# GNU Interactive Tools

A Set of Interactive Programs
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GNUIT: A set of interactive tools, by Tudor Hulubei and Andrei Pitis.

This file documents the GNU Interactive Tools package.

# 1 Introduction

GNUIT is a set of interactive tools. It contains an extensible file system browser, an ascii/hex file viewer, a process viewer/killer and some other related utilities and shell scripts. It can be used to increase the speed and efficiency of most of the daily tasks such as copying and moving files and directories, invoking editors, compressing and uncompressing files, creating and expanding archives, compiling programs, sending mail, etc. It looks nice, has colors (if the standard ANSI color sequences are supported) and is user-friendly.

GNUIT runs on a wide variety of UNIX systems because it uses the GNU Autoconf package to get system specific information. Please refer to the PLATFORMS file included in the standard distribution for a detailed list of systems on which GNUIT has been tested.

One of the main advantages of GNUIT is its flexibility. It is not limited to a given set of commands. The configuration file can be easily enhanced, allowing the user to add new commands or file operations, depending on its needs or preferences.

GNUIT also provides a shell like command prompt, just to make sure that the entire power of the UNIX shell commands is still there.

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# 3 Using GNU Interactive Tools

The GNUIT package contains three interactive programs and a few additional utilities. Here there is a description of each of them.

## 3.1 The GIT file system browser

gitfm is a file system browser with some shell like features designed to make your work much easier and much efficient. It displays one or two panels, each one containing a file system directory. You can browse the directory tree with the usual cursor keys, pressing *ENTER* when you want to enter or leave a directory and *TAB* when you want to change the panels.

Under the two panels there is a shell like input line which you can use to type normal shell commands. The input line can handle an unlimited number of characters and keeps a history of typed commands (using the GNU history library).

Under the input line there is a status bar. You can see there the status of the currently executed command, the warnings and errors and you will be prompted if a decision has to be taken.

### 3.1.1 Key binding conventions

gitfm now follows a new, easy to remember, scheme to bind commands on keys. This is only a convention, if you define new key bindings you may, or may not follow it.

All the file commands start with *^C*. This prefix can be followed by some modifiers, in order to affect the default behavior of the given command. These modifiers are *b* and *r*.

*b* - this modifier specifies that the command will run in background:

```
^CM = CHMOD; chmod %s{New mode of %i: ,%m} %i;;;;y
```

defines a command that changes the current selected files mode in foreground, while

```
^CbM = B-CHMOD; chmod %s{New mode of %i: ,%m} %i&;;;;y
```

defines a background command that does the same thing.

*r* - this modifier specifies that the command will be run recursively:

```
^CrM = R-CHMOD; chmod -R %s{New mode of %i: ,} %i;;;;y
```

defines a command that recursively changes the mode of the selected entries.

The *b* and *r* modifiers can be combined, the resulting command running recursively and in background:

```
^CbrM = B-R-CHMOD; chmod -R %s{New mode of %i: ,} %i&;;;;y
```

You should also note that for some commands (like gzip) there is no need for a non-recursive version. Running gzip recursively on files is harmless. If there is a directory between these files, gzip will recursively compress that directory, so you can use the same key binding for recursively and non-recursively compressing. In fact, it is a matter of selecting files or directories.

Unfortunately, we can't run chmod recursively trying to change the mode of all the files in a directory to 0644 because that directory might contain subdirectories and removing the execution permission from them is a bad idea. So, in this case, we need separate commands.

### 3.1.2 Command line

This is a brief description of the command line arguments.

`-h` print this help message

`-v` print the version number

`-c` use ANSI colors

`-b` don’t use ANSI colors

`-l` don’t use the last screen character

`-p` output final path at exit

The `-p` option can be used to make gitfm force bash (assuming that you’re using it as your shell) chdir to the last directory gitfm was in before quitting. In order to do this, you need to invoke gitfm using this function (put it into your .profile):

```
function g
{
    gitfm -p $ 3> /tmp/gitfm.p.$$

    if test -s /tmp/gitfm.p.$$; then
if test -d "‘cat /tmp/gitfm.p.$$‘"; then
    cd "‘cat /tmp/gitfm.p.$$‘"
else
    cd
fi
    fi

    rm -f /tmp/gitfm.p.$$
}
```

This will not work if you suspend gitfm. Nothing bad will happen, just the chdir will not be performed.

### 3.1.3 Panel modes

`gitfm` has three major modes of displaying the panels. In the first (default) mode, two panels are displayed, each one using half of the screen. In the second mode, only one panel uses the entire screen. In the third mode, only the status bar and the input line are displayed, both panels being hidden.

Briefly, a panel can use the entire screen or just half of it. Even when a panel is hidden, it still exists.

Users can switch between these three major modes as needed:

*^X 0*

> Enlarges the other panel to use the entire screen. It also changes the minor mode to ‘`Enable all`’. The current panel will become invisible (‘`enlarge-other-panel`’).

*^X 1*

> Enlarges the current panel to use the entire screen. It also changes the minor mode to ‘`Enable all`’. The other panel will become

invisible (‘`enlarge-panel`’).

*`^X 2`*

Switches back to the two panel mode (‘`two-panel-mode`’).

*`^O`*, *`ESC o`*

Switches to the tty mode (no panels on the screen) (‘`tty-mode`’).

A panel displays the files and subdirectories in a directory. You can optionally specify some additional information about each entry (file, directory, . . . ) to be displayed (a minor mode).

When using the full screen mode, all the minor modes here can be used. In half screen mode, the ‘`panel-enable-all`’ mode is not available.

These are the panel minor modes:

*`ESC e o`*

Display the entry owner and group (‘`panel-enable-owner-group`’).

*`ESC e d`*

Display the entry date and time (‘`panel-enable-date-time`’).

*`ESC e s`*

Display the entry size (‘`panel-enable-size`’).

*`ESC e S`*

Display the entry size, scaled (e.g. ‘`123M`’) (‘`panel-enable-abbrevsize`’).

*`ESC e m`*

Display the entry mode (‘`panel-enable-mode`’).

*`ESC e f`*

Display the entry full name (‘`panel-enable-full-name`’).

*`ESC e a`*

Display the entire information about file (‘`panel-enable-all`’).
This mode is only available if the panel has been enlarged to use the
entire screen with ‘`enlarge-panel`’ or ‘`enlarge-other-panel`’
(‘`panel-enable-all`’).

There is another way of changing the panel minor modes:

*`^]`*, *`^[]`*

Switches to the next panel minor mode (‘`panel-enable-next-mode`’).

### 3.1.4 Sorting methods

Entries in a panel can be sorted in different ways. These are the available options:

*`ESC s n`*

Display the panel entries sorted by their names
(‘`panel-sort-by-name`’).

*`ESC s e`*

Display the panel entries sorted by their extensions
(‘`panel-sort-by-extension`’).

*`ESC s s`*

Display the panel entries sorted by their sizes (‘`panel-sort-by-size`’).

*ESC s d*

Display the panel entries sorted by their ‘`last modified`’ stamps (‘`panel-sort-by-date`’).

*ESC s m*

Display the panel entries sorted by their modes (‘`panel-sort-by-mode`’).

*ESC s o i*

Display the panel entries sorted by their owner ids (‘`panel-sort-by-owner-id`’).

*ESC s g i*

Display the panel entries sorted by their group ids (‘`panel-sort-by-group-id`’).

*ESC s o n*

Display the panel entries sorted by their owner names (‘`panel-sort-by-owner-name`’).

*ESC s g n*

Display the panel entries sorted by their group names (‘`panel-sort-by-group-name`’).

There is also another way to change the sort method:

*ESC s u*

Switch to the next panel sort method (‘`panel-sort-next-method`’).

### 3.1.5 Moving the cursor in the panel

Moving the cursor in the panel is very easy. If your keyboard has arrows, use them. If the arrow keys don’t work (it might be due to a badly configured *TERM* environment variable), you can use the Emacs commands bindings as well.

*UP*, *^P*

Move the cursor vertically up one entry (‘`previous-line`’).

*DOWN*, *^N*

Move the cursor vertically down one entry (‘`next-line`’).

*HOME*, *ESC <*

Move the cursor on the first entry in the panel (‘`beginning-of-panel`’).

*END*, *ESC >*

Move the cursor on the last entry in the panel (‘`end-of-panel`’).

*PGUP*, *ESC v*

Move the cursor vertically down one page (‘`scroll-down`’).

*PGDOWN*, *^V*

Move the cursor vertically down one page ('`scroll-up`').

*ESC g*

Scroll the panel entries to the left ('`horizontal-scroll-left`').

*ESC j*

Scroll the panel entries to the right ('`horizontal-scroll-right`').

*^X P*

In order to optimize the screen output, you can modify the scroll step ('`set-scroll-step`'). This is the number of lines to try scrolling a panel when the cursor moves out. The '`StartupScrollStep`' specifies the initial scroll step, but using '`set-scroll-step`' you can dynamically change it.

