Screen Attributes

2. Fill in the command form as shown below:

```
Video
[Suppress pause between pages?]  yes _____
[Screen time out in minutes]     _____
[Foreground color (current)]     _____
[Narrow characters?]             _____
[Background color (current)]     _____
```

3. Press GO.

To turn the pause back on, execute the **Video** command again with no parameter values.

- ☛ To suppress the pause while a command is executing, press **CODE-NEXT PAGE**, either when the prompt is displayed or while information is scrolling.

How to Set Screen Timeout

You can set your screen display to turn off automatically when you have not used your workstation for a specified length of time. It is a good idea to turn the screen off when you are not using it, especially after working hours. This prevents an image from “burning” into the screen, which can cause “ghosts” in the background. These can seriously degrade the quality of the image you work with every day.

To set screen timeout, follow these steps:

1. On the Command line, type **Video**; then press **RETURN** to display the command form.
2. Fill in the command form as described below:

In the *[Screen time out in minutes]* field, enter the number of minutes to elapse before the screen is turned off.

Example:

```
Video
[Suppress pause between pages?]  _____
[Screen time out in minutes]     10 _____
[Foreground color (current)]     _____
[Narrow characters?]             _____
[Background color (current)]     _____
```

3. Press **GO**.

This sets the screen to turn off ten minutes after your last keystroke. It will not turn off while you are typing.

To turn the screen back on, press any key; **SHIFT** or **CODE** is recommended because neither changes anything on the screen.

☞ To turn the screen off at any time, press **ACTION-OVERTYPE**.

Section 5

Troubleshooting

Problems You Might Encounter

Problems you encounter while using the Executive can have several causes, for example:

- Misunderstandings about what you can accomplish with certain commands or functions
- Errors you make yourself, such as supplying incorrect or invalid parameter values
- Unfamiliar situations that require new skills
- System problems, which can be caused by defective equipment or improper installation of hardware or software

Where to Find Help

When the results of a command are not what you expect, refer to the *CTOS Executive Reference Manual* for detailed information about the command and to make sure that you understand the parameter values.

When error messages occur, see “Common Error Messages,” later in this section. If the error message is not covered here, see the *CTOS Status Codes Reference Manual* or use the **Status Code Reporter** command, as described later in this section.

Unusual situations, which require additional skills, are briefly described later in this section. See the *CTOS Executive Reference Manual* for more detailed information.

Executive commands you can use for diagnosing system problems are briefly described in this section. See the *CTOS System Administration Guide* for more information.

Common Error Messages

Many error messages are the result of typing errors or invalid parameter values. Other errors can be caused by other users on the cluster. Table 5-1 describes some common error messages and provides suggestions about what can cause them and how to remedy them. The errors are listed in numerical order.

The *CTOS Status Codes Reference Manual* lists and describes error codes that are in use at the time of publication. As applications are developed and enhanced, additional error codes are implemented. Sometimes, when you look up an error code, the message states, “Reserved for future use.” This means that the error code was implemented after the latest edition of the manual was published. In such a case, see the release documentation for the application that is producing the error.

You can also look up error messages with the **Status Code Reporter** command, which is described later in this section. This command displays the same error messages and explanations as you will find in the *CTOS Status Codes Reference Manual*.

Table 5-1. Common Error Messages

Error Code	Explanation
4	<p>Operator intervention</p> <p>Occurs when you terminate a command while it is executing. Commands can be terminated from a prompt (such as "Press Go to continue, Cancel to deny, or Finish to exit") or by pressing ACTION-FINISH. This error message is for your information only and requires no action.</p>
6	<p>Server workstation not running</p> <p>Either the server has been turned off or has crashed, or someone has disabled the cluster. Check with your system administrator.</p>
7	<p>Not implemented</p> <p>The command or function you are trying to execute is not available on your workstation. No action is required; you just can't do it.</p>
31	<p>No such request</p> <p>In most cases, this error occurs when a system requires rebooting after an application has been installed or updated. Try rebooting the workstation or SRP; if this does not correct the problem, the software package probably was not properly installed. Try repeating the software installation procedure by using the Installation Manager command.</p>
33	<p>Service not available</p> <p>This error occurs when you execute a command requiring a system service that has not been installed. For example, before you can use a mouse, you must execute the Install Mouse Service command to install the mouse system service on your workstation. See the documentation for the application you are trying to use, or check with your system administrator.</p>
202	<p>Directory full</p> <p>The directory you are using is full. Create a larger directory and move your files (see "Creating Directories" and "Moving Files," in Section 4); or use a different directory.</p>

continued

Table 5-1. Common Error Messages (cont.)

