

14. FILEBROWSER

The FileBrowser provides a convenient user interface for manipulating files stored on a workstation or file server. It enables you to see, edit, delete, print, load, copy, move, rename, compile, sort, and get several types of information about groups of files.

User Interface

Starting FileBrowser

To open a browser on a set of files select the FileBrowser command from the background menu.

FileBrowser prompts you to create a window by presenting you with a dashed rectangle with the mouse cursor and a small geometric design at the lower right corner.

1. Move your mouse until the upper left corner of the rectangle is where you want it on the screen.
2. Hold down the left mouse button and move your mouse down and to the right, thus expanding the window diagonally, until the window is the right size.
3. Release the mouse button. This creates a window group on your screen in the outlined area.

Next, FileBrowser prompts you for a file pattern. Type a pattern, as described in the section Specifying What Files to Browse, below.

FileBrowser enumerates the set of files matching the pattern you requested. While the enumeration is in progress, the **Recompute** command is grayed out. When the enumeration is finished, you may select files and issue commands. You can scroll the window at any time, even while the browser is busy.

If FileBrowser can't find any files matching the pattern you specified, or you decide you specified the wrong pattern and want to try again, you can specify a new file name pattern from within the browser using the **New Pattern** command; see **Recompute** in the FileBrowser Commands section below.

You can have as many active FileBrowsers open at once as you like.

Specifying What Files to Browse

A full file name in NoteCards consists of a device or host (such as your local disk, a file server), a principal directory and zero or more subdirectories, a file name (possibly including an extension), and a version number. These fields are put together in the form :

```
{HOST}<DIRECTORY>SUBDIRECTORY>FILENAME.EXTENSION;VERSION
```

A file name pattern, as specified to FileBrowser, consists of a file name with one or more pieces omitted or filled with wild cards (*). All the files matching the pattern are listed by FileBrowser. You can browse all the files in a particular directory, all the files in a subdirectory of that directory, all the files in a directory with a particular extension, and so forth. The wild card * can be used to stand for zero or more consecutive characters in the file name. You can use as many wild cards in a pattern as you wish.

If you leave out some of the fields in a file name pattern, the missing fields are defaulted by the system. Omitted fields in the front of the pattern, i.e., the host, device, or directory fields, are filled in by consulting your connected directory. Other omitted fields are filled in with wild cards unless they are explicitly omitted; i.e., the field is empty, but the preceding punctuation is still present. In more detail, some of the cases are as follows:

If you leave out the name of the host/device, specifying *<DIRECTORY>FILENAME*, FileBrowser uses the name of the host/device for the directory to which you are currently connected.

If you leave out both the device and directory names, specifying *FILENAME*, FileBrowser uses the device and directory to which you are currently connected.

If you do not specify a file name, FileBrowser lists all the files in the specified directory (or the connected directory if you also omitted the host and directory).

If you leave out the extension of a file name, FileBrowser lists all the files with the specified file name and any extension. If you omit the extension but include the period that usually precedes the extension, FileBrowser lists only the files with the specified name and *no* extension.

If you omit the version number of the file name, FileBrowser lists all versions of the matching files. If you omit the version number but include the semicolon that usually precedes the version, FileBrowser lists only the highest version of the matching files.

Thus, the minimal pattern you can type is * (asterisk—enumerate all files in the connected directory) or ; (semicolon—enumerate just the highest version of all files). If you press the RETURN key without giving a pattern, FileBrowser aborts the prompt for a pattern, leaving you with an empty browser in which the only things you can do are change some FileBrowser parameters (see the subcommands of **Recompute** in the FileBrowser Commands section below) and then use the **Recompute** command to be prompted for a pattern again.

Examples

The pattern * specifies all files in the connected directory. It is equivalent to *.* or *.*.*.

The pattern <NoteCards>Demo specifies all files in directory NoteCards with name Demo and any extension. It is equivalent to <NoteCards>Demo.*.*.

The pattern <NoteCards>Demo. specifies all files in directory NoteCards with name Demo and *no* extension. It is equivalent to <NoteCards>Demo.*.

The pattern *.TEdit specifies all files in the connected directory with the extension TEdit. It is equivalent to *.TEdit.*.

The pattern *.TEdit; specifies only the newest version of all files in the connected directory with the extension .TEdit.

The pattern <NoteCards>A*E specifies all files in directory NoteCards whose names begin with A and end with E and have any extension.

The pattern {DSK}<NoteCards>*MY* specifies all files in directory {DSK}<NoteCards> whose names contain the substring MY and any extension.

Using the FileBrowser Window

The FileBrowser window has six major subwindows, which from top to bottom are as follows.