*TAB*, *^I*, *^X o*

Move the cursor in the other panel ('`other-panel`').

*^X P*

Switch the two panels. This command works even when `gitfm` is not in the '`two panels`' mode ('`switch-panels`').

### 3.1.6 Selecting files

*INS*, *^T*, *^X *, *^*

Toggle the '`selected`' flag of the current entry ('`select-entry`').

*^C s*

Select (marks) all the files matching at least one pattern from a space separated list of shell patterns. Spaces and `\`s are allowed in the patterns but they have to be escaped with a `\`. The user will be prompted for a pattern to match against ('`select-files-matching-pattern`').

*^C u*

Unselect (unmarks) all the files matching at least one pattern from a space separated list of shell patterns. Spaces and `\`s are allowed in the patterns but they have to be escaped with a `\`. The user will be prompted for a pattern to match against ('`unselect-files-matching-pattern`').

*ESC +*

Select (marks) all the files having the same extension as the current file. If the current file name doesn't have an extension or starts with a dot, no files are selected ('`select-extension`').

*ESC -*

Unselect (unmarks) all the files having the same extension as the current file. If the current file name doesn't have an extension or starts with a dot, no files are unselected ('`unselect-extension`').

See Section 3.1.8.8 [Selecting Files], page 10, for additional ways of selecting and unselecting files.

### 3.1.7 Incremental searching files in a panel

Users sometime need to search a file in a panel, especially when the panel contains a big number of entries. For that reason `gitfm` provides an incremental search feature. Using forward and backward incremental search, files can be very easy located. Wrapped incremental search is also provided.

*`^S`*, *`^Xs`*

Incremental search forward a file name in the current panel
(‘`isearch-forward`’). Pressing *`^S`* or *`^Xs`* again will
force `gitfm` to go to the next entry that matches the current
isearched string. When the end of the panel is reached, the isearch is
restarted from its beginning.

*`^R`*, *`^Xr`*

Incremental search backward a file name in the current panel
(‘`isearch-backward`’). Pressing *`^R`* or *`^Xr`* again will
force `gitfm` to go to the next entry that matches the current
isearched string. When the beginning of the panel is reached, the
isearch is restarted from its end.

### 3.1.8 Using the input line

The input line is one of the main methods used by `gitfm` to interact with the user. All the answers the user should give in order to perform some operation and all the shell like commands are built using it. So here is a description of all the basic editing operations that the ‘`input line`’ provides. They are very much inspired from `Emacs`, so `Emacs` users should have no problem using them.

#### 3.1.8.1 Inserting Text

Typing characters is the most usual way of inserting text into the input line. Key sequences starting with printable ascii characters are not allowed in `gitfm` so typing `a` for example results in inserting `a` at the current point position. Of course, there are some other ways of inserting text into the command line and here there is a description of most of them.

*`ESC RET`*

Copy the current entry name into the input line at the current point
position (‘`entry-to-input-line`’).

*`ESC ESC RET`*

Copy the other panel path into the input line at the current point
position (‘`other-path-to-input-line`’).

*`^X ^I`*

Copy the names of all the selected entries into the input line at the
current point position (‘`selected-entries-to-input-line`’).

#### 3.1.8.2 Moving Point

*`^B`*, *`LEFT`*

Move the point backward one character (‘`backward-char`’).

*`^F`*, *`RIGHT`*

Move the point forward one character (‘`forward-char`’).

*ESC b*

Move the point one word backward (‘`backward-word`’).

*ESC f*

Move the point one word forward (‘`forward-word`’).

*^A*

Move the cursor at the beginning of the input line (‘`beginning-of-line`’).

*^E*

Move the cursor at the end of the input line (‘`end-of-line`’).

#### 3.1.8.3 Deleting and killing text

*DEL*, *^D*

Delete the character under the cursor (‘`delete-char`’).

*^H*, *BKSPC*

Delete the character before the cursor (‘`backward-delete-char`’).

*ESC BKSPC*

Delete backward one word (‘`backward-kill-word`’).

*ESC d*

Delete forward one word (‘`kill-word`’).

*ESC k*

Delete the entire line (‘`kill-line`’).

*^U*

Delete all the characters between the beginning of the input line and the point (‘`kill-to-beginning-of-line`’).

*^K*

Delete all the characters between the point and the end of the input line (‘`kill-to-end-of-line`’).

*ESC SPC*

Delete all the spaces around the point, leaving only one space (‘`just-one-space`’).

*ESC \*

Delete all the spaces around the point (‘`delete-horizontal-space`’).

*^W*

Save the region between the point and the mark into the kill "ring" and then kills it (‘`kill-region`’). Note that there is no real kill-ring here. The so-called kill-ring has only one entry.

*ESC w*

Save the region between the point and the mark without killing it (‘`kill-ring-save`’).

#### 3.1.8.4 Case conversion of words.

*ESC l*

Convert the following word to lower case, moving over.
(‘downcase-word’).

*ESC u*

Convert the following word to upper case, moving over.
(‘upcase-word’).

*ESC c*

Capitalize the following word, moving over.
(‘capitalize-word’).

#### 3.1.8.5 Reusing recent input line arguments

A separate history is kept for both built-in and user-defined commands. If you call a command that you have used before, you can re-edit a previously entered string in order to minimize the amount of characters needed to be typed for the new one. There is no limit on the number of strings that can be kept in the history.

*ESC p*

Walk backward through the history of previously entered strings
(‘previous-history-element’).

*ESC n*

Walk forward through the history of previously entered strings
(‘next-history-element’).

#### 3.1.8.6 Commands to set the mark

*^SPC*

Set the mark at the current point position (‘set-mark’).

*^X ^X*

Exchange the current point position with the mark one
(‘exchange-point-and-mark’).

#### 3.1.8.7 Reinserting recently killed text

*^Y*

Reinsert a previously killed text at the current point position
(‘yank’).

#### 3.1.8.8 Selecting files matching patterns

If the very first character in the input line is a ‘+’, what comes after it is considered a (space separated) list of shell patterns, and all the files that match at least one pattern from that list will be marked as selected. An empty list of shell patterns (i.e. the ‘+’ by itself) will cause all the files to be selected.

If the very first character in the input line is a ‘-’, the space separated list of shell patterns that follows is used to unselect files. An empty list of shell patterns (i.e. the ‘-’ by itself) will cause all the selected files to be unselected.

Finally, if the first and only character in the input line is a '*', then all the selected files will become unselected, and all the unselected files will become selected.

### 3.1.9 File operations

#### 3.1.9.1 Copying Files

*F5*, *ESC 5*, *^C C*

Copy the currently selected entries to the user supplied path ('`copy`').

*^C b C*

Copy the currently selected entries to the user supplied path. The operation is performed in background ('`B-COPY`').

#### 3.1.9.2 Moving Files

*F6*, *ESC 6*, *^C T*

Move the currently selected entries to the user supplied path ('`move`').

*^C b T*

Move the currently selected entries to the user supplied path. The operation is performed in background ('`B-MOVE`').

#### 3.1.9.3 Creating Files

The easiest way to create a new file is to start an editor passing the file name as an argument. Most editors will try to create the file if the file doesn't exist. See Section 3.1.9.10 [Editing Files], page 14, for more information.

#### 3.1.9.4 Deleting Files

*F8*, *ESC 8*, *^C D*

Delete the currently selected entries ('`delete`').

*^C b D*

Delete the currently selected entries. The operation is performed in background ('`B-DELETE`').

#### 3.1.9.5 Linking Files

*^C H*

Create a hard link from the current files to a user supplied file name ('`LINK`').

*^C b H*

Create a hard link from the current files to a user supplied file name ('`B-LINK`'). The action is performed in background.

*^C S*

Create a symbolic link from the current files to a user supplied file name ('`SYMLINK`').

*^C b S*

Create a symbolic link from the current files to a user supplied file name (‘B-SYMLINK’). The action is performed in background.

#### 3.1.9.6 Renaming Files

*^C R*

Rename the current file or directory with the user supplied name (‘RENAME’).

*^C b R*

Rename the current file or directory with the user supplied name. The operation is performed in background (‘B-RENAME’).

*^C n d*

Change the name of all the selected entries to lowercase. (‘name-downcase’).

*^C n u*

Change the name of all the selected entries to uppercase. (‘name-upcase’).

#### 3.1.9.7 Splitting files into smaller parts

*^C /*

Split the current file into several smaller files of a given size and named based on a given prefix (‘SPLIT’).

*^C b /*

Split the current file into several smaller files of a given size and named based on a given prefix. The operation is performed in background (‘B-SPLIT’).

#### 3.1.9.8 Packing files into the minimum number of bins

*^C ~*

Pack the files into the smallest number of bins. This is an approximation - the problem is NP-complete and no known algorithm can guarantee a solution better than ‘(11/9) * OPTIMAL + 4’.