Error Code	Explanation
203	<p>No such file</p> <p>The file name you have used does not exist. Check for typing errors in the command form. Use the Files command with various wild card combinations to locate the correct file name (see "Listing Files," in Section 4).</p>
204	<p>No such directory</p> <p>The directory name you have used does not exist. Check for typing errors in the command form; use the Volume Status command to double check the directory name (see "Listing Directories," in Section 4).</p>
205	<p>Bad file specification</p> <p>The Executive does not recognize the file specification you have used. This is usually caused by missing or misplaced square ([]) or angle (< >) brackets. Check for typing errors.</p>
215	<p>No such volume</p> <p>The volume or device name you have used does not exist. If you used a volume name, try using the device name instead (see "Volume and Device Names," in Section 3.). If you get this error while using a device name, check with your system administrator.</p>
216	<p>Volume not mounted</p> <p>This error usually occurs when you try to execute a command on a floppy but a diskette is not in place in the specified floppy drive. Insert a diskette and try again. (You can use the Redo key; see "Redoing a Command," in Section 4.) This error also occurs when you insert a disk incorrectly; reposition it and try again. If this error occurs when you are using a hard disk, check with your system administrator.</p>
219	<p>Access denied</p> <p>You need a password to execute the command. This can happen when you are trying to use a password-protected disk on the server. (See "Path Setting," in Section 4.)</p>

continued

Table 5-1. Common Error Messages (cont.)

Error Code	Explanation
220	<p>File in use</p> <p>Someone else is using the file you want to use. Try the command again later; check with other users to see whether they have finished using the file.</p>
230	<p>Disk full</p> <p>You have run out of disk storage space. Try performing the disk cleanup procedure (see "Cleaning Up a Disk," in Section 4). Consider archiving files that you seldom use (see the Selective Archive command in the <i>CTOS Executive Reference Manual</i>).</p>
301	<p>Disk I/O error</p> <p>This is not a common error; it is included here, however, because it requires immediate attention. This error means that a portion of the disk has become unreadable. See your system administrator immediately; most data can usually be salvaged with the Volume Archive command (see the <i>CTOS Executive Reference Manual</i>).</p>

Using the Status Code Reporter

To quickly look up error messages on your workstation, use the **Status Code Reporter** command, as described in the following procedure:

1. On the Command line, type **Status Code Reporter**; then press **RETURN** to display the command form.
2. In the *[Error code(s)]* field, enter the error code number, as shown in the following example:

```

Status Code Reporter
[Error code(s)]           204
[Range of error codes]
[Print file]
[String(s) to search]
[Error message file name]
  
```

3. Press GO.

A description of the error code appears on the screen.

See the *CTOS Executive Reference Manual* for more detailed information about the **Status Code Reporter** command.

Entering Multiple-Word Parameter Values

If you are using the Executive for programming or system administration, you may need to enter a parameter value containing more than one word. For example, you might do this to create a new Executive command or to create or delete multiple-word file names.

To enter a parameter value containing more than one word, enclose the entire entry with a pair of single quotation marks ('). The following example shows a field from the **New Command** command form:

```
New Command  
Command name 'Sample Command'
```

Entering Lengthy Parameter Values

If a parameter value contains several file names or too many characters to fit in the command form field, it must be entered via an at-file. At-files are briefly described in "Listing Files," in Section 4. See also "At-Files," in the *CTOS Executive Reference Manual*, for more detailed information.

