

FiXme – a L^AT_EX 2_ε package for inserting fixme notes in your documents *

Didier Verna
mailto:didier@lrde.epita.fr
<http://www.lrde.epita.fr/~didier/>

April 9, 2005

Abstract

In the process of writing a long document, it is a common practice to leave some parts unwritten or uncomplete, and come back to them later. In such cases, you probably want to stick clues about which parts need to be “fixed”, where they are located, and what needs to be done. This is what I call “fixme notes”. The purpose of this package is to provide you with convenient ways to insert FiXme notes in your documents.

The FiXme package is Copyright © 1998, 1999, 2000, 2001, 2002, 2004, 2005 Didier Verna, and distributed under the terms of the LPPL license.

1 Description

With FiXme, you can insert different kinds of notes in your documents, ranging from simple not-so-important notices to critical stuff that must absolutely be fixed in the final version.

FiXme gives you full control on the layout of these notes: they can be displayed inline (directly in the text), as marginal paragraphs (the default), as footnotes and even as index entries. All these possibilities can be mixed together. Additionally, you can summarize all FiXme notes in a “list of fixme’s”.

FiXme notes are also recorded in the log file, and (depending on their importance level) some of them are displayed on the terminal during compilation. A final summary is also created at the end of the compilation process.

All these features are actually available when you’re working in **draft** mode. In **final** mode, the behavior is slightly different: any remaining critical note generates an error (the compilation aborts), while non critical ones are just removed from the document’s body (they’re still recorded in the log file though).

2 Using FiXme

First of all, please note that the **ifthen** and **verbatim** packages are required. You don’t have to load them explicitly though. As long as L^AT_EX 2_ε can locate them, they will be used automatically.

*This document describes FiXme v3.1, release date 2005/01/31.

To use FiXme, simply say `\usepackage[options]{fixme}` in the preamble of your document.

2.1 Inserting notes

2.1.1 Macros

`\fixme` The main command for inserting a FiXme note in your document is the `\fixme` macro. It takes the note to insert as its mandatory argument. Notes inserted via this command are considered fatal to your document's final processing (see section 2.2).

`\fxnote` As of version 2.0, FiXme provides three new macros that insert meta-comments about the document, rather than real fixmes. These comments have three different importance levels: note, warning and (non critical) error. The corresponding macros obey the same syntax as `\fixme`. However, none of the notes inserted via these macros are fatal.

`\fxwarning`

`\fxerror`

2.1.2 Environments

`anfxnote` As of version 3.0, FiXme provides environments for inserting longer notes. These environments take one optional argument (should be short, perhaps a summary of the note) that will be used in the list of fixme's and in the index if required.

`anfxwarning`

`anfxerror`

`afixme` The FiXme environments behave exactly the same way as their macro counterpart, except for the layout (see section 2.3): as they are meant for longer notes, the layout is always `inline` (and possibly `index` if so required). By default, FiXme environments are typeset in a `quotation` one.

2.2 Controlling the behavior of FiXme

`final` The global behavior of the package is controlled via the two standard options `final` and `draft`. These options are usually given to `\documentclass{}` which in turn passes them to all packages.

`draft`

In `draft` mode, the notes are recorded in the log file, and appear in the text as specified by the layout settings (see section 2.3). Additionally, warnings, errors and fatal errors are also displayed on the terminal.

In `final` mode, non fatal notes (those generated by the `\fx*` commands) are still logged, but they're removed from the document's body. On the other hand, any remaining fatal note (generated by `\fixme`) will abort compilation with an informative message. This will help you track down forgotten important caveats in your document. Let me say it again: final documents can only have notes, warnings, and (non critical) errors left. Well, if, for some reason, you really want to compile in `final` mode with critical FiXme notes left behind, you always have the possibility to pass the `draft` option to FiXme directly. . .

The `final` mode has been chosen as the default because L^AT_EX 2_ε itself behaves this way.

2.3 Controlling the notes layout

`inline` FiXme notes can appear in several forms (that can be combined) in your document.

`margin` The forms currently supported are: inline (directly in the text), marginal notes,

`footnote`

`index`

footnotes, and index entries. To activate a particular layout, use the corresponding package option. By default, only the `margin` layout is active.

Each layout option has a counterpart that deactivates it. The counterpart option has the same name, prefixed with `no`. For instance, if you don't want marginal notes, use the `nomargin` option.