To make things even worse, for large files, there is no portable way to predict how many blocks the file system implementation will require for indirect blocks, directories, etc. So keep in mind that this is only an approximation.

Bin packing can be useful when you want to put a bunch of files on floppies or zip disks and you want to optimize things a little bit (‘bin-packing’).

‘gitfm’ assumes that you want to pack all the files in the current directory - if there is any selected file in that directory it will be unselected first. Then ‘gitfm’ will ask for a bin size, and select the files that should go in the first bin. You are supposed to place those files in the first bin (e.g. a tar archive), remove them from the current directory, then run '`bin-packing`' again, to obtain the list of the files that should go into the second bin, etc.

### 3.1.9.9 Changing a file's mode, owner and group

*^C M*

Change the mode of the currently selected entries ('`CHMOD`').

*^C b M*

Change the mode of the currently selected entries. The operation is performed in background ('`B-CHMOD`').

*^C r M*

Recursively change the modes of the selected entries if one of them is a directory ('`R-CHMOD`').

*^C b r M*

Recursively change the modes of the selected entries if one of them is a directory. The operation is performed in background ('`B-R-CHMOD`').

*^C O*

Change the owner of the currently selected entries ('`CHOWN`').

*^C b O*

Change the owner of the currently selected entries. The operation is performed in background ('`B-CHOWN`').

*^C r O*

Recursively change the owners of the selected entries if one of them is a directory ('`R-CHOWN`').

*^C b r O*

Recursively change the owners of the selected entries if one of them is a directory. The operation is performed in background ('`B-R-CHOWN`').

*^C G*

Change the group of the currently selected entries ('`CHGRP`').

*^C b G*

Change the group of the currently selected entries. The operation is performed in background ('`B-CHGRP`').

*^C r G*

Recursively change the groups of the selected entries if one of them is a directory ('`R-CHGRP`').

*^C b r G*

Recursively change the groups of the selected entries if one of them is a directory. The operation is performed in background ('`B-R-CHGRP`').

#### 3.1.9.10 Editing Files

*F4*, *ESC 4*

Call the default editor with the current file name as an argument (‘EDIT’).

*^X e*

Call the default editor with the selected entry names as arguments (‘MULTIPLE-EDIT’).

*^X ^F*

Create a new file by calling the default editor with the user supplied file name as an argument (‘FILE-CREATE’).

*^X 4 a*

Call the default editor in order to edit the ‘ChangeLog’ file (‘CHANGE-LOG’).

The default editor can be specified using the *EDITOR* or *GNUIT_EDITOR* environment variables. See Section 4.1 [Environment Variables], page 33, for more information.

*$GNUIT_EDITOR* used to be called *$GIT_EDITOR*. The old name is still accepted for backwards-compatibility.

#### 3.1.9.11 Viewing Files

*F3*, *ESC 3*

Call the default viewer (`gitview`) with the current file name as argument (‘VIEW’).

*^X v*

Call the default pager (`more`) with the currently selected entry names as arguments (‘MULTIPLE-VIEW’).

#### 3.1.9.12 Compressing Files

*^C z*

Compress the currently selected entries with `gzip` (‘COMPRESS’).

*^C b z*

Compress the currently selected entries with `gzip`. The operation is performed in background (‘B-COMPRESS’).

*^C Z*

Uncompress the currently selected entries with `gunzip` (‘UNCOMPRESS’).

*^C b Z*

Uncompress the currently selected entries with `gunzip`. The operation is performed in background (‘B-UNCOMPRESS’).

*^C f Z*

Uncompress the currently selected entries with `gunzip` (‘`F-UNCOMPRESS`’). Force uncompression of links.

*^C b f Z*

Uncompress the currently selected entries with `gunzip`. Force uncompression of links. The operation is performed in background (‘`BF-UNCOMPRESS`’).

*^C .*

Compress the currently selected entries with `bzip2` (‘`BZIP2-COMPRESS`’).

*^C b .*

Compress the currently selected entries with `bzip2`. The operation is performed in background (‘`B-BZIP2-COMPRESS`’).

*^C o*

Uncompress the currently selected entries with `bunzip2` (‘`BZIP2-UNCOMPRESS`’).

*^C b o*

Uncompress the currently selected entries with `bunzip2`. The operation is performed in background (‘`B-BZIP2-UNCOMPRESS`’).

#### 3.1.9.13 Encoding Files

*^C e*

Encode the currently selected file (‘`UUENCODE`’).

*^C b e*

Encode the currently selected file. The operation is performed in background (‘`B-UUENCODE`’).

*^C E*

Decode the currently selected file (‘`UUDECODE`’).

*^C b E*

Decode the currently selected file. The operation is performed in background (‘`B-UUDECODE`’).

*^C k*

Encode the currently selected file using mpack (‘`MIME-PACK`’).

*^C b k*

Encode the currently selected file using mpack. The operation is performed in background (‘`B-MIME-PACK`’).

*^C K*

Decode the currently selected file using munpack (‘`MIME-UNPACK`’).

*^C b K*

Decode the currently selected file using munpack. The operation is performed in background (‘`B-MIME-UNPACK`’).

#### 3.1.9.14 Encrypting Files

*^C p*

Encrypt (using `pgp`) the current file (‘`ENCRYPT`’).

*^C P*

Decrypt (using `pgp`) the current file (‘`DECRYPT`’).

#### 3.1.9.15 Comparing Files

*^C =*

Compare (using `diff`) the current ASCII file with the other panel’s current file (‘`DIFF`’). If both entries are directories, a recursive diff is performed.

*^C ESC =*

Compare (using `diff`) the current ASCII file with its latest backup. The latest backup is the file having the same name and a ’~’ at the end (‘`LAST-BACKUP-DIFF`’).

*^C B*

Compare the current file with the other panel current file. A binary comparison is performed (‘`compare`’).

#### 3.1.9.16 Spell Checking Files

*^X I*

Run the `ispell` command with the current file name as an argument.

#### 3.1.9.17 Printing Files

*^C j*

Print the selected files via `lpr` to the user specified printer or to the default one if no `lpr` options are given (‘`PRINT-JOB`’).

*^C J*

Print the list of active printing jobs via `lpq`. The default printer is queried if no `lpq` options are given (‘`PRINT-JOB-LIST`’).

#### 3.1.9.18 Wiping Files

*^C W*

Call `gitwipe` to wipe the selected files. Asks for confirmation before actually wiping them in order to avoid errors (‘`WIPE`’).

See Section 3.5 [gitwipe], page 31, for more information.

#### 3.1.9.19 Searching Files

*ESC %*

Search files on the file system, starting from the current directory (‘FIND’).

*ESC &*

Use ’locate’ to search files on the file system, starting from the current directory (‘LOCATE’).

*^X w*

Locate the binary, source, and manual page files for a command (‘WHEREIS’).

*^X W*

Locate a command; display its pathname or alias (‘WHICH’).

### 3.1.9.20 Managing tar based archive files

*^C a*

Create a `tar` archive containing all the currently selected entries (‘TAR’).

*^C b a*

Create a `tar` archive containing all the currently selected entries. The operation is performed in background (‘B-TAR’).

*^C x*

Create a compressed `tar` archive containing the current entry, provided it is a directory (‘TAR-COMPRESS’).

*^C b x*

Create a compressed `tar` archive containing the current entry, provided it is directory. The operation is performed in background (‘B-TAR-COMPRESS’).

*^C -*

Create a bzip2 compressed `tar` archive containing the current entry, provided it is a directory (‘TAR-BZIP2’).

*^C b -*

Create a bzip2 compressed `tar` archive containing the current entry, provided it is a directory. The operation is performed in background (‘B-TAR-BZIP2’).

*^C X*

Expand the selected archives into the current directory. The utility used is selected based on the extension of the file (‘GENERIC-UNPACK’).

*^C b X*

Expand the selected archives into the current directory. The utility used is based on the extension of the file. The operation is performed in background (‘B-GENERIC-UNPACK’).

*^C V*

Expand the selected archives into an user supplied current directory. The utility used is selected based on the extension of the file (‘`GENERIC-UNPACK-INTO`’).

*^C b V*

Expand the selected archives into an user supplied directory. The utility used is based on the extension of the file. The operation is performed in background (‘`B-GENERIC-UNPACK-INTO`’).

#### 3.1.9.21 Working with DPKG

`dpkg` provides commands for manipulating and querying the dpkg database, `gitfm`’s DPKG commands allow quick access to most of those which operate on binary packages, files, or require package names as arguments. All commands expecting package names can also be given binary packages, the package names will be automatically extracted. Most commands use their single character `dpkg` option letter as the key command.

*^C ^D i*

Install the `deb` file(s) selected or pointed by the cursor (‘`DPKG-INSTALL`’).

*^C ^D R i*

Recursively install the `deb` file(s) in the directories selected or pointed by the cursor (‘`R-DPKG-INSTALL`’).

