

**NAME**

xvi – multi-file text editor

**SYNOPSIS**

**xvi** { **-s** *parameter-assignment* } [ **-t** *tag* | **+number** | **+/pattern** ] { *filename* ... }

**DESCRIPTION**

**Xvi** (pronounced *ecks-vee-eye*) is a free, portable, multi-window implementation of the popular **vi**(1) editor. It has some useful enhancements, although, as described below, not all of **vi**'s features have been implemented yet, and some things work differently from **vi**.

**OPTIONS**

The following command-line options are available:

**-s** *parameter-assignment*

Set the value of the specified parameter at startup. The assignment has the same form as when given as an editor command, i.e:

*name=string*

for string parameters

*name=number*

for numeric parameters

*name* to turn a Boolean parameter on

**noname**

to turn a Boolean parameter off

**-t** *tag* Edit the file containing the definition specified as *tag*, at the start of the definition (as per **vi**).

**+number**

Go to the specified line number of the file being edited.

**+/pattern**

Go to the first occurrence of the specified *pattern* within the file being edited.

The **-r** command line option is not supported.

**ENHANCEMENTS****Parameter handling**

**Xvi** supports 5 types of parameter: as well as **vi**'s *numeric*, *string* and *boolean*, it also has *enumerated* and *list* types. The former is used for e.g. **format** and **regextype**, while the latter is currently only used for **tags**. The advantage of the *enumerated* type is that if you try to set an illegal value, the set of correct values will be displayed, which is very useful if you have forgotten what the values may be. (Try **:set preserve** to see an example of this.)

**Multiple buffers and windows**

**Xvi** supports multiple *buffers* and *windows*. A *buffer* is the internal object which holds a file in memory, while a *window* is an area of the screen which shows part of a buffer. Every window references a buffer, even if no file is being edited.

The following commands are available for operating on buffers and windows:

**:buffer** create a new buffer in a new window; can be followed by a filename, which will be edited in the new buffer.

**:split** create a new window on to the current buffer by splitting the current window in half. The two resulting windows are similar to *viewports* on to a single editing buffer, in that changes made in one window are reflected in the other one.

**:close** close the current window; will also close the buffer if this is the last window on to it.

**:x / ZZ** close only the current window. If the window is the only one on to the buffer, the buffer will be closed as well, writing it first if it is modified.

- g**            move to the next window.
- ^W**        increase the size of the current window (may be given a numeric prefix, default is one line).
- ^T**        decrease the size of the current window (may be given a numeric prefix, default is one line).
- ^O**        make the current window as large as possible.
- ^]**        as for **vi**, but create a new buffer window if appropriate (and if **autosplit** allows).

Note that the **:quit** command quits out of the editor, not out of a window. The **:close** command is thus the equivalent of **:quit** for windows. There is no equivalent of **:x** or **ZZ** for the whole editor; these have been hijacked for operations on windows.

The numeric **autosplit** parameter specifies the maximum number of buffer windows that will be created automatically whenever you either edit more than one file, or use tags to edit a different file.

Undo works per buffer, as do marks; yank/put and redo (the **.** command) work over all buffers, i.e. you can delete from one buffer and put the text into a different buffer.

The **minrows** parameter specifies the minimum number of rows to which a window may be shrunk, including the status line. The default value is 2; 0 and 1 may also be useful.

### Named buffers

As well as the normal named (conjugate) buffers, and the default one named **@**, several extra buffers named **;**, **/**, **?** and **!** contain the last command lines entered for each of the command types. So for instance, **@:** will re-execute the last colon command, or you can insert it into your buffer, edit it and then re-execute it (e.g. with **dd@**).

### File preservation

Rather than use **vi**'s Unix-specific method for preservation, **xvi** does periodic preservation of all files currently being edited into temporary files in the same directory. It tries to do this when you aren't typing, so that you won't notice the short delay when the temporary file is written out. Obviously, only changed files are preserved in this way, and the temporary file is removed once the real file has been successfully written.

