



# XENIX\* 286 Visual Shell User's Guide



**XENIX\* 286  
VISUAL SHELL  
USER'S GUIDE**

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## Manual Overview

The *XENIX 286 Visual Shell User's Guide* is a reference manual for using the XENIX 286 visual shell. The manual provides operating instructions and necessary background information for the visual shell. Because users are likely to have a wide range of experience with computers and operating systems, this manual includes both basic operating information and details on advanced features that enable more sophisticated users to customize the shell and create their own menus.

Occasionally you will be directed to another book containing more information about a particular topic; Appendix B contains a list of Intel publications.

## Intended Users

The *XENIX 286 Visual Shell User's Guide* is written for those familiar with XENIX basic concepts and need to use the visual shell. Users should read the *XENIX 286 User's Guide* and learn to use the features described there before using the visual shell.

## Notational Conventions

These notational conventions are used in this manual:

- Literal names are bolded where they occur in text, e.g., **/sys/include**, **printf**, **dev\_tab**, **EOF**.
- Syntactic categories are italicized where they occur and indicate that you must substitute an instance of the category, e.g., *filename*.
- In examples of dialogue with the XENIX 286 system, characters entered by the user are bolded.
- In syntax descriptions, optional items are enclosed in brackets ( [ ] ).
- Items that can be repeated one or more times are followed by an ellipsis ( ... ).
- Items that can be repeated zero or more times are enclosed in brackets and followed by an ellipsis ( [ ]... ).
- A choice between items is indicated by separating the items with vertical bars ( | ).

## Manual Organization

This manual is organized in the following manner:

### Chapter 1--Introduction

This chapter introduces the reader to the XENIX 286 visual shell. Included are manual and shell overviews, user definition, notational conventions, a synopsis of each chapter and appendix, and a visual shell overview.

### Chapter 2--Using the Visual Shell

Chapter 2 provides the reader with instructions for operating the visual shell. This chapter includes a description of command syntax, the main menu commands and submenus and examples of how to use the visual shell.

### Chapter 3--Advanced Features

This chapter describes the advanced features of the visual shell. After reading this chapter, you will know how to add and delete commands from a menu, create new menus, modify existing menus, and use and modify the window.

### Appendix A--Command Reference

Appendix A is a summary of the visual shell commands and a directory of the special keys used in the visual shell.

### Appendix B--Related Publications

This appendix includes a list of Intel publications containing information relating to XENIX 286.

## Visual Shell Overview

Every operating system must have some method of enabling a user to communicate with the root of the operating system (the kernel); in XENIX this is called the "shell." The XENIX shell is actually a command interpreter that accepts commands input by the user and interprets them into bit patterns that the kernel can understand and execute.

XENIX 286 users have four shells to choose from: the visual shell, the Bourne shell, the C shell, and the restricted shell. Each of these shells is designed for use with certain applications, but you may use any of the shells at any time (with the exception of the restricted shell).

While the interface to the Bourne, C, and restricted shells is transparent, the visual shell interface is highly visible to the user. In the Bourne, C, and restricted shells, the user inputs commands on a "command line" preceded by the system prompt, but in the visual shell the user selects a command from a list displayed on the screen; the visual shell is a "menu-driven" program.

Because the visual shell is menu-driven it is particularly well suited to environments where the operator has little or no computer experience or where certain applications software packages are used constantly. The shell interprets all commands to the operating system; it replaces the traditional command line with a visual shell that shows you a menu of the most commonly executed applications and utilities.

An important feature of the visual shell is that you can customize it for different purposes. You can create commands and help files as well as tailor the shell for different applications.

Pressing the HELP key or choosing the Help command displays information about the visual shell commands and facilities. You can then select the topic you want to explore by selecting it with the cursor. Selecting not only alleviates having to type the entire file name or directory name for the topic, but also ensures that you'll select exactly the file or directory you want to view.



## Introduction

This chapter describes how the visual shell works and how to use it. You will learn how to enter commands, manipulate files and directories, set visual shell options, use mail, and print files and directories.

## How the Visual Shell Works

When you first enter the visual shell, XENIX displays a list of 12 commands: this is the command menu. From this menu you select the task to be performed. After selecting the appropriate command, another menu (the submenu) appears with prompts you must answer. After you fill in the fields for the submenu, XENIX executes the command in the same way it executes a command entered from the keyboard.

## Status Line

The status line is the last line on the screen. It gives you the following information:

- The path name of the working directory (left-truncated if necessary)
- A message if you have mail
- The date and time
- The name of the operating system (XENIX)

When the operating system is waiting for you to enter commands, the date and time are monitored and displayed on the status line. The date is updated daily and the time is updated every minute.

## Message Line

The message line is above the status line. The visual shell displays various messages on this line when you choose commands and execute operating system tasks. Any error messages you may receive appear on this line.

## Command Output

The center portion of the screen appears blank when you start the computer. As you enter commands, the output of these commands appears in the center portion of the screen; this center portion of the screen is called the window. The command output scrolls up each time a new command is typed. The command menu, message line, and status line are temporarily erased during command execution but are redrawn when the command has completed.