*^C ^D u*

Unpack the `deb` file(s) selected or pointed by the cursor, but don’t configure it (‘`DPKG-UNPACK`’).

*^C ^D R u*

Recursively unpack the `deb` file(s) in the directories selected or pointed by the cursor, but don’t configure them (‘`R-DPKG-UNPACK`’).

*^C ^D C*

Configure the unpacked package(s) selected or pointed by the cursor (‘`DPKG-CONFIGURE`’).

*^C ^D r*

Remove the package(s) selected or pointed by the cursor (‘`DPKG-REMOVE`’).

*^C ^D P*

Purge the package(s) selected or pointed by the cursor (‘`DPKG-PURGE`’).

*^C ^D A*

Update dpkg and dselect’s idea of which packages are available with information from the `deb` file(s) selected or pointed by the cursor (‘`DPKG-RECORDAVAIL`’).

*^C ^D R A*

Recursively update dpkg and dselect’s idea of which packages are available with information from the `deb` file(s) in the directories selected or pointed by the cursor (‘R-DPKG-RECORDAVAIL’).

*^C ^D h*

Display quick help file for GITFM’s DPKG commands. (‘DPKG-HELP’).

*^C ^D c*

Lists the contents of the filesystem tree archive portion of the deb file pointed by the cursor (‘DPKG-CONTENTS’).

*^C ^D f*

Extracts control file information from a deb file pointed by the cursor (‘DPKG-FIELD’). You are presented with the file name and can either hit ENTER to see all fields, or add control file field names (space separated) to see only those fields.

*^C ^D I*

Provides information about a deb file pointed by the cursor (‘DPKG-INFO’).

*^C ^D l*

List the package(s) selected or pointed by the cursor (‘DPKG-LISTPKGS’).

*^C ^D s*

Display status details for the package(s) selected or pointed by the cursor (‘DPKG-STATUS’).

*^C ^D L*

List files owned by the package(s) selected or pointed by the cursor (‘DPKG-LISTFILES’).

*^C ^D S*

Find package owning file pointed to by the cursor (‘DPKG-SEARCH’).

*^C ^D p*

Display available version details of package(s) selected or pointed by the cursor (‘DPKG-PRINTAVAIL’).

#### 3.1.9.22 Installing and Uninstalling RPM packages

Red Hat Linux Distributions use a very powerful package manager called `rpm`. It is used whenever you need to install/remove/upgrade/etc a software package. The packages used by `rpm` use the extension ‘`.rpm`’. `gitfm` provides default key bindings for some of the basic operations `rpm` can perform on packages: install, uninstall, upgrade and query.

*^C I*

Install the rpm package pointed by the cursor (‘RPM-INSTALL’).

*^C b I*

Install the `rpm` package pointed by the cursor (‘`B-RPM-INSTALL`’). The operation is performed in background.

*^C i*

Uninstall the `rpm` package pointed by the cursor (‘`RPM-UNINSTALL`’).

*^C b i*

Uninstall the `rpm` package pointed by the cursor (‘`B-RPM-UNINSTALL`’). The operation is performed in background.

*^C N*

Upgrade the `rpm` package pointed by the cursor (‘`RPM-UPGRADE`’).

*^C b N*

Upgrade the `rpm` package pointed by the cursor (‘`B-RPM-UPGRADE`’). The operation is performed in background.

*^C q*

Query the `rpm` package manager (‘`RPM-QUERY`’). The default options used are ‘`-qil`’. See the `rpm` manual page for more details on using `rpm`.

#### 3.1.9.23 File Types

*^C t*

Print the type of a file using the `file` utility (‘`FILE-TYPE`’).

#### 3.1.9.24 Accessing MSDOS Files

*^C m d*, *^C m ^D*

Change the current `MSDOS` directory to a given directory (‘`MTOOLS-CHDIR`’).

*^C m P*

Put the currently selected files on a `MSDOS` floppy (‘`MTOOLS-PUT`’).

*^C b m P*

Put the currently selected files on a `MSDOS` floppy (‘`B-MTOOLS-PUT`’). The operation is performed in background.

*^C m G*

Get some files from a `MSDOS` floppy and put them in a given directory (‘`MTOOLS-GET`’).

*^C b m G*

Get some files from a `MSDOS` floppy and put them in a given directory (‘`B-MTOOLS-GET`’). The operation is performed in background.

*^C m D*

Delete files from a MSDOS floppy (‘MTOOLS-DELETE’).

*^C b m D*

Delete files from a MSDOS floppy (‘B-MTOOLS-DELETE’). The operation is performed in background.

*^C m L*

List files and directories on a MSDOS floppy (‘MTOOLS-DIR’).

*^C m F*

Format a MSDOS floppy (‘MTOOLS-FORMAT’).

*^C b m F*

Format a MSDOS floppy (‘B-MTOOLS-FORMAT’). The operation is performed in background.

*^C m M*

Create a directory on a MSDOS floppy (‘MTOOLS-MKDIR’).

*^C b m M*

Create a directory on a MSDOS floppy (‘B-MTOOLS-MKDIR’). The operation is performed in background.

*^C m K*

Remove a directory from a MSDOS floppy (‘MTOOLS-RMDIR’). All the files and subdirectories in that directory are removed as well.

*^C b m K*

Remove a directory from a MSDOS floppy (‘B-MTOOLS-RMDIR’). All the files and subdirectories in that directory are removed as well. The operation is performed in background.

*^C m R*

Rename a file or directory on a MSDOS floppy (‘MTOOLS-RENAME’).

*^C b m R*

Rename a file or directory on a MSDOS floppy (‘B-MTOOLS-RENAME’). The operation is performed in background.

*^C m T*

Display the contents of a file located on a MSDOS floppy (‘MTOOLS-TYPE’).

### 3.1.9.25 A different action for each file type

Many files on UNIX systems have one or more extensions specifying their types. For example, a file that ends in ‘.c’ is a file containing a C program, while a file ending in ‘.tar.gz’ is a tar archive compressed with the gzip utility. Having a default action for each file type, binded on the same key, seems to be a good idea because you can use that key to obtain type specific information about a file or to process it in some type specific way much easier. The GNUIT package contains a script called gitaction that is used to detect the current file type and perform a type specific action. See Section 3.7 [gitaction], page 31, for more information.

*F2*, *ESC 2*, *^X* a

Perform an action on the current file, depending on its type (‘`FILE-ACTION`’).

### 3.1.10 Directory operations

#### 3.1.10.1 Creating directories

*`F7`*, *`ESC 7`*, *`^X M`*

Create a new subdirectory in the current directory with the user supplied name (‘`make-directory`’).

#### 3.1.10.2 Copying directories

*`F5 (for directories)`*, *`ESC 5 (for directories)`*, *`^C C (for directories)`*

Copy the currently selected entries to the user supplied path (‘`copy`’).

*`^C b C (for directories)`*

Copy the currently selected entries to the user supplied path. The operation is performed in background (‘`B-COPY`’).

#### 3.1.10.3 Deleting directories

*`F8 (for subdirectories)`*, *`ESC 8 (for directories)`*, *`^C D (for subdirectories)`*

Delete the currently selected entries (‘`delete`’).

*`^C b D (for directories)`*

Delete the currently selected entries. The operation is performed in background (‘`B-DELETE`’).

#### 3.1.10.4 Moving directories

*`F6 (for directories)`*, *`ESC 6 (for directories)`*, *`^C T (for directories)`*

Move the currently selected entries to the user supplied path (‘`move`’).

*`^C b T (for directories)`*

Move the currently selected entries to the user supplied path. The operation is performed in background (‘`B-MOVE`’).

#### 3.1.10.5 Renaming directories

*`^C R (for directories)`*

Rename the current file or directory with the user supplied name (‘`RENAME`’).

*`^C b R (for directories)`*

Rename the current file or directory with the user supplied name. The operation is performed in background (‘`B-RENAME`’).

#### 3.1.10.6 Comparing Directories

*^C c q*

Quickly compare the files in the left panel with the files in the right one. Only the file names, sizes and time stamps are considered in the comparison.

*^C c t*

Compare the files in the left panel with the files in the right one. The contents of each file in the current panel will be compared against the contents of its counterpart (if any) from the other panel.

*^C f d*

Recursively compare (using `diff -r -q`) the current directory with the other panel's current directory (‘`FAST-DIFF`’). Print on standard output the names of the files that differ.

*^C d*

Compare (using `diff`) the current directory with the other panel current directory. For successful operation, both panels should contain the same directory (‘`DIR-DIFF`’).

*^C b d*

Compare (using `diff`) the current directory with the other panel current directory. For successful operation, both panels should contain the same directory. The operation is performed in background (‘`DIR-DIFF`’).

#### 3.1.10.7 Summarize directory usage

*^C U*

Display the output of the `du -s` command on the status line (‘`DIRECTORY-USAGE`’).