Enumerating {DSK}/usr/users/kmount/NC/DOC/ENVOS/1.1/WORKING/*.*;* ...done			
{DSK}/usr/users/kmount/NC/DOC/ENVOS/1.1/WORKING/*.*;* at 12:26			
Total: 32		Deleted: 0	
Name		Created	
000-OUTLINE.TEDIT;13		4-Apr-89 11:28:15	
001-TITLE-PAGE.TEDIT;7		6-Mar-89 14:50:11	
002-PREFACE.TEDIT;15		17-Feb-89 09:52:39	
003-TOC.TEDIT;2		8-Mar-89 14:00:07	
01-INTRODUCTION.TEDIT;10		23-Feb-89 13:32:25	
02-SYSTEM-REQUIREMENTS.TEDIT;21		23-Feb-89 11:38:09	
03-SOFTWARE-INSTALLATION.TEDIT;22		23-Feb-89 13:40:36	
04-SYSTEM-USE-ISSUES.TEDIT;21		7-Mar-89 12:05:51	
05-NOTECARDS-BASICS.TEDIT;48		5-Apr-89 16:20:08	
06-BUILDING-NC-STRUCTURES.TEDIT;13		4-Apr-89 10:40:25	
Info Options			
Length	Pages	Created	Read
ByteSize	Type	Written	Author

Figure 14-1. FileBrowser Display

Prompt window

This topmost subwindow is where FileBrowser prints messages about what it is doing and receives input from you. Its contents are cleared before every command.

Tally window

This subwindow immediately below the prompt window keeps a running tally of the total number of files listed in the window and the number of files that you have marked for deletion. In addition, if one of the attributes you are displaying is a size attribute (Pages or Length, as in the INFO menu, described below), this window maintains a tally of the total number of pages in the files listed and the files marked for deletion.

This window also has a title bar across the top identifying the pattern you specified and the time at which the directory enumeration was performed.

The window is blank while the files are being enumerated.

Browser window

This is the principal subwindow, in which the files matching the specified pattern are listed (see Figure 14-1). Each file's name appears at the left, and various attributes of the file are displayed in columns to the right. A title bar across the top of the browser window identifies the contents of each column (e.g., Name, Pages, Created). The files are listed in alphabetical order, with multiple versions of the same file listed in decreasing version order; i.e., the newest version appears first. The width of the column listing the file names is initially chosen to be appropriate for average-sized file names. If the files you asked to browse have particularly long names, then when FileBrowser has finished listing all the files it may choose to redraw the browser window with the attribute columns moved farther to the right to accommodate the longer file names.

Command menu

This menu appears vertically along the right side of FileBrowser window (under a title bar "FB Commands") and lists the commands that you may select to perform

operations on the files in the browser, or to change the appearance of the browser. Most of the commands operate on the set of currently selected files (see the section *Selecting Files* below). Some commands have subcommands, as indicated by the small triangle alongside them, which can be selected by holding down the left mouse button and sliding the mouse to the right over the triangle.

Info menu

An additional subwindow, the Info menu, is not normally displayed. It is used to change the set of file information (attributes) displayed in the browser (see the *Getting Information About Files* section below).

Scroll bar

If there are more files in the listing than fit at one time in the browser window, you can scroll the browser window to view more files. Slide the mouse cursor out the left side of the browser window to get the scroll bar and press the left mouse button to scroll the region up and the right mouse button to scroll it down. Pressing a mouse button when the cursor is near the bottom of the scroll bar will scroll the region by larger increments than when the cursor is at the top.

You can also press the middle mouse button in the scroll bar to move the listing to the place that corresponds to that position in the scroll bar. For example, pressing the middle mouse button when the cursor is at the bottom of the scroll bar will display the end of the listing. This quick-scrolling technique is called *thumbing*. The gray box in the scroll region indicates where the currently displayed contents are, relative to the entire contents of the browser.

Similarly, if there is more attribute information than fits in the browser window, you can scroll the browser window horizontally to view the rest of the attribute information. To do this, slide the mouse out the bottom of the browser window to get the horizontal scroll bar. The left button scrolls to the left, the right button to the right.

Selecting Files

Most FileBrowser operations are performed by selecting a single file or set of files, then giving a command that specifies what you want to do with the selected files. The current selection is indicated by a small triangle in the left margin of the browser next to each selected file (see Figure 14-2).

```
| 003-TOC.TEDIT;2
| ▶01-INTRODUCTION.TEDIT;10
| 02-SYSTEM-REQUIREMENTS.TEDIT;21
| ▶03-SOFTWARE-INSTALLATION.TEDIT;22
| ▶04-SYSTEM-USE-ISSUES.TEDIT;21
| ▶05-NOTECARDS-BASICS.TEDIT;48
| 06-BUILDING-NC-STRUCTURES.TEDIT;13
```

Figure 14-2. Four Selected Files Marked by Triangles

To select one file, point to any part of the line (which lists the file name and its attributes) and press the left mouse button. If other files are already selected, this unselects them. A file selected with the left mouse button is always the only selection.

To add a single file to the current selection, press the middle mouse button at any place in the line. The file is selected without unselecting any other file.

To remove a single file from the current selection, hold down the CONTROL key and press the middle mouse button at any place in the line. The file is unselected without affecting any other file.

To extend the selection to include a group of contiguous files, that is, to select all the files between a file and the nearest already selected file, press the right mouse button on any part of the line. You can only extend the selection from the first selected file upward, or the last selected file downward. In addition, files marked for deletion are not normally selected when you extend.

If you want to include all files, both deleted and undeleted, hold down the CONTROL key while extending the selection.

Some lines in a FileBrowser display are directory-only lines. These lines are slightly indented and name the directory and subdirectory to which the files listed below that line belong. You cannot select in these lines, though you can copy-select them (see the Copy-Selecting Files section below).