Typing Symbols

You may need to execute a command on a file or directory name containing a symbol that is not on the keyboard. For example, some software companies use symbols to designate special purpose directories, such as *<WonderWare™>*.

To enter a symbol in a command form, type CODE-'; nothing appears in the command form when you do this. Then, type the keystroke for the symbol. For example, CODE-5 is the keystroke for the trademark symbol. To enter a trademark symbol, you type the following sequence:

```
CODE-' CODE-5
```

See the *CTOS Procedural Interface Reference Manual* for a table of the keyboard character set.

Commands Used For Troubleshooting

The Executive provides several troubleshooting commands, which are briefly described below. These commands can help you track down and fix system problems.

Cluster Status	Displays the status of cluster communications.
Partition Status	Displays information about system services and applications that are running on a workstation.
PLog	Displays or prints the system error log, which includes information about system crashes and disk errors.
Volume Status	Displays information about disk space utilization (see "Listing Directories," in Section 4).

See the *CTOS Executive Reference Manual* for detailed information about the **Cluster Status**, **Partition Status**, **PLog**, and **Volume Status** commands.

Glossary

< >

See angle brackets.

*

See wild card character.

{ }

See braces.

^

See circumflex.

\$ directory

See dollar sign directory.

!

See bang.

?

See wild card character.

[]

See square brackets.

[Sys]<Sys>

The volume and directory that contain the bootable operating system. Usually your applications programs and other system files are also stored in *[Sys]<Sys>*.

A

angle brackets (< >)

Used to enclose a directory name in a file specification or path setting, for example, <Sys>.

application

A computer program that provides specific capabilities, such as OFIS Document Designer for word processing or OFIS Spreadsheet for financial planning.

archive dataset

A disk or tape file created by one of the backup commands. Archive datasets contain the contents of files in a compressed format.

at-file

A text file that contains a parameter value. At-files are used to supply file lists or other parameter values that are too long to be typed in the command form. When the name of a text file is preceded by the at symbol (@) in a command form field, the contents of the file are substituted as the parameter value when the command is executed.

ASCII text file

A file containing the alphanumeric characters that comprise the American Standard Code for Information Interchange.

B

BNet

A communications application that is used to connect servers together.

bang (!)

The exclamation point that is typed before the volume or device name to designate a disk on the server, for example, *[/!Sys]*.

braces ({})

Used to enclose a network node name in a file specification or path setting, for example, *{Office}*.

C**case sensitive**

Difference in the interpretation of uppercase and lowercase letters. The Executive is not case sensitive.

circumflex (^)

Used to designate a password in a file specification.

command form

Used to supply parameter values to the Executive.

command line

The highlighted line on the Executive screen where you enter the name of the command you want to issue.

configuration file

Contains parameter values for an application or a piece of hardware.

D**default directory**

The directory name that appears in angle brackets (< >) in the path setting on the screen.

default file prefix

The file prefix that appears to the right of <Directory> in the path setting on the screen.

default path

The volume and directory that appear in the path setting on the screen.
See also path.

default value

A predetermined value with which the command is executed when you leave an optional field blank.

default volume

The volume or device name that appears in square brackets ([]) in the path setting on the screen.

device

A disk drive, printer, tape drive, modem, or other physical device that receives or transmits data. *See also* disk drive.

device name

The identifier for a device. When referring to a disk drive, the device name is determined by the physical location of the disk drive. When using the Executive, the device name can be used instead of the volume name in command forms.

directory

A subdivision of disk storage space, which can be compared to an electronic file cabinet. Directories are used to organize the many files that are contained on a disk.

disk

A physical device that is either contained within or attached to your workstation. It provides storage space for your files.

disk drive

The mechanism that holds the disk. The disk drive stores and retrieves information to and from the disk.

distribution media

The diskette(s) or tape on which applications programs are supplied. You install applications from the distribution media to your hard disks.

dollar sign directory

A directory that is used for storing temporary files that are created by applications.

drive

See disk drive.