#### 3.1.10.8 Changing directories

*^X d*, *^X ^D*

Change the current working directory. The user is asked for a new directory name and the new directory is added to the directory history (‘`change-directory`’).

See Section 3.1.10.9 [Dirs History], page 24, for more information.

*ESC* a *c*

Change the current directory of the current panel to the directory of the other panel (‘`adapt-current-directory`’).

*ESC* a *o*

Change the current directory of the other panel to the directory of the current panel (‘`adapt-other-directory`’).

#### 3.1.10.9 Directory History

Users usually work on a limited set of subdirectories. Providing a fast method of switching between a number of intensively used directories is a good idea and `gitfm` has a set of builtin commands for doing it.

Usually new directories are added to the directory history when the '`change-directory`' built-in command is used. `gitfm` also adds the current directory to the history list when started, when the directory history is reset and when a command having a non empty '`new-dir`' field successfully completes its execution. See Section 4.2.3.22 [new-dir], page 38, for more information.

*^X ^N*

Go to the next directory in the history ('`next-directory`').

*^X ^P*

Go to the previous directory in the history ('`previous-directory`').

*^X ^R*

Reset the entire directory history. As explained above, the current directory becomes the only directory in the history ('`reset-directory-history`').

#### 3.1.10.10 Hot Keys

`gitfm` provides default key bindings for switching to a number of important directories as "/", "..", "$HOME", etc.

*ESC /*

Go to the '`/`' directory ('`ROOT-DIR`').

*ESC .*

Go to the '`..`' directory ('`up-one-dir`').

*ESC h*

Go to the '`~`' ($HOME) directory ('`HOME-DIR`').

*ESC i*

Go to the '`/usr/include`' directory ('`INCLUDE-DIR`').

*ESC ESC 1*

Go to the '`/mnt/fd0`' directory ('`FIRST-FLOPPY-DIR`').

*ESC ESC 2*

Go to the '`/mnt/fd1`' directory ('`SECOND-FLOPPY-DIR`').

### 3.1.11 Compiling programs

*F9*, *ESC 9*, *^X m*

Run the `make` command in the current directory. Use -k as the default option ('`MAKE`').

*^X b m*

Run the `make` command in background in the current directory ('`B-MAKE`').

See Section 3.7 [gitaction], page 31, for more information.

### 3.1.12 Sending/receiving ascii/binary mail

*^C 2 a*

Send the current current ascii file by mail to an user supplied email address (‘`ASCII-MAIL`’).

*^C b 2 a*

The same as ‘`ASCII-MAIL`’, the only difference being that the command runs in background (‘`B-ASCII-MAIL`’).

*^C 2 b*

Send the current current binary file by mail to an user supplied list of email addresses. The file is uuencoded first (‘`BINARY-MAIL`’).

*^C b 2 b*

The same as ‘`BINARY-MAIL`’, the only difference being that the command runs in background (‘`B-BINARY-MAIL`’).

*^C 2 m*

Send the current current binary file by mail to an user supplied list of email addresses. The file is encoded with mpack first (‘`MIME-MAIL`’).

*^C b 2 m*

The same as ‘`MIME-MAIL`’, the only difference being that the command runs in background (‘`B-MIME-MAIL`’).

*ESC x r m*

Run the **`emacs -f rmail`** command. This will start the Emacs’s ‘**`rmail`**’ function so that you can read your mail (‘`READ-MAIL`’).

### 3.1.13 Starting a sub-shell

*^X z*

Call a sub-shell as specified by the *$GNUIT_SHELL* environment variable (‘`SUB-SHELL`’).

*$GNUIT_SHELL* used to be called *$GIT_SHELL*. The old name is still accepted for backwards-compatibility.

See Section 4.1 [Environment Variables], page 33, for more information.

### 3.1.14 Using grep and recursive grep

*^X g*

Search using **`grep`** all the selected files for a given pattern (‘`GREP`’).

*^X g*

Search recursively using **`gitrgrep`** all the user specified files and directories for a given pattern (‘`RECURSIVE-GREP`’).

See Section 3.9 [gitrgrep], page 32, for more information.

### 3.1.15 Locking your console

Having a lock feature might be a good idea and, since not all the UNIX systems provide one, gitfm tries to get around the problem . . .

*^X p*

> Prompt the user for a password and locks the console until the same password is reinserted ('lock').

### 3.1.16 Refreshing the screen contents

Sometimes your screen needs to be refreshed. Just think about what happens when somebody wants to talk with you and the talk daemon writes something like this

> Message from Talk_Daemon@galei.cs.vu.nl at 12:15 ...
> talk: connection requested by andrei@galei.cs.vu.nl.
> talk: respond with: talk andrei@galei.cs.vu.nl

on your screen. And sometimes you might also want to re-read the current directories. gitfm provides a built-in command for refreshing the screen contents.

*^L*

> Re-read the directories contents and refresh the screen ('refresh').

### 3.1.17 Resetting your terminal

*^X ^L*

> Call reset in order to reset the terminal to its default settings ('TTY-RESET').

### 3.1.18 Mounting/unmounting file systems

People dealing with lots of files usually need to save/restore/copy files from/to other file systems. In order to be more efficient, gitfm provides a set of key bindings for mounting and unmounting file systems. See Section 3.6 [gitmount], page 31, for more information.

The default key bindings set has been designed to work under Linux, but it can be easily changed for other UNIX systems with different device names. Reading the configuration file 'gnuitrc.common' should be enough. See Section 3.1.10.10 [Hot Keys], page 24, for more information.

As a convention, the '/mnt' directory is used to store an empty subdirectory for each mountable file system. Each file system is actually mounted in its counterpart '/mnt' subdirectory. Try to follow this convention since the gitmount script is heavily based on it. See Chapter 4 [Customization], page 33, for more information.

*ESC m a*

> Call mount(1) in order to mount the first floppy ('/dev/fd0') in the '/mnt/fd0' directory ('MOUNT-A').

*ESC m b*

> Call mount(1) in order to mount the second floppy ('/dev/fd1') in the '/mnt/fd1' directory ('MOUNT-B').

*ESC m c*

Call `mount`(1) in order to mount the cdrom (‘`/dev/cdrom`’) in the ‘`/mnt/cdrom`’ directory (‘`MOUNT-CDROM`’).

*ESC m f*

Call `mount`(1) in order to mount the first floppy (‘`/dev/fd0`’) in the ‘`/mnt/floppy`’ directory (‘`MOUNT-FLOPPY`’).

*ESC m z*

Call `mount`(1) in order to mount the zip drive (‘`/dev/zip`’) in the ‘`/mnt/zip`’ directory (‘`MOUNT-ZIP`’).

*ESC m j*

Call `mount`(1) in order to mount the jaz drive (‘`/dev/jaz`’) in the ‘`/mnt/jaz`’ directory (‘`MOUNT-JAZ`’).

*ESC m t*

Call `mount`(1) in order to mount the file systems corresponding to the selected subdirectories. For example, if you are in the ‘`/mnt`’ directory and the ‘`cdrom`’ and ‘`zip`’ subdirectories are selected, the cdrom and the zip disk will be mounted (‘`MOUNT-THESE`’).

*ESC r a*

Call `umount`(1) in order to remove (unmount) the first floppy (‘`/dev/fd0`’) (‘`UMOUNT-A`’).

*ESC r b*

Call `umount`(1) in order to remove (unmount) the second floppy (‘`/dev/fd1`’) (‘`UMOUNT-B`’).

*ESC r c*

Call `umount`(1) in order to remove (unmount) the cdrom (‘`/dev/cdrom`’) (‘`UMOUNT-CDROM`’).

findex UMOUNT-CDROM

*ESC r f*

Call `umount`(1) in order to remove (unmount) the first floppy (‘`/dev/fd0`’) (‘`UMOUNT-FLOPPY`’).

*ESC r z*

Call `umount`(1) in order to remove (unmount) the zip drive (‘`/dev/zip`’) (‘`UMOUNT-ZIP`’).

*ESC r j*

Call `umount`(1) in order to remove (unmount) the jaz drive (‘`/dev/jaz`’) (‘`UMOUNT-JAZ`’).

*ESC r t*

Call `umount`(1) in order to remove (unmount) the file systems mounted into the selected subdirectories. For example, if the current directory is ‘`/mnt`’ and the ‘`cdrom`’ and ‘`zip`’ subdirectories are selected, the cdrom and the zip disk will be unmounted (‘`UMOUNT-THESE`’).

### 3.1.19 Getting some useful system information

*^X T*

Call `date`(1) in order to display the current time/date (‘`DATE`’).

*ESC S f*

Call `finger`(1) in order to display information about local and remote users (‘`FINGER`’).

*ESC S m*

Call `mount`(1) in order to display a list of the currently mounted file systems (‘`MOUNTED-FILE-SYSTEMS`’).

*ESC S q*

Call `quota`(1) in order to display a user file system disk quota and quota (‘`QUOTA`’).