Commands that Require Input

Some FileBrowser commands require input from you. For example, the **Copy** command requires that you supply a destination file name. When a command requires input, FileBrowser prints a prompt message in its prompt window. This is usually followed by a default answer. If you want the default answer, press RETURN to finish the input. If you want to specify a different answer, simply start typing it; the default answer is erased and your answer replaces it.

Alternatively, you can modify the default answer by backspacing over individual letters, or typing CONTROL-W to back up over complete words. Type CONTROL-Q to erase the entire answer. You can also use the mouse to edit your answer, using the same rules as followed by the Executive (see the documentation of TTYIN). Briefly, the left mouse button positions the caret at a character boundary; the middle mouse button positions the caret at the nearest word boundary; and the right mouse button deletes the characters between the caret and the mouse.

When you have finished, position the caret at the end of your answer, if it isn't there already, and press RETURN. You can also type CONTROL-X to finish your answer even if the caret isn't at the end.

If you change your mind and want to abort the command, supply an empty input; i.e., if there is an answer in progress, backspace over it or type CONTROL-Q to erase it, then press RETURN. FileBrowser prints "aborted" and aborts the command. In most situations, the CONTROL-E interrupt can also be used to abort your answer.

While you are typing an answer, you can copy-select file names out of the browser (or any other browser), as described below in the Copy-Selecting Files section. This can be useful, for example, if you wish to rename a file to a similar name in the same directory, or move a file into a subdirectory listed in the browser.

Aborting Commands

During commands of indefinite duration, such as **Recompute** or **Copy**, FileBrowser adds another command to the browser, **Abort** (see Figure 14-3).

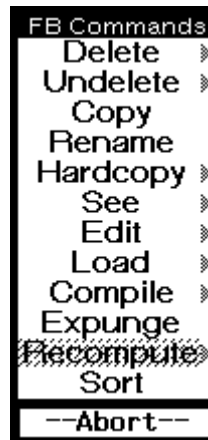


Figure 14-3. **FileBrowser** Menu with the Abort Option Attached

Clicking on the **Abort** command will immediately abort the current operation. Aborting some commands can take a little while, as FileBrowser may need to do some cleaning up, so the **Abort** command is greyed out during this time to show you that it is doing something.

Quitting the FileBrowser

To quit a FileBrowser, close the browser window. If any files have been deleted but not expunged, a small menu pops up listing two options: **Expunge deleted files** and **Don't Expunge** (see Figure 14-4). If you select **Expunge deleted files**, the files will be expunged before the window closes. If you select **Don't Expunge**, your deletions are ignored. If you click outside the menu, no action is taken, and the **Close** command is aborted.

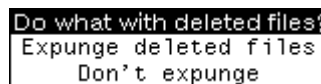


Figure 14-4. **Do what with deleted files?** Menu

If you have finished with FileBrowser only temporarily and want to put it aside to work on later, you can shrink the browser by selecting the **Shrink** command from the right-button background menu. The browser shrinks to an icon which displays the file pattern inside the browser (see Figure 14-5). If any files are marked for deletion, you are prompted with the same menu of expunge options as when you close a browser.



Figure 14-5. FileBrowser Shrink Icon

Copy-Selecting Files

You can copy-select file names from a FileBrowser into other windows, such as TEdit windows. Hold down the COPY or SHIFT key while selecting a name in the window. The full name of the file is inserted as if you had typed it where the input caret is flashing. You can also copy-select in a directory-only line, in which case the full directory name is inserted in your type-in.

Getting Hardcopy Directory Listings

You can get a hardcopy listing of the directory displayed in a FileBrowser by using the regular window **Hardcopy** command. Press the right button in FileBrowser's prompt window or tally window and select **Hardcopy** from the menu. FileBrowser produces a hardcopy listing of the files and the attributes displayed in the browser.

If the browser displays a large number of attributes, or your default printer font is too large, the listing may not accommodate all the attributes on one line, making the listing less readable. You may want to make the listing with fewer attributes, or use a smaller font for the listing.

FileBrowser Commands

Delete, Undelete

Removing a file from the file system using FileBrowser is a two-step process.

1. Mark the file or files for deletion.
2. Issue the **Expunge** command.

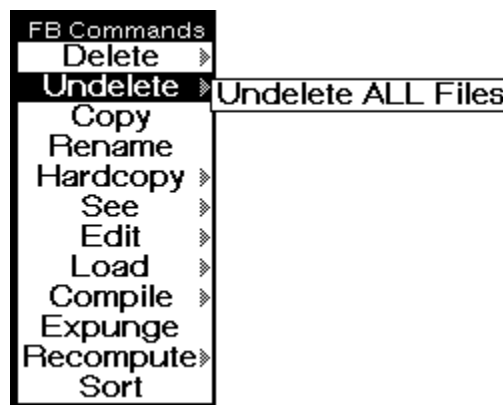
You can change your mind and undelete any of the files any time between the deletion and the expunge.

To mark a file or files for deletion, select them, then choose the **Delete** command. FileBrowser draws a line through the deleted files (see Figure 14-6). It also adjusts the numbers in the tally window to show how many files are marked deleted and how many pages they contain. This shows how much file space you will regain when you issue the **Expunge** command.