## How to Use the Visual Shell

The visual shell can be invoked by entering

```
vsh
```

at the system prompt. A few seconds after invoking the visual shell, the command menu appears on the screen. The visual shell can also be set as the shell that you enter as soon as you log in to XENIX: your login shell. If the visual shell is set as your login shell, you don't have to invoke it.

The lists of commands on the screen is called a command menu. In fact, any time you see choices on the bottom part of the screen, that is a menu. You can choose an option from a menu by pressing the SPACE BAR. As you press the SPACE BAR, watch the command menu. The highlight moves left to right, stopping at each command. Try pressing the SPACE BAR to move to each of the different options on the main command menu. Once you have selected a command, press RETURN and a submenu appears on the screen. You must fill in the blank fields of this submenu to tell the visual shell what to do with the command selected.

The BACKSPACE key can be used to back up (move right to left) through the commands.

To return to the main command menu at any time, press the CANCEL key or CONTROL-C.

Another way to select commands and other options is to type the first letter of the command or option while in the command menu. For example, to select **Copy**, type **C**. You do not need to press RETURN; the **Copy** command will automatically be processed.

If you press a key that does not work as a command, such as the letter J, the command screen will not change, but you will see the error message "Not a valid option."

### Editing Responses to Commands

Each submenu contains command fields that require you to enter a response; the visual shell provides special editing keys to edit command field responses. The following keys are listed by FUNCTION only. Refer to Appendix A for the exact key or sequence of keys that corresponds to these functions.

To replace a response, type the replacement. The visual shell automatically deletes the original response as soon as you type the new one.

To delete the response and leave the field empty, press the DELETE key. All highlighted text is deleted.

To append to the response, move the cursor to the end of the existing response and add the new text. Once the response is altered, one character or word in the field is highlighted. This highlight is the edit cursor. The edit cursor may be moved to designate where or what to edit.

Use the arrow or cursor movement keys to move the edit cursor in the command fields. CONTROL-K and CONTROL-L move the cursor left and right, respectively, one character at a time. CONTROL-O and CONTROL-P move the cursor left and right one word at a time. Note that punctuation marks are considered words.

To insert new text, type the text. It will be inserted in front of the edit cursor.

To delete text, use the BACKSPACE key to delete characters on the left side of the cursor. Use the DELETE key to delete what is highlighted by the cursor.

To replace text, use the delete key to remove the old text, and then type the new text.

### **Executing a Command**

The visual shell does not carry out the command until you tell it to do so by pressing RETURN. As shown earlier, the RETURN key is also used after you move the highlight to a command or subcommand name with the SPACE BAR or BACKSPACE key.

You can press RETURN whenever the responses in all the command fields are correct. When a command has been carried out, the command screen reappears and waits for a new command. Note that if you choose a command by typing its first letter, you do not have to press RETURN.

### **Canceling a Command**

Before you press RETURN to carry out a command, you may press the CANCEL key to cancel the command. When you press the CANCEL key, the command screen will reappear and you can choose another command or end the session by choosing **Quit** from the command menu.

### **Redrawing the Screen**

You may redraw the screen at any time during the session by entering an exclamation point (!). When you redraw the screen, XENIX clears it and then displays the current information again.

## Command Descriptions

The following command descriptions explain the action of each command, the purpose of the command fields, and the meaning of the messages displayed by a command. The submenu for each command is displayed immediately under the command heading. Instructions for using features such as the editor (**vi**) and **mail** are provided in the *XENIX 286 User's Guide*.

### Copy

**COPY:** File Directory

The **Copy** command offers a choice of subcommands that perform the following tasks:

- Copy the contents of a file to a new file
- Copy the contents of a directory to a new directory

The **Copy** subcommands are described individually in the following sections.

#### Copy File

**COPY FILE** from:                   to:

You may copy the contents of any existing file to a destination file. If the destination file already exists, the old contents are deleted before the new contents are copied to it. If the file is not in the current directory, you must specify a valid path name.

If you copy the source file to another directory, you may give the destination file the same name as the source, but you must specify a full path name for the destination file. Otherwise, you must use a different name.

#### Copy Directory

**COPY DIRECTORY** from:                   to:

You may copy the contents of any existing directory to a destination directory. If the directory is not in the current directory, you must specify a valid path name.

The **Copy File** and **Copy Directory** commands have the following command fields:

- from:**       Enter a file or directory name. If the file is not in the working directory, specify a valid path name.
- to:**         Enter a file or directory name. If the file is not in the working directory, specify a valid path name.

## Delete

DELETE name:

The **Delete** command enables you to perform these delete operations:

- Delete a file from a directory
- Delete a subdirectory from a directory

**Delete** removes a file from the current or specified directory or deletes the directory specified by the path name. If the file or directory does not exist, the command displays an error message.

**Delete** has the following command field:

**name:** Enter a file or directory name.

## Edit

EDIT file:

This command enables the user to edit the specified file. **Edit** loads **vi** and replaces the command menu screen with the text editor screen. The command menu is restored when you exit **vi**.