*ESC S s*

Call `df`(1) in order to get the status of the currently mounted file systems (‘`DISK-FREE-SPACE`’).

*ESC S u*

Call `users`(1) in order to get the name of the currently logged in users (‘`USERS`’).

*ESC S v*

Call `$GNUIT_VMSTAT`(1) in order to get the current virtual memory status. This is very system dependent, `Linux` uses `free`, other systems use `vmstat`, so the *$GNUIT_VMSTAT* variable is used to deal with this (‘`VIRTUAL-MEMORY-STATUS`’).

*$GNUIT_VMSTAT* used to be called *$GIT_VMSTAT*. The old name is still accepted for backwards-compatibility.

See Section 4.1 [Environment Variables], page 33, for more information.

*ESC S w*

Call `who`(1) in order to find out who is on the system (‘`WHO`’).

### 3.1.20 How to look at the environment variables

*^X E*

Call `env`(1) in order to display the current environment (‘`ENV`’).

*^X H*

Call `xhost`(1) in order to add/remove hosts names to the list allowed to make connection to the X server (‘`XHOST`’).

### 3.1.21 Viewing/killing processes

There are at least two kinds of `ps`(1) utilities. One that accepts (more or less) combinations of the 'a', 'u', and 'x' flags and another that accepts combinations of 'e', 'f' and 'l' flags. Since is quite difficult to test which one works fine on a given `UNIX` system, `gitfm` provides key bindings for both of them. Anyway, if your `ps`(1) fails to accept the predefined combinations, please take a look in its manual and then modify the '`.gnuitrc.TERM`' file as needed.

Since the number of possible combinations of flags in the `ps` command line is quite big and *very* system dependent, there is no real reason to display them all here. We are only interested in giving you a starting point in your search through the '`.gnuitrc.TERM`' file.

Note also that you can display a list of processes using `ps`(1) or browse through a list of them (killing as needed) using `gitps`. As a convention, we have used the same key sequence for a given set of `ps`(1) flags for both `ps`(1) and `gitps`, the only difference being that `ps`(1) keys end in an uppercase letter. See Section 3.2 [gitps], page 30, for more information.

Under Linux it is possible to see a tree of processes using `pstree`(1).

Here there are the default key bindings for the 'e', 'f' and 'l' `ps`(1) flags combinations:

*ESC P b*, *ESC P c*, *ESC P e*

Call `gitps` or `ps`(1) in order to browse through or display
a list of currently running processes ('`GITPS`', '`PS`').

... and the default key bindings for the 'a', 'u' and 'x' `ps`(1) flags combinations:

*ESC P a*, *ESC P l*, *ESC P u* *ESC P x*, *ESC P y*

Call `gitps` or `ps`(1) in order to browse through or display
a list of currently running processes ('`GITPS`', '`PS`').

*ESC P T*

Call `pstree`(1) in order to display the tree of currently running
processes ('`PSTREE`').

*^X k*

Call `kill`(1) in order to kill a user specified process with a
given signal ('`KILL`').

### 3.1.22 Synchronizing the file systems

*^X S*

Call `sync`(1) in order to synchronize all the file systems
('`SYNC`').

### 3.1.23 Reading the documentation

*^X q*

Read a manual page. The user is prompted for its name ('`MAN`').

*F1*, *ESC 1*, *^X i*

Read an info documentation. The user is prompted for the documentation
name ('`INFO`').

*^X h*

Read the html documentation using the viewer specified in *GNUIT_BROWSER*, or with lynx if *GNUIT_BROWSER* is not set (‘HTML’).

*$GNUIT_BROWSER* used to be called *$GIT_BROWSER*. The old name is still accepted for backwards-compatibility.

*^X ^A*

Show the key-bindings for commands matching a specified string (‘apropos’).

### 3.1.24 Exiting GNU Interactive Tools

*F10*, *ESC 0*, *^X ^C*, *^X c*

Exit GNU Interactive Tools (‘exit’).

## 3.2 The GNUIT process viewer/killer

gitps is an interactive process viewer/killer. It calls internally the ps(1) utility. This is a brief description of the command line arguments.

-h print this help message

-v print the version number

-i print the installation directory

-c use ANSI colors

-b don’t use ANSI colors

-l don’t use the last screen character

-p pass the remaining arguments to ps(1)

Running gitps is self explanatory. Use the *arrows*, *PageUp*, *PageDown*, *Home*, *End*, *^N*, *^P*, *^V*, *ESC v*, *Space* and *Backspace* to move in the list, *^L* to refresh it, *Enter* to change the default signal and *F10*, *q* or *^X ^C* to leave.

You can change these keys, just read the GITPS-Setup, GITPS-Color, GITPS-Monochrome and GITPS-Keys sections in the configuration files ‘gnuitrc.TERM’.

The selected signal can also be changed by pressing its first letter (in uppercase), e.g. for ‘SIGTERM’ press *T*, or by pressing the key corresponding to the signal number. For signals > 10, prefix with *^X*, and for signals greater than 20, prefix with *^C*. For instance, to select signal 15 (‘SIGTERM’), press *^X5*.

Keys for signal numbers are hard-coded to the versions in i386 Linux, however most correspond to POSIX. Compare signal(7) or signal(5) with http://linux.die.net/man/7/signal.

## 3.3 The GNUIT ASCII/HEX file viewer

gitview is an ASCII/HEX file viewer. Use the *arrows*, *PageUp*, *PageDown*, *Home*, *End*, *^N*, *^P*, *^V*, *ESC v*, *Space* and *Backspace* to move in the file, *^L* to refresh the screen and *F10*, *q* or *^X ^C* to leave.

You can change these keys, just read the GITVIEW-Setup, GITVIEW-Color, GITVIEW-Monochrome and GITVIEW-Keys sections in the configuration files ‘gnuitrc.TERM’.

Here is a brief description of the command line arguments:

-h print this help message

-v print the version number

-i print the installation directory

-c use ANSI colors

-b don’t use ANSI colors

-l don’t use the last screen character

## 3.4 The GNUIT key sequences display utility

gitkeys is a program that displays the key sequence sent by the pressed key. This is the key sequence received by GIT tools, so this program is useful when setting up the ‘.gnuitrc.TERM’ configuration files.

## 3.5 The GNUIT wipe file utility

gitwipe is an utility for wiping files. It overwrites the file contents with a random sequence of numbers and then calls ‘sync’().

Note that gitwipe does *not* remove the wiped file since (under Linux at least) the ‘sync’() system call might return before actually writing the new file contents to disk. Removing the file might be dangerous because some file systems can detect that the blocks in the removed wiped file are no longer used and never write them back to disk in order to improve performance. It is up to you to remove the file(s) at a later moment.

## 3.6 The GNUIT mount utility

gitmount is a script that allows you to mount a list of block devices (specified in the command line), without specifying the file system type. With a command like ‘gitmount fd0 cdrom’ the first floppy will be mounted in ‘/mnt/fd0’ and the cdrom will be mounted in ‘/mnt/cdrom’. Make sure your ‘/etc/fstab’ settings are correct.

You don’t need to know the file system type anymore. If you want to use gitmount with the block device ‘/dev/xxx’ then the directory ‘/mnt/xxx’ is created if it doesn’t exist. gitmount will attempt to create the necessary directories, but root permissions might be required.

## 3.7 The GNUIT per file type action script

gitaction is a script that executes a different action for each file type specified. It is called by the gitfm program when pressing *F2*, *ESC 2* or *^Xa*.

The first parameter is the current directory name and the second one is the file name to be matched against the default patterns. The matching is done using the shell ’case’ statement.

If you press *F2*, *ESC 2* or *^Xa* on a ‘*.html’ file, gitfm will invoke a browser to view it, if you press *F2*, *ESC 2* or *^Xa* on a ‘*.tar.gz’ file, gitfm will list the tar archive contents, if you press the same keys on a '`*.gz`' file, `gitfm` will display its uncompressed contents on the screen, etc ...

If you press *F2*, *ESC 2* or *^Xa* on a '`*.gif`' file or '`*.jpg`' file and you have the `xzgv` utility installed, you will be able to see it. If you want to change the gif/jpeg viewer, all you need to do is to change its name in the `gitaction` script.

There are many more file types and viewers that gitaction knows about. In addition, if you are running under GNOME, gnome-open is used, and on MacOS, open(1) is used. see(1) and metamail(1) are also used as fallbacks. If all else fails, the file is displayed using $GNUIT_PAGER.

If you want to find out what the default action for each file type is (or if you want to modify it), just read/modify the `gitaction` script.

Also, you can add a `.gitaction` shell script in your home directory and/or in any other directory. Before trying to match a file name, `gitaction` will attempt to execute `./.gitaction`. If that one fails to match the file name against its patterns, it backs up to `$HOME/.gitaction`. When this one fails too the patterns in `gitaction` are tried. For an example of how to write .gitaction scripts take a look at the `.gitaction` shell script provided as part of the distribution and installed in the '`$(prefix)/bin`' directory. Debian users will find it in '`/usr/share/doc/gnuit/examples/`'.