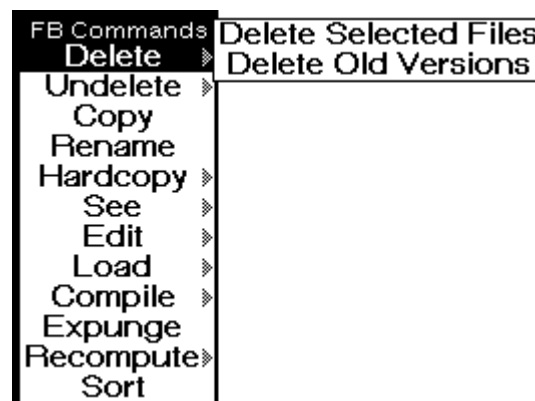
```
11-SYSTEM-CARDS.TEDIT;5
12-MENUBOX-ICON.TEDIT;11
13-PARAMETERS.TEDIT;9
14-FILEBROWSER.TEDIT;10
▶14-FILEBROWSER.TEDIT;9——
14-FILEBROWSER.TEDIT;8——
15-OTHER-TOOLS.TEDIT;27
16-PRINTING.TEDIT;52
```

Figure 14.6 Two Files Marked for Deletion

To undelete a file or files (i.e., to remove the deletion mark), select them, then choose the **Undelete** command. The lines through the files are removed, and the tally of deleted files is updated. The **Undelete** command has a single subcommand, **Undelete ALL Files**, which undeletes all the files in the browser, independently of whether they are selected (see Figure 14-7). This is useful if you completely change your mind about deleting any files.

Figure 14-7. **Undelete** Submenu

The **Delete** command has a useful subcommand, **Delete Old Versions**. When you have been editing a file in the text editor and performing repeated **Put** commands, multiple versions of the file accumulate, each more recent version denoted by a higher version number. The **Delete Old Versions** command is used to delete excess versions of the files displayed in the browser.

Figure 14-8. **Delete** Submenu

To use this command, press the left mouse button down on the **Delete** command and slide the cursor out to the right, selecting the **Delete Old Versions** command. Unlike the **Delete** command (or **Delete Selected Files**, the equivalent subcommand), the **Delete Old Versions** command operates on all the files in the browser. FileBrowser prompts for the number of versions of each file that you wish to retain. It offers the default of one version. You can accept the default or you can type a different number of your choosing, followed by a carriage return. FileBrowser then marks for deletion all but the most recent *n* versions of all the files in the browser, where *n* is the number you specified. Before issuing the **Expunge** command, you can, if you wish, scroll through the browser, undeleting any particular files for which you wish to retain more versions than you specified.

The **Delete Old Versions** command is sometimes useful even when you are not planning to actually expunge the files. This is because of the way extending the selection avoids deleted files (see the **Selecting Files** section above).

For example, if you wanted to copy only the most recent version of all the files in the browser to another location, you could do the following:

1. Use the **Delete Old Versions** command, retaining just one version. This marks deleted all files but the newest version of each.

2. Go to the start of the browser and select the first file, then scroll to the end of the browser and press the right mouse button to extend the selection to the end of the browser. You have selected exactly the newest version of each file.
3. Use the **Copy** command to copy those files.
4. Use the **Undelete ALL Files** command to undelete all the old versions.

Copy

Use the **Copy** command to copy an entire file or set of files to another file system location; for example, from your disk to a file server. Select the file(s) you wish to copy, then select the **Copy** command. FileBrowser prompts you to supply a destination.

If you selected just one file, FileBrowser prints the old name and offers a default, which consists of the same file name and either the same directory that was last used in a **Copy** or **Rename** in this FileBrowser, or the connected directory if this is the first use of **Copy** in this FileBrowser (see Figure 14-9). You can accept the default or supply your own destination file name. If you supply just a directory specification, e.g., *{SERVER}<DIRECTORY>*, the file is copied to that directory under its current name. If you supply a complete name, the file is copied to that exact name.

Copy file {DSK}/usr/users/kmount/NC/DOC/ENVOS/1.1/WORKING/14-FILEBROWSER.TEDIT;10 to new file name: {Eris}<NoteCards>Doc>ENVOS>1.1>WORKING>14-FILEBROWSER.TEDIT			
{DSK}/usr/users/kmount/NC/DOC/ENVOS/1.1/WORKING/*.;* at 13:18 Thu 6-Apr		FB Commands	
Total: 34 / 4734 pages		Deleted: 2 / 652 pages	
Name	Pages	Created	
000-OUTLINE.TEDIT;13	31	4-Apr-89 11:28:15	Delete
001-TITLE-PAGE.TEDIT;7	12	6-Mar-89 14:50:11	Undelete
002-PREFACE.TEDIT;15	24	17-Feb-89 09:52:39	Copy
003-TOC.TEDIT;2	47	8-Mar-89 14:00:07	Rename
			Hardcopy
			See

Figure 14-9. Copy Command Confirming Name of File to which to Copy

Note: Unless you specify a version number in the destination file name, the version number of the new file will be 1, or one higher than the highest existing version of the file in the destination directory, independent of the version number of the old name.

Even files marked for deletion can be copied.

If you selected several files, FileBrowser notes how many files you wish to copy and offers as a default destination the connected directory. You can accept the default or supply a different directory. All the files are copied to that directory under the names they currently have.