**Edit** has the following command field:

**file:** Enter a file name. If the file is not in the working directory, you must supply a valid path name.

## Help

HELP: Resume Introduction Next Previous Commands Keyboard Filters Menus

The **Help** command displays information about visual shell commands; it provides the following information:

|              |   |
|--------------|---|
| Resume       | Exits Help and returns to the previous screen.                |
| Introduction | Displays the beginning of visual shell Help text.             |
| Next         | Scrolls Help text ahead one full screen.                      |
| Previous     | Scrolls Help text in reverse one full screen.                 |
| Commands     | Displays visual shell command information.                    |
| Keyboard     | Displays information about the keyboard.                      |
| Filters      | Displays information on XENIX filters FIND, MORE, and SORT.   |
| Menus        | Displays information on how to change the visual shell menus. |

## Mail

**Mail** has two commands: **Read** and **Send**. These two commands are described in the following text.

### **MAIL: Read**

The **Read** command enables you to read mail sent by other users. Once you have selected **Read**, you begin using the XENIX mail system to read your mail. When you finish reading your messages, enter **CONTROL-D** to exit **mail**.

### **MAIL SEND to:**

The **MAIL SEND** command enables you to send **mail** to other users. After filling the "to:" command field with valid user names, you can then use the normal XENIX **mail** commands. When you finish composing a message, enter **CONTROL-D** to send it to the designated users. Chapter 6, "**mail: The XENIX Mail System**," of the *XENIX 286 User's Guide* provides complete instructions for using the XENIX mail system.

## Name

**NAME old:**            **new:**

This command enables you to rename an existing file or directory. The new name must not be the same name of a file or directory already in that directory.

This command has the following command fields:

- old:**            Enter the existing file or directory name. If the file or directory is not in the working directory, a valid path name must be given.
- new:**            Enter the new file or directory name. If the file or directory is not in the working directory, a valid path name must be given.

## Options

**OPTIONS:** Directory FileSystem Output Permissions

The **Options** command enables you to select one of the listed subcommands to perform the following functions:

- Make a directory (under Directory)
- Determine disk usage (under Directory)
- Check a file system (under FileSystem)
- Determine free space (under FileSystem)
- Mount a flexible disk (under FileSystem)
- Unmount a flexible disk (under FileSystem)
- Change visual shell command output on the screen (under Output)
- Set permissions for directories and files (under Permissions)

The subcommands are described in the following sections.

### Options Directory

The **Options Directory** menu has two commands: **make** and **usage**.

**OPTIONS DIRECTORY MAKE:** directory:

This command enables you to make a new directory by entering a directory name. The new directory is a subdirectory of your working directory.

**OPTIONS DIRECTORY USAGE:** name:

The **usage** command enables you to determine the number of blocks contained in all files and directories within each directory and file specified by "name." This command does not count directories that cannot be read or files that cannot be opened. Files with holes in them will result in an incorrect block count.

This command has the following command field:

**pathname:** Specify the pathname of a directory.

## Options FileSystem

The **Options FileSystem** menu contains four commands:

|                   |                                     |
|-------------------|-------------------------------------|
| <b>Filescheck</b> | Checks and repairs files systems.   |
| <b>Mount</b>      | Mounts a file structure.            |
| <b>Unmount</b>    | Unmounts a file structure.          |
| <b>Spacefree</b>  | Reports number of free disk blocks. |

These commands are described in the following sections.

### Options FileSystem Filescheck

**OPTIONS FILESYSTEM FILESCHECK:** device name:

This command is usually run when you have problems mounting a flexible disk on a system. **Options FileSystem Filescheck** audits and repairs inconsistent conditions for file systems. If the file system is consistent, the number of files, number of blocks used, and number of blocks free are reported. Most corrective actions of this command result in some loss of data.

The **Filescheck** option has the following command fields:

**device name:** Specify a device name such as **/dev/dvf0**.

### Options FileSystem Mount

**OPTIONS FILESYSTEM MOUNT:** device name:    directory: read only: Yes (No)

This command option enables you to mount a flexible disk in the system. This command tells the system that a removable file structure (e.g., a flexible disk) is present. The file structure is mounted on a directory. The directory must already exist; it becomes the name of the root of the newly mounted file structure. Refer to the **Options Directory Make** command for information on how to create a directory.

If you have problems mounting a flexible disk, refer to the **Options FileSystem Filescheck** command.

This option has the following command fields:

**device name:** Specify the name of the device you are mounting, such as **/dev/dvf0**.

**directory:** Specify the name of the directory in which the mounted file system will reside.

**read only:** Choose "Yes" if your disk is write-protected. The default is "No".

### Options FileSystem Unmount

OPTIONS FILESYSTEM UNMOUNT device name:

The **Unmount** option unmounts a mounted flexible disk file system. Busy file structures cannot be unmounted with **Unmount**.

This command has the following command fields:

**device name:** Specify the mounted device name (e.g., **/dev/dvf0**).

### Options FileSystem Spacefree

OPTIONS FILESYSTEM SPACEFREE device name:

This command reports the number of free disk blocks. If the **device name:** command field is not specified, **Spacefree** reports free space on all mounted file systems.