## 3.8 Unified archive unpacking

`gitunpack` is a shell script that accepts a directory and a set of archives as its command line parameters, and then attempts to unpack those archives in the given directory, selecting the utility used to unpack the archives based on the archive extensions.

## 3.9 The GIT recursive grep script

`gitrgrep` is a very small script that calls `grep` recursively. It accepts `grep` like options / parameters, the only difference being that file specifications should be quoted:

```
gitrgrep main '*.c'

or

gitrgrep errno '*.c *.h'
```

`gitregrep` and `gitrfgrep` are recursive versions of the egrep and fgrep programs.

# 4 Customizing GNU Interactive Tools

## 4.1 Environment Variables

The configuration files use shell environment variables to call the shell, editor, mail reader, html viewer, compress and virtual memory status utility. That means that if you set *GNUIT_SHELL*, *GNUIT_EDITOR*, *GNUIT_RMAIL*, *GNUIT_BROWSER*, or *GNUIT_VMSTAT* to some value, that value will be used instead of the default one. The defaults are:

```
GNUIT_SHELL='/bin/sh'
GNUIT_EDITOR='vi'
GNUIT_RMAIL='emacs -f rmail'
GNUIT_PAGER='more
GNUIT_VMSTAT='free'
GNUIT_BROWSER='lynx'
```

if the `configure` script is passed ‘`--enable-debian`’, some of the defaults are changed as follows:

```
GNUIT_EDITOR='sensible-editor'
GNUIT_PAGER='sensible-pager'
GNUIT_BROWSER='sensible-browser'
```

If *SHELL* is defined, *GNUIT_SHELL* will be set to that value. If *PAGER* is defined, *GNUIT_PAGER* will be set to that value. If *EDITOR* is defined, *GNUIT_EDITOR* will be set to that value. If you want to change the default settings, put something like this into your ‘`.profile`’:

```
export GNUIT_SHELL='/usr/local/bin/bash'
export GNUIT_EDITOR='emacs'
export GNUIT_RMAIL='elm'
export GNUIT_PAGER='less'
export GNUIT_VMSTAT='vmstat'
export GNUIT_BROWSER='netscape'
```

These variables used to be prefixed with *GIT_* (e.g. *GIT_PAGER*). The old names are still accepted for backwards compatibility.

## 4.2 Configuration Files

There is one configuration file per terminal type in `GNUIT`. The configuration file(s) reside in the user’s home directory or (the default versions) in the directory ‘`/usr/share/gnuit/`’). Files in the user’s home directory start with a leading “.”

Their generic name is ‘`gnuitrc.TERM`’. `GNUIT` allows each terminal type to have its own configuration file (*TERM* is the value of the *TERM* environment variable (e.g ‘`vt102`’); for the `Linux` console the configuration file is ‘`gnuitrc.console`’).

Since most of the key bindings are common to all the terminal types, a configuration file called ‘`gnuitrc.common`’ is parsed before parsing the normal ‘`.gnuitrc.TERM`’ configuration file, the later one defining only those keys that are terminal specific. However, if a key binding is redefined in the ‘`gnuitrc.TERM`’ file, that binding will be used.

If the GNUIT package have been compiled without passing the '--enable-terminfo' option to the configure script and your system has a huge 'termcap' database ('/etc/termcap'), you can copy the termcap definition(s) of your terminal(s) in a file called, lets say '.termcap' and put it in your home directory. After that, set your *TERMCAP* environment variable to point to it. You should add something like this to your '.profile':

*TERMCAP*='/home/mike/.termcap'

The interactive programs in the GNUIT package can run without such a file, but on systems with huge 'termcap' databases, copying the definitions of the most used terminals in a local '.termcap' file will lead to a faster start.

The '.gnuitrc.TERM' is first searched for in the home directory then, if not found, in the directory '/usr/share/gnuit/'). (without the leading "."). The configuration file is structured in sections, each section containing variables in the following format:

'variable-name' = 'first-field';'second-field'; ...

After the 'variable-name' at least one space or tab is required. All characters after a '#' are ignored and if you comment a section name, the whole section is ignored.

Section names are enclosed in rectangular brackets ('[' and ']'). Note that this manual don't include them while refering to section names.

The GNUIT package contains three major programs: gitfm, gitps and gitview. Each one has its own sections in the configuration files. There is also a global setup section called 'Setup' that is used by all these programs.

Note that now git has been renamed to gitfm, the corresponding sections have been renamed to GITFM, however for backwards compatibility, the old name (GIT) is still checked if the GITFM section is not found.

### 4.2.1 Writing key sequences

GNUIT contains three interactive programs. Their names are: gitfm (this is the file system browser), gitps (this is the process viewer/killer and gitview (this is the ASCII/HEX file viewer). Each one of these programs has its own set of key bindings.

The convention used in describing key bindings are very simple. Here there are some examples that will help you to understand them. The corresponding Emacs conventions will help you even more.

*^A* means keeping the Ctrl key down and pressing the a key (*C-a*).

The *ESC* character is represented as *^[* so that you can use the meta character (*M-* ) where available (or the *ESC* key):

*^[*a corresponds to *M-a* (pressing the *ESC* key and then a).

The ^ character is represented as ^^.

The *backspace* character is represented as ^_.

The *Ctrl-SPACE* character (*C-SPC*) is represented as ^$.

The space (*SPC*) character is represented as ^@.

Note that the key bindings notation described here is only used in the configuration files. For the sake of readability this manual uses *ESC* for the *ESC* key, *SPC* for the *SPACE* key and *RET* for the *RETURN* (*ENTER*) key.

### 4.2.2 The global setup section

In this section the variables have only one field.

'AnsiColors'

This variable should be set to 'ON' if the terminal supports standard 'ANSI' color sequences. Otherwise it should be 'OFF'. If 'AnsiColors' is 'ON', 'GITxxx-Color' sections will be used in the configuration files 'gnuitrc.TERM'. Otherwise, GNUIT interactive programs will use the 'GITxxx-Monochrome' sections.

'UseLastScreenChar'

This variable is used for terminals that can't write on the last character of the screen without scrolling the entire screen. If your terminal has no problem writing there (Linux console, vt100, vt102, xterm, ...) set it to 'ON'. Otherwise (hpterm), it should be 'OFF'.

'StartupScrollStep'

This variable specifies the scroll step initial value for both panels.

### 4.2.3 gitfm Sections

#### 4.2.3.1 gitfm Setup

In this section the variables have only one field.

'StartupFileDisplayMode'

This variable specifies the file specific information displayed at startup. It can be any of 'OwnerGroup', 'DateTime', 'Size', 'AbbrevSize', 'Mode' or 'FullName'. Its value initially affects both panels but it can be changed separately afterward.

'StartupFileSortMethod'

This variable specifies the startup sort method. It can be any of 'Name', 'Extension', 'Size', 'Date', 'Mode', 'OwnerId', 'GroupId', 'OwnerName' or 'GroupName'. Its value initially affects both panels but it can be changed separately afterward.

'MaxUnscaledDigits'

Maximum number of digits a number may be before being scaled (e.g. to '123M'). If you want number to always be scaled, either set this to '0', or set 'StartupFileDisplayMode' to 'AbbrevSize'. Note that scaling may happen anyway if the number is too large for the display field.

'GroupDigits'

If this variable is 'ON', digits of file sizes will be grouped according to your locale, (e.g. '123,456,789').

'ConfirmOnExit'

If this variable is 'ON', the user is prompted for confirmation at exit.

'HistoryFile'

This variable specifies the history file name. The default value is '~/.githistory'.

'InfoDisplay'

If this variable is 'OFF', auxiliary file informations are not displayed. This can be useful if you are using a very slow terminal.

'LeadingDotMatch'

If this variable is 'OFF' when matching files for select-files-matching-pattern / unselect-files-matching-pattern then the leading '.' in the file name is matched only explicitly.

'TypeSensitivity'

If this variable is 'OFF', colors are not used when displaying files. Normally, the information in the 'GITFM-FTI' section is used to display files with different colors, depending on their types. Note that 'TypeSensitivity' is automatically set to 'OFF' when 'AnsiColors' is 'OFF'. See Section 4.2.4 [GITFM-FTI], page 39, for mor information.

'NormalModeHelp' 'CommandLineModeHelp'

These variables describe the status bar contents for each gitfm mode when no errors occurred. gitfm can display on the status bar a help string and/or some system information (system type, hostname, machine type and the current date) using escape characters:

| | | |
|---|---|---|
| \s | -> | the system type |
| \h | -> | the host name |
| \m | -> | the machine type |
| \d | -> | the current date |

See Section 3.1.3 [Modes], page 4, for more information.

#### 4.2.3.2 Using gitfm on color displays

In this sections the variables have only one field.