You must supply a directory specification, e.g., *{SERVER}<YOURDIRECTORY>*, rather than a complete file name, since you cannot copy multiple files to the same name. If you mistakenly type a file name, rather than a directory specification, FileBrowser prints an error message and aborts the command.

If you want to copy files from different subdirectories, FileBrowser prints a message in its prompt window asking if you want to preserve the subdirectory structure at the destination. If you answer **Yes**, the names at the destination will include not just the root name of each source file, but also all the subdirectory names below the greatest subdirectory prefix common to all the selected files (this common prefix is displayed as part of the question). If you answer **No**, the names at the destination are formed solely from the root name of each file (the name displayed in the browser), ignoring any

directory information each name might have. This can cause multiple files with the same root name to be copied into the same destination name (but with different version numbers, of course).

When copying (or renaming) multiple versions of the same file, FileBrowser does the copying in order of increasing version number, so that the versions at the destination are in the same relative order as at the source.

As each file is copied, FileBrowser prints a message giving the full name of the new file. If a file with the chosen name already exists, the new file's version number will be one higher; otherwise it will be version 1 (one). The new file will have the same creation date as the original file. If the destination file happens to be one that matches the pattern of the files in the browser, the new file is inserted in the appropriate place in the browser display. However, if it matches the pattern of some other FileBrowser, it is not inserted in that other browser's display (in other words, FileBrowsers do not know about each other). You would have to **Recompute** the destination FileBrowser to see that the file was copied into it.

Rename

The **Rename** command is used for changing the name of a file or group of files, or for moving a file or group of files to a different directory.

The **Rename** command is used in exactly the same way as the **Copy** command. If you rename a single file, you can supply a complete new name or just a directory; if you rename several files, you must specify a directory. As each file is renamed, FileBrowser prints a message giving the file's new name and removes the file from the browser display. If the new name belongs in the same browser, it is inserted in the appropriate place. If a file could not be renamed, an appropriate message prints in the FileBrowser prompt window. The reasons for the failure of a renaming operation are roughly the same as for the failure of an **Expunge**; the file is open, or you do not have the access rights needed to rename the file.

Note: If the destination of the rename is on a different file system than the original file, changing its name is equivalent to copying the file to its new name and then deleting the original file.

Hardcopy

You can print text files, TEdit, Sketch, InterPress, and PostScript files from FileBrowser. Select the appropriate file or files, then select the **Hardcopy** command. The **Hardcopy** command determines what type of file you are printing and calls the appropriate function for printing that file. Then the files are printed one at a time on your default printer. The prompt window displays status messages telling you when files are being printed and when they are done (if your printer is one that provides this status service).

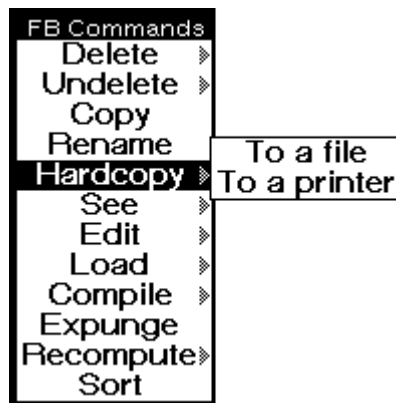


Figure 14-10. **Hardcopy** Submenu

You may specify printing to a file or to a printer other than the default printer by means of a submenu from the **Hardcopy** command (see Figure 14-10). This menu is the same as the one on the **Hardcopy** command in the background menu.

Selecting **To a printer** presents you with a choice of printers from a menu. Selecting **To a file** prompts you to supply a file name. If you selected a single file, you must specify a single hardcopy file name (or accept the offered default). If you selected multiple files, then you must specify a pattern with a single asterisk somewhere in the "name" field, for example, *.INTERPRESS or Hardcopy-*.IP. The output file names are constructed by merging the pattern with each selected file name. If the name includes an extension that implies the type of print format (e.g., .IP or .INTERPRESS implies the Interpress print format), then a file of the specified type is made automatically. Otherwise, you are prompted to supply a print format type.

Notes: For files stored on servers not supporting random access, FileBrowser is currently unable to determine that a file is in TEdit format unless the file has the extension .TEDIT. Therefore you should use TEdit to hardcopy TEdit files with other extensions. Use FileBrowser's **Edit** command (to call TEdit), then the **Hardcopy** command either from the TEdit Expanded Menu or from the right-button menu.

To obtain a hardcopy of the directory itself, use the **Hardcopy** command from the right-button window menu. See the Getting Hardcopy Directory Listings section.

See

When you browse a directory you sometimes want to see a file before printing or performing some other operation on it. To do this, select the file, then select the **See** command from the command menu. FileBrowser will prompt you to open a window by presenting you with a dashed rectangle and printing a message in the system prompt window. The window will be blank until FileBrowser starts printing the contents of the file in it.

There are actually four different **See** commands (see Figure 14-11). The **Fast SEE Pretty** and **Fast SEE Unformatted** commands let you quickly see the contents of a file, but not do anything fancy, such as scroll around at random in the file. The slower **Scrollable & Pretty** command does let you scroll, and if the file contains formatting information of a kind that FileBrowser knows about (via the editors you have loaded), you see the file formatted. However, this command does much more work, and may

take a bit longer to show you even the first line of the file. The **Filebrowse** command is for use on files that are directories; it is described in the next section.