The **Spacefree** command has the following command fields:

**device name:** Specify a device name such as **/dev/dvf0**.

### **Options Output**

OPTIONS OUTPUT commands like: Vshell Xenix

This command determines how the visual shell will display command syntax when a command is executed. Normally, the visual shell displays its commands in the command output area of the screen. For example, when you run **Options Directory Make** to create a directory, the visual shell displays "Options Directory Make..." when the command executes. If you want to see which XENIX command is running, select the "Xenix" field. The visual shell will display "mkdir ..." instead of **Options Directory Make**.

The **Options Output** command has the following command field:

commands like: Vshell Xenix

Choose "Xenix" to see actual XENIX commands displayed. The default is visual shell commands ( "Vshell").

## Options Permissions

OPTIONS PERMISSIONS filename: who: (All) Me Group Others read: (Yes) No write: (Yes) No execute: (Yes) No

**Options Permissions** enables you to change file and directory permissions and has the following command fields:

- filename:** Type the name of a file or directory.
- who:** Enable the permissions group by selecting All (default), Me, Group, or Others.
- read:** Select "Yes" (default) or "No."
- write:** Select "Yes" (default) or "No."
- execute:** Select "Yes" (default) or "No."

## Print

PRINT file:

The **Print** command enables you to print files on a line printer. The command adds the specified files to the end of the printer queue. Each file is printed when it reaches the top of the queue. The specified files must be text files. **Print** has the following command fields:

- file:** Enter file names.

## Quit

QUIT:

Enter Y to confirm:

**Quit** enables you to leave the visual shell and return to the command shell. You must type the letter "Y" to confirm that you want to leave the visual shell. On exit from the shell, the system saves the current environment so you may return to the same point when you start the shell again. If the visual shell is your login shell, when you quit the visual shell you will be logged off the system.

## Run

**RUN** file: parameters: output:

**Run** enables you to execute the program or command specified after "file:". The specified file must be one of the following:

- An application program
- An executable XENIX file (including commands)

If the file is not in the working directory, you must supply a valid path name. **Run** has the following command fields:

**file:** Enter a file name, program name, or command name.

**parameters:** Enter any arguments to the program or command, including switches.

**output:** Specify a file name or device name to redirect output from the program or command. Enter a vertical bar (|) to access the menu of XENIX filters.

## View

**VIEW** name:

This command enables you to view the specified file. If a file is loaded in the window, you can view the file by using the scrolling keys. If a directory is loaded in the window, you can travel around the directory by using the **SHOW** (=) and **GOAWAY** (-) keys. (Appendix A contains a complete list of the keys used in the visual shell.) **View** has the following command field:

**name:** Enter a file or directory name. If the file or directory is not in the current directory, you must give a valid path name.

## Window

**WINDOW** redraw: Yes No (default) height in lines: 5 (default)

The **Window** command turns the window display on or off and sets the window height. When the window redraw is "Yes," a permanent window appears at the top of your screen. The window contains the output from the **View** command and directory displays. When redraw is "No," a permanent window appears at the **View** command or when a direction key is pressed. The default window redraw command field is "No."

You may use the "height in lines:" field to set the window. Initially, the height is 5 lines; the maximum height is 15 lines.

**Window** has the following command lines:

**redraw:** Choose an option. "Yes" turns the window display on; "No" turns it off.

**height:** Enter a number from 1 to 15.



## Introduction

The visual shell is more than just an operating system interface; it is designed to help you enter commands and perform functions efficiently. Two visual shell features give you flexibility and power: the window and a modifiable menu structure. You will learn about the window and how to change visual shell menus in this chapter.

## Using the Window

The visual shell enables you to use part of the screen as a window for displaying and accessing information and manipulating directories and files. The visual shell window characteristics can be manipulated by using the **Window** command. The window may be permanent or temporary. A permanent window is one that has been opened and remains open until closed; a temporary window disappears after the next command is processed.

## Showing the Directory

Just as you can view text files in the window, you can use the direction keys on your keyboard to view directories in the window. (Refer to Appendix A, "Command Reference," for information on the direction keys UP, DOWN, LEFT, and RIGHT.) When you use one of these keys, a temporary window appears on your screen and remains there only until you execute a visual shell command.

To display a directory, press one of the direction keys when the main command menu appears on the screen. A temporary window will be drawn in the upper portion of the screen. The window displays a directory listing for your working directory, showing the names of files and directories. Directories and subdirectories are shown in brackets ([ ]), and each executable file is preceded by an asterisk (\*). Text files are not marked in any special way and device special files are not listed.

You can use the direction keys to select file and directory names displayed in the window. The bottom border of a window always contains information about the selected directory or file. The border tells you the name of the directory (or file), its size in bytes, and the date it was last modified. For example:

```
_____ myfile _____ 621 bytes _____ modified Aug. 2, 1983
```

Two special keys are used with the window: SHOW (=) and GOAWAY(-). If the cursor is highlighting a directory, you can press the SHOW (=) key to display the listing for that directory. Pressing the GOAWAY (-) key returns the display to the parent directory. (You can always access a parent directory by pressing the GOAWAY key.) Using these two keys, you can change your current working directory.

The following example demonstrates how to view a directory and use the **SHOW** and **GOAWAY** keys.