As an additional safety measure, when a file is explicitly saved and it appears not to have been preserved recently, it is normally preserved first. This ensures that, even if the operating system crashes while the real file is being created, there should always be at least one recent copy of it in the filesystem. The **:preserve** command is available as in **vi** to preserve a specific buffer manually.

The level of safety provided by the preservation facility may be configured by changing the values of the **preserve** and **preservetime** parameters. The following values are available for **preserve**:

**unsafe**    Never preserve any buffer before an explicit save. This can be useful on old, slow, floppy-only systems, but is not generally recommended.

#### **standard**

The default value. Only preserve a buffer before an explicit save if it appears not to have been preserved recently.

**safe**      Always preserve buffers before they are written.

#### **paranoid**

As for **safe**, but the preserve file is never removed, even after the file has been successfully written.

In all cases, all modified buffers are preserved automatically after no user events have been received for **preservetime** seconds, if a minimum number of events (currently 60) have been received since the last automatic preservation. This behaviour can be more or less disabled by setting **preservetime** to a very high value.

The names given to preserve files are system-dependent, but are generally of the form "*filename.tmp*", or "*filename.001*" to "*filename.999*". If a preserve file already exists, it will not be overwritten; instead, a new filename will be generated.

### 8-bit character support

Characters with the top bit set may be displayed, although it is not yet possible to have null ('\0') bytes in a file buffer. How the characters are displayed varies between systems; on UNIX, they will be shown as an octal escape sequence, while on MS-DOS, OS/2 and QNX they will be shown as the actual character in the PC character set. This can be controlled by setting the **cchars** and **mchars** variables; if these parameters are set, control- and meta-characters (respectively) are shown directly, otherwise they are shown as some sequence of printable characters.

Tabs are normally displayed as a series of spaces of the appropriate length (according to the **tabstops** parameter); setting **list** mode will cause them to be displayed as control characters, as will unsetting the **tabs** parameter. How the tab character is displayed is then under the control of the **cchars** parameter.

You can use the ^\_ (control-underscore) command to flip the top bit of the character the cursor is on. This may be useful on systems where it is otherwise impossible to enter 8-bit characters.

### File formats

**Xvi** can read and write text files in non-Unix formats. The current format is given by the value of the **format** parameter, which may be set to "**unix**", "**msdos**", and so on. This means you can edit MS-DOS files under UNIX, etc. To see a list of available formats, type

```
:se fmt=?
```

### Extended regular expressions

**vi**'s **magic** parameter is superseded by the **regextype** parameter, which can take the following values:

**tags** only ^ and \$ are significant (used for tags)

**grep** like **grep(1)**, but with \< and \> added

**egrep** like **egrep(1)**, but with \< and \> added

The default is **grep**.

Note that it is still possible to set or unset **magic** as in **vi**; this will simply result in **regextype** being set as appropriate.

The **sections** and **paragraphs** parameters define **egrep**-style patterns to search for, rather than **vi**'s simplistic (and **troff**-dependent) character pairs.

### Improved replace mode

The **R** command acts more intelligently when you press return — it leaves the rest of the current line alone, and just starts replacing text on the next line, starting at the screen column where you first typed **R**.

### Command line editing and filename completion

While entering a '.' command or a '/' search string, as well as the usual keys, **Backspace** to cancel the previous character, ^W to cancel the previous word and ^U to cancel the line, **xvi** also lets you move back and forth in the line with the arrow keys to correct typing errors.

The **Escape** key, instead of executing the line (the same as **Enter**), performs filename completion on the last word in the line, which can be the first part of a file's name or a filename regular expressions containing special characters ?, \* and maybe others, depending on your operating system.

### Command re-execution

As well as the normal named (conjugate) buffers, and the default one (named @), there exist several extra ones named :, /, ? and !, which contain the last command lines typed to each of the given commands. So for instance, @: will re-execute the last **ex** command, or you can insert it into your buffer, edit it and then re-execute it (e.g. with **dd @@**).