These section allows you to customize the colors of gitfm. Reading the 'gnuitrc.TERM' configuration file is self explanatory.

#### 4.2.3.3 Using gitfm on monochrome displays

In this sections the variables have only one field.

These section allows you to customize the appearance of gitfm on monochrome displays. Reading the 'gnuitrc.TERM' configuration file is self explanatory.

#### 4.2.3.4 Defining keys

These section describes the actions gitfm takes when a specified key is pressed. A variable can have up to 6 fields separated by ';'. Each line in this section looks like:

```
'key-sequence' = 'command-name';'formatted-command';'new-dir';
     'save-screen';'pause';'hide'
```

Note that you can't continue the variable fields description on the next line.

#### 4.2.3.5 The key-sequence field

'key-sequence' is the key sequence associated with the given command. You can use any key sequence that doesn't start with an ascii character (0x20 to 0x7e).

Symbolic key names (*F0*, *F1*, *F2*, ... *F10*, *UP*, *DOWN*, *RIGHT*, *LEFT*, *INS*, *DEL*, *HOME*, *END*, *PGUP* and *PGDOWN*) can be used instead of the key sequence. If some keys don't have a 'termcap'/ 'terminfo' description (like the *F11*/*F12* keys on the Linux console) you can specify the key sequence in the usual way.

#### 4.2.3.6 The command-name field

'command-name' is a command generic name. Even if it is not always used, the 'command-name' must be present (if a command is associated with a 'key-sequence'). If it is not, no action will be taken when pressing 'key-sequence'.

There are two types of commands in gitfm: built-in commands and user defined commands. If the 'command-name' section contains a built-in command specification, the other fields are ignored.

Note that by convention built-in command names contain only lower case letters while user defined command names contain only upper case letters.

#### 4.2.3.7 The formatted-command field

'formatted-command' is a shell command which can contain some scanf(3)-like format specifiers. They are used to get the current entry name, owner, group, mode, etc.

Note that using uppercase 'format specifiers' you will be able to access the other panel path, file and directory names, etc.

These are the available 'format specifiers':

#### 4.2.3.8 The %s format specifier

The format of %s is: %s{question,default_answer}.

When gitfm encounters a %s in the 'formatted-command' it asks the user the question 'question' whose default answer is 'default_answer' and replaces the '%s{ , }' with the user's answer. Both 'question' and 'default_answer' can contain any other 'format specifiers' except %s.

Note that there should be no spaces between %s and '{'.

#### 4.2.3.9 The %f format specifier

gitfm will replace %f with the current directory entry name only if it is a file (not a directory).

#### 4.2.3.10 The %d format specifier

gitfm will replace %d with the current directory entry name only if it is a directory (not a file).

#### 4.2.3.11 The %l format specifier

gitfm will replace %l with the current directory entry name only if it is a symbolic link with no target.

#### 4.2.3.12 The %t format specifier

gitfm will replace %t with the current directory entry name only if it is a named pipe.

#### 4.2.3.13 The %z format specifier

gitfm will replace %z with the current directory entry name only if it is a socket.

#### 4.2.3.14 The %a format specifier

gitfm will always replace %a with the current directory entry name.

#### 4.2.3.15 The %m format specifier

`gitfm` will always replace %m with the current file mode.

#### 4.2.3.16 The %g format specifier

`gitfm` will always replace %g with the current file group.

#### 4.2.3.17 The %o format specifier

`gitfm` will always replace %o with the current file owner.

#### 4.2.3.18 The %p format specifier

`gitfm` will always replace %p with the current panel path.

#### 4.2.3.19 The %b format specifier

`gitfm` will always replace %b with the current panel directory name.

#### 4.2.3.20 The %i format specifier

`gitfm` will always replace %i with all the current panel selected entry names.

#### 4.2.3.21 The %? format specifier

The format of %? is: %?{confirmation}.

`gitfm` uses this format specifier only to ask for confirmation before expanding / executing the current command. The '`confirmation`' string is displayed and, if the user doesn't confirm, the command is aborted. Otherwise, %?{confirmation} expands to a null string and the command is expanded / executed normally.

#### 4.2.3.22 The new-dir field

If the '`formatted-command`' successfully exits (exit code = 0) or it has no body and this field is present then '`new-dir`' will become the current panel directory.

The character '~' used at the beginning of the '`new-dir`' field is replaced by the user's home directory.

#### 4.2.3.23 The save-screen field

This field is a character (usually 'y' or 'n') that tells `gitfm` to save ('y') or not to save ('n') the terminal's screen after executing the '`formatted-command`'. Saving the screen is not necessary while editing or viewing a file because the information left after the editor or the viewer exits is not important. Saving the screen means that that screen will be restored before the execution of the next command. Currently this field is used only if you are working as a super user under `Linux` on a virtual console. Its default value is 'y'.

#### 4.2.3.24 The pause field

Users may wish to read the result of some commands before repainting the panels. If this field is present gitfm will wait for a key to be pressed before restoring the panels. Its default value is 'n'.

#### 4.2.3.25 The hide field

Some commands that don't displaying any useful information if successfully complete their execution: `mount`, `chmod`, `chown`, `chgrp`, `sync` ... and, if an error occurs, a line or two are sent to stderr. If this option is 'y', the stdout and stderr will be redirected to some files ('`git.1.pid`' and '`git.2.pid`', where pid is `gitfm`'s pid) and only if the command's exit code is not 0, the '`git.2.pid`' file will be displayed, line by line, onto the status bar. This way the panels will not be deleted and then repainted and the command appears to be built-in. '`git.1.pid`' and '`git.2.pid`' are created in the temporary directory specified in the `TMPDIR` environment variable (or `"/tmp"` if `TMPDIR` is not defined). The default value of the `hide` field is 'n'.

### 4.2.4 Setting up colors for different file types

This sections contains entries of the form:

```
'pattern' = 'foreground'; 'background'; 'brightness'
```

where '`pattern`' is a file name matching pattern, '`foreground`', '`background`' and '`brightness`' are the color specification to be used when a file whose name match the given '`pattern`' is displayed in a panel. Colors can be turned off using the '`TypeSensitivity`' variable in the '`GITFM-Setup`' section.

### 4.2.5 gitps Sections

#### 4.2.5.1 gitps Setup

In this section the variables have only one field.

'`Help`'

This variable describe `gitps`'s status bar contents.

#### 4.2.5.2 Using gitps on color displays

In this sections the variables have only one field.

These section allows you to customize the colors of `gitps`. Reading the '`gnuitrc.TERM`' configuration file is self explanatory.

#### 4.2.5.3 Using gitps on monochrome displays

In this sections the variables have only one field.

These section allows you to customize the appearance of `gitps` on monochrome displays. Reading the '`gnuitrc.TERM`' configuration file is self explanatory.

#### 4.2.5.4 Defining keys

### 4.2.6 gitview Sections

#### 4.2.6.1 gitview Setup

In this section the variables have only one field.

'`Help`'

This variable describe `gitps`'s status bar contents.

#### 4.2.6.2 Using gitview on color displays

In this sections the variables have only one field.

These section allows you to customize the colors of `gitview`. Reading the ‘`gnuitrc.TERM`’ configuration file is self explanatory.

#### 4.2.6.3 Using gitview on monochrome displays

In this sections the variables have only one field.

These section allows you to customize the appearance of `gitview` on monochrome displays. Reading the ‘`gnuitrc.TERM`’ configuration file is self explanatory.

#### 4.2.6.4 Defining keys

# 5 GNU Interactive Tools limitations

Background commands (& terminated)can be specified in the configuration file but their result (stdout and stderr redirection), will be overwritten by the result of newer commands and, if an error occurs, it will not be seen.

When `gitfm` is compiled for `Linux`, the default built-in color descriptions are for color monitors, so you can't (decently) run `gitfm` on a b/w monitor without the '`gnuitrc.TERM`' file correctly configured. '`gnuitrc.TERM`' should be configured with '`AnsiColors`' = OFF. However, if your system knows about the linux-m terminal type, using that may be a better solution.

Job support is implemented only in `gitfm`.

Due to the fact that the ';' character is used as a field separator in the configuration files, you can't write something like that in the '`gnuitrc.TERM`' files:

```
^AAA = SHOW-USERS-AND-GROUPS; more /etc/passwd; more /etc/group
```

because 'more /etc/group' will be considered as a directory to switch to. You must write a small script instead:

```
#! /bin/sh
more /etc/passwd more /etc/group
```

Supposing the script name is `show_ug`, the '`gnuitrc.TERM`' line will look like this:

```
^AAA = SHOW-USERS-AND-GROUPS; show_ug
```

There is no support for appearance modes on magic-cookie terminals.

# 6 GNU Interactive Tools bugs

Any questions, comments, or bug reports, should be emailed to ‘`gnuit-dev@gnu.org`’. Please include the version number.

# Appendix A Copying This Manual

Version 1.3, 3 November 2008

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