E

expansion

The physical replacement, within a command form, of wild-card characters for the actual characters they match. Also, the physical replacement of the contents of a file when using an at-file as a parameter value.

F

field

A blank line in a command form where you type a parameter value.

field name

Describes the type of information to enter in a command form field.

file

A unit of data that can be used by your workstation. Files can be executable programs or they can be documents, spreadsheets, pictures, and so on, which you create with applications.

file specification

A unique identifier that contains the name of a file, as well as its volume and directory location.

file system

All the information contained on a workstation's disks.

floppy disk

A small, flexible disk that is inserted into a disk drive. They are usually used to store backups or install new applications.

floppy-disk drive

A slot-like opening on the front of the workstation that is used to hold a floppy diskette. *See also* disk drive.

I

initialization

The procedure that prepares a disk for use on a workstation or shared resource processor.

L

logging out

The opposite of signing on. Logging out exits the Executive.

M

macro

A single keystroke or command that defines a sequence of operations.

mandatory field

In a command form, a field that must be filled in or the command cannot be executed. A mandatory field is not surrounded by square brackets.

metacharacter

See wild-card character.

N

network node

When a server is connected to another server via a networking application, it becomes a network node. Cluster workstations connected to a node can communicate with other servers in the network. *See also* BNet.

node

See network node.

O**optional field**

In a command form, a field that does not have to be filled in for the command to be executed successfully. An optional field is surrounded by square brackets ([]). If such a field is left blank, a default value is used.

operating system

The program that controls the execution of the applications and utilities on your workstation.

overwrite

To replace the contents of an existing file with the contents of another file. Overwriting destroys the original file. This is an option with many Executive commands.

P**parameter field**

See field.

parameter value

The information you type in a command form field.

password

An access code that restricts the use of a system. Workstations or servers can have several passwords that allow varying levels of access to different users.

path

The default volume and directory. This volume and directory are used automatically when you execute a command unless you override the path with a file specification. The path setting appears in the status area of the screen.

Q**query field**

In a command form, a field that is defined by a field name in the form of a question.

R

record

To store a group of commands that can be reexecuted later.

redo key

The F1 function key that is used to repeat the previous command.

release documentation

A document containing information about a new version of a software product. Sometimes called Release Notes, Release Notice, or Release Information File.

replay

To reexecute a group of commands that were previously recorded. *See also* record.

S

server

A workstation or shared resource processor, formerly called a master, to which cluster workstations are connected. The server controls many system services, such as printing and communications. Co-workers can share the files and applications that are stored on disks located on the server.

shared resource processor (SRP)

A multiprocessor computer that is used as a server.

SignOn

The procedure that prepares your workstation for use. When you sign on, you enter a user name, which determines the applications and commands that are available on the workstation. You also enter your access password when you sign on.

square brackets ([])

Used to enclose a volume or device name in a file specification or path setting. Also used to designate optional fields in command forms.

SRP

See shared resource processor.

status area

The top two lines of the Executive screen where default path, user name, and date/time information are displayed.

submit facility

An Executive feature that executes groups of commands.

Sys

An abbreviation for "System." It is used in file names to denote files that are necessary for the system to boot and function correctly. It is also used as the name for the volume (*/Sys/*) and directory (*<Sys>*) that contain the bootable operating system.

U

utility

A program that carries out a specific task, such as copying or deleting files.

V

valid volume

A disk that has been initialized for use on a workstation or shared resource processor.

volume

An initialized disk. *See also* valid volume.

volume name

The name that is assigned to a disk when it is initialized.

W

wild-card character

A special character, also called a metacharacter, that is used by the Executive to match character strings in file specifications. The asterisk (*) wild-card character matches 0 to any number of characters; the question mark (?) wild-card character matches exactly one character.

window interface

An interactive user interface that presents a predictable look and feel from application to application.

X

XE

Another name for a shared resource processor. *See* shared resource processor.

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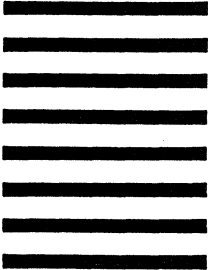
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