Press one of the direction keys to display your working directory in the window. For the purposes of this example, your working directory is named **/usr/sue**. There are several subdirectories in the **/usr/sue** directory, including one named **formats**. To view the directory named **/usr/sue/formats**, follow these steps:

1. Use the direction keys to select the **formats** subdirectory.
2. Press the **SHOW** key (=) to view the **/usr/sue/formats** directory.
3. Press the **GOAWAY** key (-) to display the **/usr/sue** directory.

### Showing Text Files

The **SHOW** and **GOAWAY** keys may also be used to display a text file. Press a direction key to display the working directory in the window. Select the name of the file you want to view and press the **SHOW** key. The directory disappears and is replaced by the selected text file; use the arrow keys to move through the file. When you press the **GOAWAY** key, the working directory is redisplayed in the window.

You can only "show" text files that reside in the directory currently displayed on the screen. To display other text files, change directories or use the **View** command and specify a full path name.

The following example demonstrates how to show a text file.

1. Press one of the direction keys when you see the main command menu on the screen. Your working directory appears in the window.
2. Select a file from the working directory.
3. Press the **SHOW** key.

The selected file appears in the window. To return to the working directory, press the **GOAWAY** key.

### Changing the Window Size

Windows displayed in response to pressing a direction key are temporary windows that disappear after the next command executes. The **Window** command enables you to create a permanent window and change the window size.

To expand the window size from the default five-line window, choose the **Window** command from the main command menu; the **Window** menu appears. This menu asks you whether you want to redraw the window after each command. The default is "No." To create a permanent window, go to the "redraw:" command field and choose "Yes." To establish a larger window, use the **TAB** key and move to the "height:" command field. Type a number from 6 through 15. (The window cannot be more than 15 lines long.) When you press the **RETURN** key, the main command menu appears. A permanent window is displayed on the screen until you close it by using the **Window** command.

To close the window, choose the **Window** command from the main command menu. Choose the "No" option in the "redraw:" command field. Press RETURN. The display returns to the main command menu, and the window will not appear until you press a direction key.

To create a permanent 10-line window on the screen, follow these steps:

1. Choose the **Window** command from the main command menu.
2. Go to the "redraw:" command field and choose "Yes."
3. Press the TAB key and move to the "height:" command field. Type the value 10.
4. Press the RETURN key.

The main command menu appears and a window 10 lines high is displayed in the upper part of the screen. To close this permanent window, choose the **Window** command and go to the "redraw:" command field. Choose "No." When you press RETURN, the main command menu appears and the window is closed.

You can decrease the window size by using the same procedure but specifying a smaller window size. The window size must be between 5 and 15 lines long.

## Using the Window with Simple Commands

Using a window enables you to specify file and directory names by selecting them from the window. The following example copies the file **temp1** to a file named **temp2**.

1. In the main command menu, type **C**. The **Copy** menu will appear on the screen.
2. The cursor should be in the "from:" command field. Do not type the file name **temp1**. Instead, press any direction key so that the working directory appears in the window.
3. Use the direction keys to select the file **temp1** from the window. Notice that as you press the direction keys, the "from:" command field changes in the **Copy** menu. Each file selected from the window appears in the "from:" field at the bottom of the screen.
4. When the name **temp1** appears in the "from:" field of the **Copy** menu, use the TAB key to go to the "to:" field.
5. Type the file name **temp2**.
6. Press RETURN.

Output from the **Copy** command ("1 file copied") will appear in the command output section of the command screen. Both file and directory names can be selected to fill in command menus. Experiment with various commands by using the window to fill in the command menus.

## Modifying the Menus

You can modify menu commands (except those in **Help**) at any time. While in a menu (for example, the main command menu), you can change the commands on the screen by pressing the MODIFY key (@). When you press @, the **Modify** menu is displayed.

The choices on this menu are Insert, Delete, and Rename. The following sections discuss what happens when you choose each of these commands.

### Adding Commands to the Menus

To add a command to the main command menu, first press the MODIFY key and then select the Insert option. Fill in the command fields with the following information:

- The name of the command as you want it to appear on the menu.
- The name of the corresponding XENIX command.
- Where you want the command to appear on the menu.

When you press the RETURN key, the command will be added to the main command menu.

The following example adds to the main menu a command that lists the permissions of a file or directory; the menu command is called **List** and corresponds to the XENIX **l** command. To add the **List** command, follow these steps:

1. When the main command menu is displayed, press the MODIFY key. The **Modify** menu will appear.
2. Choose the Insert option.
3. Press RETURN. The Modify Insert menu appears and displays the following fields: "menu item:", "for command:", and "before item:".
4. Type "List" in the "menu item:" field.
5. Go to the "for command:" field and type **l** for the value of the **List** command. (If the command were an executable file, you would specify its file or path name.)
6. Go to the "before item:" field. This asks you which command you want **List** to precede on the menu. Type "Mail". (If you want the command to come at the end of the command menu, leave the "before item:" field blank.) You can also press the direction keys to scroll through the existing commands.
7. Press RETURN. The main command menu will include the new **List** command between **Help** and **Mail**.

Do not name your commands with letters that have already been used on the command menu. If you choose a letter that is already taken, the visual shell will ask you to specify a different name for that command.