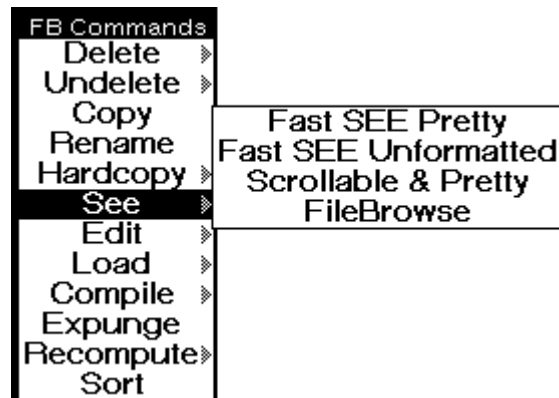


Figure 14-11. See Submenu

The **Fast SEE Pretty** and **Fast SEE Unformatted** commands display the selected file in the display window one windowful at a time. When the file fills the window, a small menu appears at the bottom-left corner of the window (or top-left if your display window is at the bottom of the screen) giving you the option of seeing more of the file or aborting the **See** command. If you issued the command with more than one file selected, you also have the choice of aborting just the display of this file or the entire **See** command (see Figure 14-12).

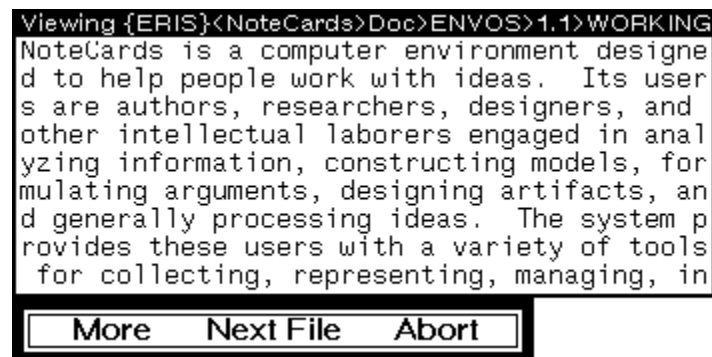


Figure 14-12. See Window Control Menu

If you select **More**, the **See** command displays another windowful of the file. If you select **Next File**, the **See** command closes this file and goes on to display the next file in the current selection. If you select **Abort**, the entire **See** command is aborted. You can also abort the **See** command by closing the display window.

The next time you give a **Fast See Pretty** or **Fast SEE Unformatted** command, the same window is reused.

The only difference between the **Fast See Pretty** and the **Fast SEE Unformatted** commands is the manner in which the characters of the file are processed as they are displayed.

The pretty (formatted) version interprets certain control characters found in source files as font change commands, and interprets certain multibyte sequences as representing

characters in the Xerox extended character set. It also squeezes out blank lines and shrinks the indentation of indented lines in order to better fit the text in a window that is generally much narrower than the standard file width. The formatted version is thus most appropriate for viewing source files and files containing plain text.

The unformatted version of the **See** command does no special processing on the characters. It simply displays each eight-bit byte as a single character, uninterpreted. This means bytes that do not represent normal printing characters may be displayed as black boxes, in the form ^x or #x, or as a flashing of the window (for the byte that represents the ASCII "bell" character). The unformatted version is most appropriate for viewing binary files that also contain text portions worth seeing; e.g., compiled files (those with extension .LCOM) or Interpress masters (extension .IP or .INTERPRESS).

The **Scrollable & Pretty** command views a file in a different way. This command brings up a new read-only TEdit window for viewing a file (only if TEdit is loaded in your system; otherwise, **Scrollable & Pretty** reverts to fast format). You can scroll and copy-select the file's contents at will, as with any TEdit window. If the file is a NoteCards source file, its contents are first formatted into a TEdit document, so that all the font information is retained. This formatting, however, can take a long time for a large file. For other kinds of files, the **Scrollable & Pretty** command is exactly like viewing the file in a regular TEdit window, except that you can't edit it. If you want to edit a file, use the Edit command instead of the See command.

You can keep the display window used by the **Scrollable & Pretty** command open as long as you like. The command uses a different window for each file you select. Simply close the window with the standard right-button window menu when you are finished with it.

Filebrowse

The **Filebrowse** command is a subcommand of **See** used to view a subdirectory in its own FileBrowser window. The selected file must be a (sub)directory. Subdirectory files appear in browsers on XNS file servers when the depth is finite (see the **Set Depth** command), and their names always end in ">". On Sun servers subdirectory file names end in "/" (see Figure 14-13).

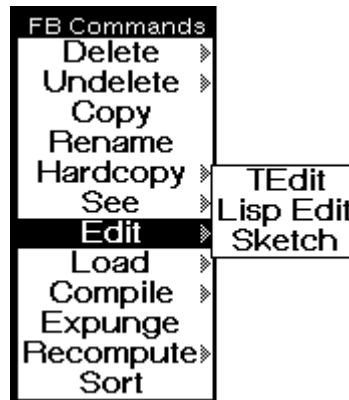
```
| medley/  
| ►nc/  
| NOTES/  
| PROGS/  
| setup/  
| sysouts/
```

Figure 14-13. Sample Listing of Subdirectories on a Sun server
(indicated by trailing slashes)

The **Filebrowse** command prompts for a region for a new FileBrowser window group. It then enumerates the contents of the selected subdirectory, to the same depth as the main browser used, if any.