### Scrolling

When multiple windows are used, **xvi** normally has to be able to scroll individual windows without scrolling the whole screen. This can be very inefficient on terminals without scrolling regions, so the **jumpscroll** parameter is provided to control the editor's scrolling behaviour. It can be set to one of:

**off** When the cursor moves outside a window's boundaries, and the new position is near enough, the window will scroll to the new position.

**on** When the cursor moves outside a window's boundaries, the window will always jump to the new position.

**auto** A window will scroll only if it can do so efficiently; otherwise it will jump.

The default value is **auto**.

On ISA-type systems which have memory-mapped displays, hardware character generators and reasonably fast processors, **jumpscroll** should generally be set to **off**; however, on LCD screens or other displays with a long image persistence, this may actually make the text more difficult to read, and many users may be more comfortable with it turned **on**.

Explicit scroll commands (e.g. **^D** and **^E**) are not affected by the **jumpscroll** parameter.

## Colour

There are four new parameters to control screen colours:

**colour** colour used for text

**statuscolour**

colour used for status lines

**roscolour**

as **statuscolour**, but for readonly files

**systemcolour**

colour used for system mode (i.e. subshells and after termination)

These parameters are numeric, and the value means different things on different operating systems. On Unix, it is an index into the **termcap**(5) entries "**c0**" to "**c9**", which are assumed to be colour-setting escape sequences if they are present. If they are not present, "**so**" (begin standout mode) and "**se**" (end standout mode) are used instead. Values of 0 and 1 give normal text, whereas 2 and above give standout mode.

The default colour for the **roscolour** parameter will generally involve red if colours are available; this is intended to provide a warning to the user that writing the file may not be possible.

## On-line help

A primitive help facility is available; the **:help** command simply creates a new buffer window on to a standard help file. The name of the file which is edited is given by the **helpfile** string parameter; the default on Unix versions is **"/usr/lib/xvi.help"**.

Note that the help file buffer will be marked "not editable" when it is created, which prevents accidental overwriting of the help file even when the file permissions would allow it.

## Mouse support

Some mouse support is available for micro-based systems and workstations Clicking the mouse button on:

any line outside current window

changes current window to the one indicated by the mouse (can be used instead of **g**).

top line of any window

scrolls window downwards (same as **^Y**).

bottom line of any window

scrolls window upwards (same as **^E**).

status line of any window

shows current file and lines (same as **^G**).

any text line of any window

moves text cursor as near as possible to mouse cursor.

Also, windows can be resized by dragging the appropriate status line up or down with the mouse.

## Miscellaneous

The command **:wn** (write file and edit next) is provided, as in **PC-vi**.

The new **edit** parameter controls whether a buffer can be modified. This may be used to implement a nicer

version of **view**(1) than the standard **vi** version, since it won't fool you into thinking that editing the buffer is in any way safe. Be warned: once having set **noedit**, it is not possible to do a **:set edit** any more. It's a one-way street.

In insert and replace modes, **^A** has the same meaning as **^@** in **vi**, except that it works at any time, not just for the first character. Also, typing **^Bx** where *x* is the name of a conjugate buffer, inserts the contents of that buffer into the input stream at that point. The buffer named **<** always contains the last thing inserted, so that **^B<** is the same as **^A**.

## LIMITATIONS

### Ex mode

The main area in which **xvi** is lacking is **vi**'s **ex** mode, which is not implemented at all (and neither are **edit**, **e**, or **open** modes). However, many of the **ex** commands are available in **vi** mode as colon commands; the colon commands that have not been implemented are mostly those which offer the same functionality as other commands in **vi** mode.

In particular, **abbreviate**, **append**, **change**, **ex**, **insert**, **open**, **recover**, **unabbreviate**, **write>>**, **z** and **|** have not been implemented as colon commands yet.