The visual shell recognizes all XENIX operating system commands and creates a submenu for each one you add to a command menu. To illustrate this, let's use the new **List** command. In the command menu, go to the **List** command and press RETURN. A special default command menu for the **List** command will appear on the screen. This menu asks you to specify the parameters for the **List** command. Type the name of the directory you want to view in the "parameters:" command field. When you press RETURN, you will be returned to the command screen, and the specified directory will appear in the window.

If the directory you want to view is not a subdirectory of your working directory, you must type the path name of the directory in the "parameters:" command field.

### Deleting Commands from the Menus

To delete a command from the main command menu, press the MODIFY key while in the command menu. (You do not have to go to the command you want to delete.) The Modify menu will appear. Go to the Delete option and press RETURN. The Modify Delete menu will ask you which command you want to delete. Type the name of the command you want to delete in the "DELETE menu item:" field. You can also use the direction keys to enumerate which command you want to delete. When you press RETURN, the main command menu will be displayed; it will no longer contain the command just deleted.

To delete the **List** command just added to the main command menu, follow these steps:

- Press the MODIFY key when the main command menu is displayed.
- Choose the Delete option from the Modify menu.
- Type the word "List" in the "DELETE menu item:" field.
- Press the RETURN key. The visual shell will redisplay the main command menu without the **List** command.

You cannot delete the **Help** command or any of the commands in the **Help** menu.

## Renaming Commands

Besides adding and deleting commands, the visual shell also enables you to rename any command in a menu by using the **Rename** command.

For example, you may want to rename the **Delete** command to "Erase." (You may want to do this to add a command that starts with the letter "D," which conflicts with the **Delete** command.) To rename a command, choose the **Rename** option in the **Modify** menu. The **Modify Rename** menu asks you which command to rename. Fill in the three command fields and press the **RETURN** key. The main command menu appears and includes the new command name.

The following steps illustrate how to rename the **Delete** command to **Erase**.

1. While in the main command menu, go to the **Delete** command and then press the **MODIFY** key. The **Modify** menu will appear on the screen.
2. Go to the **Rename** command and press **RETURN**.
3. Three fields appear: "from:", "to:", and "before item:". Each will have "Delete" as the current value of that field. Change the "to:" field to "Erase."
4. Go to the "before item:" field. Use the direction keys to scroll through the existing commands and select the menu item you want the renamed command to precede. Select **Help**.
5. The visual shell checks to see if there are any commands in the main command menu that begin with the letter "E" and returns you to the main command menu if there are no conflicts. The **Delete** command is now renamed **Erase**.

If you have chosen a letter that is already used on the menu, the visual shell prompts you to choose a different letter.

With so much naming and deleting possible, you may forget which commands are associated with which functions. The visual shell provides you with a way to check the value of each command. Press the **MODIFY** key when the main command menu is on the screen. Go to the "for command:" command field. You can press the right and left direction keys to scroll through all visual shell commands and their associated values. You always have a current command status list that you can check if you forget a new command name or function.

## Creating and Deleting Submenus

Creating and modifying submenus is easy with the visual shell. You must first decide what to name the main menu item. The command and its associated submenu must have the same name. Use the **MODIFY** key to display the Modify menu, then choose the Insert menu.

There are three fields in the Modify Insert menu: "menu item:", "for command:", and "before item:". To add a submenu, type the name of the command (and its associated submenu) in the "menu item:" field. Next, go to the "for command:" field. Instead of typing a file name, type the word "Menu". This tells the visual shell that you are planning to add a submenu to the system. When you press the RETURN key, the visual shell will display the main command menu with the new top-level command.

So far, you have created a submenu, but that submenu has no commands in it. To add commands to your new submenu, choose the top-level command and press RETURN. You should see the name of the new submenu displayed on the screen. You can use the **MODIFY** key to call up the Modify menu and add commands to the submenu. Follow the steps described in "Adding Commands to the Menus" in this chapter to add commands to the submenu.

Commands are deleted from a submenu the same way they are deleted from the main command menu. Refer to "Deleting Commands from the Menus" in this chapter for more information. You cannot delete a submenu until each command has been deleted from it.

For example, suppose you want to be able to access several editors by using a submenu under an **Edit** main command. These editors are named **Word**, **Notepad**, and **Text**.

You must first add the top-level command to the command screen using the **MODIFY** key and the Insert option. Follow these steps:

1. When the main command menu is displayed, press the **MODIFY** key. The Modify menu will appear.
2. Type "Edit" in response to the "menu item:" field and "Menu" in response to the "for command:" field.
3. Press RETURN. The main command menu appears; the **Edit** command has been added to this menu.
4. Choose the **Edit** command and press RETURN. The screen displays "EDIT". Press the **MODIFY** key to display the Modify menu. Choose the Insert menu.
5. Add the first editor by typing the name of the editor (for example, **Word**) in the "menu item:" field and the path name of the editor (for example: **/bin/word**) in the "for command:" field.
6. Press RETURN to display the main command screen.
7. Repeat steps 4, 5, and 6 to add **Notepad** and **Text** subcommands to the **Edit** submenu.

To delete the submenu, first use the Modify menu to delete the commands **Word**, **Notepad**, and **Text**. Next, return to the command screen and use the MODIFY key to display the Modify menu. Choose the Delete menu and type "Edit" in response to the "command:" field. When you press RETURN, both the submenu (named Edit) and the top-level **Edit** command will be deleted.