Edit

The **Edit** command invokes an editor on the selected file. To specify an editor explicitly, use one of the commands on the submenu (see Figure 14-14).

Figure 14-14. **Edit** Submenu

To start up a TEdit editor on a selected text file, select **Edit** with the left mouse button. If you have recently closed a TEdit window, then TEdit will probably reuse that window; otherwise, you will be prompted to create an editor window. TEdit only remembers the most recently abandoned window, however, so if you issue the **Edit** command when you have several files selected, you will be prompted to create windows for all but the first file.

The subcommand **Lisp Edit** is for people extending the NoteCards environment. Do not use this command unless you are extending the NoteCards system.

If you select the main **Edit** command, without sliding off to the submenu, then FileBrowser's default editor, TEdit, is called.

Load

The **Load** command is for people extending the NoteCards system. Do not use this command unless you are extending the NoteCards system.

Compile

The **Compile** command is for people extending the NoteCards system. Do not use this command unless you are extending the NoteCards system.

Expunge

If you are sure you want to delete files permanently, choose the **Expunge** command. The **Expunge** command is grayed while FileBrowser expunges the files that were marked for deletion by the **Delete** command. As each file is removed from the system, it is removed as well from the browser display, and the tally of total number of files and number of deleted files is updated, so you can see the progress of the command.

If for some reason a file can not be expunged, FileBrowser prints a message saying so in its prompt window, but continues to expunge the other files. The main reasons that prevent a file from being expunged are its being opened, either by you or some other user, or your not having the access rights required to delete it (if it is on a file server). See the Troubleshooting Problems with FileBrowser section below.

Note: The **Expunge** command is not affected by the current selection; it operates only on files marked for deletion, whether currently selected or not.

Recompute

FileBrowser's display shows those files that existed and matched the specified pattern at the time you created the browser. If you want the browser to reflect the latest state of the file system, use the **Recompute** command.

For example, if you open a FileBrowser on your directory, then save several versions of a TEdit file on that directory, the file listing will not display the new versions until you **Recompute**.

The **Recompute** command operates exactly as when you started up FileBrowser initially: it clears the display and tally windows, then enumerates the files matching the pattern. The **Recompute** command in the menu is grayed until the enumeration is finished. During this time you cannot scroll or perform any other operations on the browser. However, you can close the window if you want to abort the command and throw away the browser.

If any files are marked for deletion at the time you request a **Recompute**, FileBrowser will present the choice of expunging or undeleting the files, just as it does when you want to quit the browser (see the Quitting the FileBrowser section above).

The **Recompute** command also has a menu of subcommands that allow you to list different files or different information for the same set of files (see Figure 14-15).

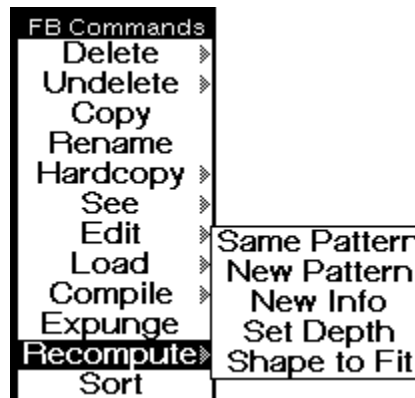


Figure 14-15. **Recompute** Submenu

Same Pattern	Is the same as the main Recompute command, i.e., it enumerates the files matching the same pattern as before.
New Pattern	Lets you change the pattern, i.e., browse a new set of files. FileBrowser prompts you to supply a new file name pattern and offers the old pattern as an initial default. You can either type an entirely new pattern, replacing the one offered, or delete the old pattern one character at a time by backspacing. Press the carriage return when you have finished specifying the pattern. FileBrowser then enumerates the files matching this pattern, just as with the Recompute command. You can abort the command with the Abort button, or by erasing the whole pattern (by backspacing or using CONTROL-Q) and then pressing the RETURN.

- New Info** Lets you change which attributes the browser displays. It is described in the next section.
- Set Depth** Lets you change the depth to which FileBrowser enumerates a directory on an XNS file server. It is described in the section Set Depth.
- Shape to Fit** Reshapes the FileBrowser window so that all the attributes in the display are visible at once, eliminating the need to horizontally scroll the window to get at all the information.

New Info

FileBrowser displays some file attributes, or information about the file, next to each file in the browser display. Ordinarily, the attributes displayed are the size of the file in pages, its creation date, and its author. You can change the attributes displayed in a particular browser window by using the **New Info** command.

To use the **New Info** command, select it from the submenu of the **Recompute** command. FileBrowser opens up an additional subwindow, the "Info Options" window, below the display window. This subwindow contains a menu of attributes, with the current defaults shaded. Selecting a shaded item unshades it; selecting an unshaded item shades it. When you have selected all the attributes you wish to see displayed, issue either the **Recompute** or the **New Pattern** command. The files will be listed with the new information you requested. The Info Options window stays open—you can close it at any time.