### Vi mode

In **vi** mode, the **U** and **=** commands are not implemented, although there is no real reason why they shouldn't be, whilst **Q** is inappropriate in the context of **xvi**, since there is no **ex** mode.

### Parameters

The following parameters have not been implemented, and probably won't be:

**ada**, **adapath**, **autoprint**, **beautify**, **directory**, **edcompatible**, **hardtabs**, **lisp**, **mesg**, **modeline**, **open**, **optimize**, **prompt**, **redraw**, **slowopen**, **term**, **terse**, **ttytype**, **window**

while these parameters may well be implemented at some point:

**autowrite**, **scroll**, **sourceany**, **writeany**

The command **:se all** gives a complete list, with current values, of those that have been.

### Miscellaneous

Appending to named buffers is not yet implemented.

Typing **^Q** in input mode does not mean the same as **^V**; it just inserts a **^Q**, assuming it gets as far as the editor at all.

Typing **^W** in insert mode does not back up one word as in **vi**.

It is not possible to interrupt the editor while it is performing certain operations. If you start off a big global command, you have to wait for it to finish.

Flags and counts after **ex** mode commands are not supported.

The **:substitute** command does not support splitting of lines.

Regular expressions, although implemented (see above), do not support the **~** metacharacter; also, the **\u** and **\l** escape sequences are not supported in substitute replacement patterns.

The **:global** command only supports the commands **[lps&~d]**.

**Undo** does not work properly when applied to macros (either **@** or **:map**); it should undo all the changes made by the macro, but in fact only the last command within the macro is undone.

## OTHER DIFFERENCES FROM VI

The **XVINIT** environment variable is read instead of **EXINIT**. Whilst no files are sourced automatically, users who wish to have a startup file can arrange it very easily. **sh**(1) or **ksh**(1) users should add this line to their **\$HOME/.profile**:

```
XVINIT='source xvi-startup-file'; export XVINIT
```

**csh**(1) users should add this to their **\$HOME/.login**:

```
setenv XVINIT 'source xvi-startup-file'
```

and MS-DOS users should add this to their **autoexec.bat**:

```
set XVINIT=source.xvi-startup-file
```

The **tags** parameter can be used to specify multiple tags files; these can be separated by either “\ ” (backslash space) or “,” (comma).

Alternate files are handled slightly differently, owing to the presence of buffer and window handling. Essentially, when you close a buffer, its filename is remembered as the alternate file; when you invoke the **^^** or **:e #** commands, this file is re-edited. Note that **^^** edits the alternate file in a new buffer window, if **autosplit** allows.

Hitting the escape key while in the command line does not terminate input; instead, it cancels input, returning the prompt to the beginning of the line. This applies to input for **:**, **/**, **?** and **!**.

## FILES

**/usr/lib/xvi.help**            Default help file.

## SEE ALSO

**ex(1)**, **vi(1)**, **termcap(5)**.

*Summary of Differences between Vi and Xvi.*

## BUGS

- When the cursor is on the last word of a buffer, the command **dw** leaves the last character of the word undeleted.
- Some screen updates do not get shown properly when buffers are split, and certain commands (e.g. **x**) are executed.
- If you do something like **cf.WORD<esc>** and then redo it, and the **f.** fails, then the **WORD<esc>** gets taken as normal input. The rest of the input should really be cancelled when part of a redo fails.
- A command of the form **:/pat/;+1m.** will not work because the editor incorrectly detects a conflict between source and destination.
- The editor in its present form is very inefficient in terms of CPU cycles.
- Most **termcap(5)** terminal descriptions are only tested with **vi(1)** (and possibly **rogue(6)**). Since **xvi** is, in some ways, more demanding than **vi** in its use of **termcap** capabilities, it sometimes exposes bugs or inadequacies in **termcap** entries. This applies especially to scrolling regions.

## AVAILABILITY

**Xvi** has been ported to MS-DOS, OS/2, QNX and many different versions of Unix. Source code is available from the authors.

## AUTHORS

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