## Modifying Fill-in Fields

In the previous section, you learned how to add, delete, and rename commands and how to create and delete menus and submenus. This section describes how to change and create fill-in fields, which are the prompts you respond to once you have selected a command.

### .mnu Files

All XENIX commands are actually executable files on disk. You can see the files when you display a directory listing for the directory that contains XENIX commands on your system (usually **/bin**). Most XENIX command files have an associated file called an **.mnu** file. All files have file names that end with **.mnu**. An **.mnu** file contains the information necessary for the visual shell to create a command submenu and describes the following:

- The submenu(s) for one operating system command.
- The defaults and possible values of the fields within the submenu(s).
- The actual command line arguments to be used once you press RETURN. These arguments act as a template into which values from the submenu are inserted.
- Help text. This text appears on the screen if you press the HELP key (?) while the command submenu is displayed.

The **.mnu** files are stored in a separate directory called **/bin**. Use the View command or the SHOW key to see which files have associated **.mnu** files. Notice that each command is matched with a file that ends with **.mnu**.

If you add commands to the visual shell using the MODIFY key, you do not have to add a corresponding command menu. When you choose the new command, the visual shell first searches in the **/bin** directory to find a **.mnu** file that corresponds to the command. (For example, a **Finger** command might have an associated **finger.mnu** file.) If there is no associated **.mnu** file for the command, the visual shell displays a default command menu.

You can create your own command menus by writing an **.mnu** file that corresponds to a command added to the visual shell. The following section demonstrates how to create an **.mnu** file.

## Creating .mnu Files

If you add commands to the command menu, you can access the visual shell default command menus or create your own command menus. To create your own command menus, you must write an **.mnu** file for each command you want the visual shell to process.

An **.mnu** file describes

- Displayed prompts on command menus
- Fields within command menu prompts
- Operating system command line arguments
- Help text for a command (optional)

Special characters (=, ^, #, ~, and ') can be included in any **.mnu** file text string by preceding them with a tilde (~).

### Prompts

Prompts are typed into the **.mnu** file as they will appear on the screen. Special characters are inserted where necessary to delimit fields.

### Fields

There are two types of fields:

**Menu fields:** Field selection is with a menu. Example: who: Me All Group Others  
(You choose one of these options.)

**Fill-in fields:** The response is text. Example: file name: (You enter a file name.)

Beneath the description of each prompt in the **.mnu** file is a list of field descriptions. There is one description for each field in the prompt. Each field description indicates the field's type, default value, and other type-specific information.

Table 3-1 is a list of field types.

Table 3-1. XENIX 286 Visual Shell Field Types

| Field Type   | Description                        |
|--------------|------------------------------------|
| SELECT       | Selection menu                     |
| FILENAME     | Allows window selection and typing |
| FILENAMELIST | Allows window selection and typing |
| PARAMETERS   | Text field                         |
| OUTPUT*      | Output field                       |
| NUMBER       | Integer field (number)             |
| DIRECTORY    | Allows window selection and typing |

\*OUTPUT fields determine redirection of I/O. If used, the visual shell adds the necessary symbols, commands, and file names to the command line.

Each field type has a fixed prompt that will appear at the bottom of the menu when the field is selected, for example, "Enter a file name".

Each field type may be followed by a default specification (that is, the option automatically suggested when the command menu first appears). Table 3-2 lists several different kinds of default specifications.

Table 3-2. XENIX 286 Visual Shell Field Type Default Specifications

| Default Value | Description  |
|---------------|--|
| POINT         | File or directory from directory window (if open).   |
| <number>      | Indicates option in menu-type selection.   |
| 'any string'  | A string for a fill-in field. Quotation marks will be stripped. For example, note that a NUMBER field is a fill-in field, so its default is a quoted string. |

For purposes of command line construction, SELECT field types must always be followed by a series of text strings, one for each option in the field. These are generally used to specify switches.

## Command Lines

After you have described the command menu prompts and fields, the `.mnu` file must contain a description of the command line. The visual shell uses this information to build the line that will be executed by XENIX. The command line description is a template with placeholders for variables that the visual shell will provide. The placeholders take the form `^x`, where `x` is an integer that indicates the command menu field that supplies the value. The template appears as "EXEC = template" in the `.mnu` file. The visual shell appends these arguments to the command name before the command is run.

## Help Text

Help text is text that appears whenever you press the HELP key or use the `Help` command. This text will only be displayed if you ask the visual shell for help when choosing the top-level command or while in the command submenu.

To enter help text, type any help text after the command argument line (EXEC=) in the `.mnu` file. Your help text should begin after this line. Help text must be separated by a line consisting of five hyphens.

## Example

```
GET string:^^ file:^^ linenumbers:^Yes No^
case sensitive:^Yes No^ output:^^
fields
1 PARAMETERS
2 FILENAME
3 SELECT = 2
'-n' "
4 SELECT =
" '-y'
5 OUTPUT
exec = 'fgrep ^3^4^1^2'
-----
```

GET finds a string in a file. If the "linenumbers:" command field is set to Yes, GET reports the line numbers that contain the string. If the "case sensitive:" command field is set to Yes, GET reports strings that exactly match the string and does not ignore case. You can direct output to a file or printer by specifying a file name or device name in the "output:" command field. Typing a bar symbol (!) in the "output:" command field brings up the menu of XENIX filters.