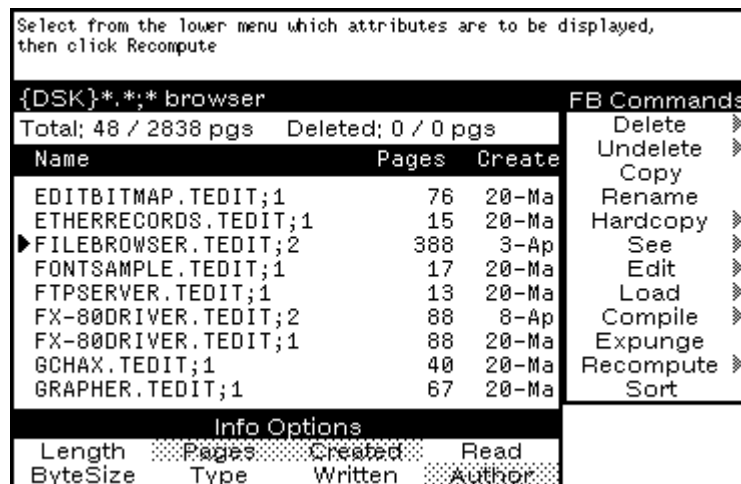


Figure 14-16. FileBrowser with Info Options Window

The Info Options items have the following meanings:

- Created** The date and time that the content of the file was created. This date changes whenever the file is modified, but does not change when a file is copied or renamed.
- Written** The date and time the file was last written to the file system. This date is never older than the Created date, but it can be newer if the file is copied, unmodified, from one file system to another.

Read	The date and time the file was last read. This attribute may be blank if the file has never been read.
Author	The login name of the person who wrote the file, or last modified it.
Length	The length of the file in (usually eight-bit) bytes.
Pages	The number of 512-byte pages in the file. On some servers, this attribute is blank if the file is empty.
ByteSize	The size (in bits) of the bytes in the file.
Type	A value indicating what kind of data the file contains. The usual values of this attribute are <code>TEXT</code> , meaning the file contains just characters, or <code>BINARY</code> , meaning the file contains arbitrary data. Some servers have additional types, such as <code>INTERPRESS</code> for files in Interpress format.

Set Depth

XNS file servers support a feature that allows enumerating a directory to a user-specifiable depth. The "depth" of a file reflects the number of subdirectories between it and the root of the enumeration, i.e., the directory or subdirectory you gave in the pattern to FileBrowser, not counting any containing wildcards (asterisks). The immediate descendants of the root are at depth 1, files in subdirectories of depth 1 are at depth 2, and so on.

Ordinarily, FileBrowser enumerates a directory to the default depth, which is usually unlimited. To enumerate a directory to a different default, use the `FB` command with argument `:DEPTH n`, for some positive integer *n*, or `T` for unlimited depth. To change the depth in an existing FileBrowser, use the **Set Depth** command, a subcommand under the **Recompute** command. The command offers you a menu of choices:



Figure 14-17. **Set Depth** Menu

Global default means use the default depth, overriding the depth at which this browser was last enumerated. **Infinite** means use no depth limit (same as depth `T`). **1** and **2** are common depth choices; to choose some other numeric value, select **Other** and enter the value via the displayed keypad.

The **Set Depth** command does not affect the current display. It takes effect the next time you use the **Recompute** or **FileBrowse** commands from the same browser.

During a **Recompute**, if a subdirectory appears at the specified maximum depth, its descendants are not enumerated; rather, the subdirectory itself appears as an entry in the browser display. This entry can be selected, just like a file, but only a small number of commands can be used on it: you can **Rename** it, you can **Delete** it if it has no descendants, and you can **FileBrowse** it. It has attributes, just as ordinary files do. Its page size is the size of the entire subtree rooted at the subdirectory.

Note: Depth currently affects only XNS servers; all other devices ignore it and enumerate to their own default depths. In addition, due to a bug in XNS Services 10, depth is ignored for nontrivial patterns, i.e., anything but "**.*".

Sort

The **Sort** command allows you to sort the files in the browser by any attribute of the files displayed in the browser. Selecting **Sort** brings up a menu of attributes by which to sort. This menu includes all the attributes currently displayed in the browser (such as Creation Date, Author), plus the choice Name. For some attributes you can sort forward or backwards; the choice is on a submenu, and the default is generally in the order of numerically greatest (e.g., size) or most recent (e.g., creation date) first.

If the attribute you select is not Name, then the file names displayed in the browser will be reformatted to include their directory portion (if there are any subdirectories below the browser's main pattern), as the subdirectory information is no longer implicit in a file's position in the browser.

The sort order Name, Decreasing Version is the default order in which browsers initially are created.

Troubleshooting Problems with FileBrowser

When FileBrowser returns the message: No files in group *FILENAMEPATTERN* when you know those files exist, the file server is probably down or rejecting connections. If this is so, your only option is to wait until the server is functioning again, and then give the **Recompute** command. In the case of an Xerox file server, the enumeration of files can also fail if you do not have sufficient access privileges; this condition is usually noted by a message in the system prompt window.

When you try to expunge a file and FileBrowser displays the message: Can't expunge *FILENAME*, it may be because you don't have write access to the file, or someone else is reading the file. However, the most common reason is that the file is still open. Be sure to close any TEdit windows in which you may still be viewing the file. If you have recently issued a **Hardcopy** command for the file, a background process may still be working on the file.

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