## Keyboard Summary

In this manual, the keys are referred to by their functional names (e.g., SHOW, HELP) rather than by what may be written on the key.

The following section lists the basic key assignments provided with the visual shell. Depending on the keyboard you use, you may have additional function keys or different key assignments. An extended chart, which lists terminal-specific keys, is available in the visual shell by pressing the letter H (for Help) and then K (for Keyboard). (Press N, for Next, to view more of the chart.)

These keys perform the following functions only in conjunction with visual shell menus. They may not work in the same manner if used during application programs or during operating system commands.

For some functions, several alternatives are listed, separated by commas. CONTROL-(letter) means press the CONTROL key and the letter simultaneously. Some functions list two control characters separated by a plus sign (+); both control characters must be pressed, in the sequence listed, for the function to work.

### Key Chart

| Key                   | Function   |
|-----------------------|--|
| CONTROL-E             | (UP) Moves the cursor up one line.   |
| CONTROL-X             | (DOWN) Moves the cursor down one line.                                     |
| CONTROL-S             | (LEFT) Moves the cursor left one character.                                |
| CONTROL-D             | (RIGHT) Moves the cursor right one character.                              |
| CONTROL-R + CONTROL-X | (PAGE UP) Scrolls up one full screen.                                      |
| CONTROL-R + CONTROL-E | (PAGE DOWN) Scrolls down one full screen.                                  |
| CONTROL-R + CONTROL-S | (PAGE LEFT) Scrolls one full screen left.                                  |
| CONTROL-R + CONTROL-D | (PAGE RIGHT) Scrolls one full screen right.                                |
| CONTROL-Q             | (HOME) Moves the cursor to the beginning of the file or directory listing. |

|                           |  |
|---------------------------|--|
| CONTROL-Z                 | (END) Moves the cursor to the end of the file or directory listing.  |
| CONTROL-C                 | (CANCEL) Cancels present operation and returns to main command menu.   |
| RETURN                    | (RETURN) Executes a command selected from a menu.  |
| SPACE BAR                 | Selects the next item on a menu.   |
| BACKSPACE, CONTROL-H      | Selects the previous item on a menu. When editing responses in command fields, deletes selected characters. Replacement text may be typed. |
| TAB, CONTROL-I, CONTROL-A | (TAB) Moves to and selects the entire contents of the next field in the command line.  |
| CONTROL-Y, DELETE         | (DELETE) Deletes selected characters. Replacement text may be typed.   |
| CONTROL-L                 | (CHARACTER RIGHT) Selects the character to the right of the current character.   |
| CONTROL-K                 | (CHARACTER LEFT) Selects the character to the left of the current character.   |
| CONTROL-P                 | (WORD RIGHT) Selects the word to the right of the current word.  |
| CONTROL-O                 | (WORD LEFT) Selects the word to the left of the current word.  |
| ?                         | (HELP) Requests information about the selected command or the command in progress at the time of the request.                              |
| =                         | (SHOW) Displays directories and text files; displays submenus for commands in the window.  |
| -                         | (GOAWAY) Returns the window display to the parent or current directory.  |
| @                         | (MODIFY) Displays the Modify menu.   |
| !                         | (REDRAW) Redraws the screen.   |
|                           | (BAR) Displays the menu of XENIX filters.  |

## Command Summary

|                |  |
|----------------|--|
| <b>Copy</b>    | Enables the user to copy files or directories to other files and directories.  |
| <b>Delete</b>  | Deletes a file from the current or specified directory, or deletes the directory specified by the path name. If the file or directory does not exist, the command displays an error message.   |
| <b>Edit</b>    | Loads <b>vi</b> and enables the user to edit or create the specified file.   |
| <b>Help</b>    | Displays information about the visual shell and its commands.  |
| <b>Mail</b>    | Enables the user to read mail and send mail.   |
| <b>Name</b>    | Renames a directory or file.   |
| <b>Options</b> | Offers a choice of subcommands to enable the user to perform the following: <ul style="list-style-type: none"><li>Make a directory</li><li>Determine disk usage</li><li>Create a file system</li><li>Check a file system</li><li>Determine free space</li><li>Mount a flexible disk</li><li>Unmount a flexible disk</li><li>Set permissions for directories and files</li><li>Change visual shell command output on the screen</li></ul> |
| <b>Print</b>   | Prints a file or files on the system's line printer.   |
| <b>Quit</b>    | Exits the visual shell and returns user to the login shell. If the visual shell is the login shell, then <b>Quit</b> logs the user off the system.   |
| <b>Run</b>     | Runs the program or command specified by "file:".  |
| <b>View</b>    | Enables the user to look at a file or directory by loading the file or directory into the window.  |
| <b>Window</b>  | Enables the user to turn the window display on or off and set the window height.   |



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*XENIX 286 Visual Shell User's Guide*, Order Number 174388 -- a XENIX command interface ("shell") that replaces the standard command syntax with a menu-driven command interpreter.

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