`\fixme[]` As of version 3.0, FiXme provides a way to change the selected layout(s) on a per-note basis: each note insertion command takes an optional first argument that overrides the global layout. This argument consists of one or more layout options (`inline`, `margin`, `footnote` and `index`) separated by commas. Remember that local layouts *override* the global ones; they don't add to it.

On what occasion would one want to modify the layout for a particular note? Here is a typical situation: suppose you have a document in which FiXme notes are typeset as margin paragraphs (this is the default). You would not be able to put a note in a figure, because floats can't be nested in L^AT_EX (margin paragraphs are floats). In such a case, you would rather inline the note, which can be done with something like `\fixme[inline]{blah}`.

Finally, note that FiXme environments behave in a special way: they are always typeset `inline`, regardless of your layout settings (they respect your wish for an index though).

2.4 Controlling the notes logging

`silent` As well as being displayed in the document itself, all FiXme notes are “logged”
`nosilent` in different ways: by default, simple notes are recorded in the log file while the others are also displayed on the terminal output.

You have the ability to suppress all kind of logging by using the `silent` option. By default, the behavior is that of `nosilent`.

2.5 List of FiXme's

`\listoffixmes` FiXme remembers where you put FiXme notes in a toc-like file whose extension is `lox`. The `\listoffixmes` macro generates the list of all FiXme notes in a manner similar to that of the “list of figures” for instance. A standard layout is automatically used for the ‘article’, ‘report’, ‘book’ classes and their koma-script replacements. If another class is used, the ‘article’ layout is selected. Also, note that if no FiXme note remain in the document, this macro doesn't generate an empty list, but rather stays silent. It also stays silent in `final` mode, regardless of the presence of remaining notes.

3 Customizing FiXme

3.1 Customizing the notes layout

3.1.1 Macros

The `inline`, `margin` and `footnote` layouts have two parts: a “prefix” which depends on the note level, and the note itself. The prefix is one of “FiXme note:”, “FiXme warning:”, “FiXme error:” or simply “FiXme:”, and appears in bold. The note itself appears emphasized. These layouts are implemented thanks to the

`\FXInline`
`\FXMargin`
`\FXFootnote`

corresponding `\FX*` macros that you can redefine if you wish. Each such macro takes two mandatory arguments: the prefix and the note, in that order.

`\FXIndex` The `\FXIndex` macro is used for the `index` layout. All `FiXme` index entries appear under the “`FiXme`” key in the symbols section. There are 4 subcategories under this key, as many as there are note levels. By default, only the first 3 of them are used though (fatal errors do not appear under a subkey, but directly under the `FiXme` key). The notes are numbered in the index.

3.1.2 Environments

`\FXEnvBegin` The optional argument of `FiXme` environments is always typeset according to the
`\FXEnvEnd` `inline` layout described above. By default, `FiXme` uses a `quotation` for displaying the environments’ contents. If you want to change that, you can redefine the macros `\FXEnvBegin` and `\FXEnvEnd` that open and close the environments.

3.2 Customizing the notes logging

`\FXNote` If you want a finer control on logging, you can redefine the commands used to
`\FXWarning` implement it. These commands (on the left) are the ones used by `\fxnote`,
`\FXError` `\fxwarning`, `\fxerror` and `\fixme` respectively. They take the note itself as
`\FXFatal` mandatory argument.

3.3 Fancy fruit salad layout

`user` If, for some totally unjustified reason, you are not happy with the available layouts,
`\FXUser` you have the ability to define your own: pass the `user` option to the package (it also has its `nouser` counterpart), and define an `\FXUser` macro in the following manner:

```
\newcommand{\FXUser}[2]{\fancy fruit salad layout job}
```

The arguments are the prefix, and the note itself, in that order.

Note that the `user` option can also be used in the optional argument of the notes insertion commands.

3.4 Internationalization

`english` `FiXme` currently supports English, French, Spanish, Italian, German and Danish.
`french` You can select the language you want to use by passing the corresponding option
`français` (these options are usually given directly to `\documentclass{}` which in turn passes
`spanish` them to all packages). The `french` and `français` options are synonyms. The
`italian` `german` and `ngerman` options are currently equivalent.

`german` If you want a finer grain on the language-dependent parts of `FiXme`, the fol-
`ngerman` lowing macros are provided and can be redefined.

The `\fixme*prefix` macros define the prefix for the four different note levels. They make intensive use of the macro `\fixmefatalindexname` ;-)

The macro `\fixmeindexname` defines the main `FiXme` index key. The other ones define the different index subkeys for each note level. Please note that an empty name for a subkey means that you don’t actually want a subcategory (that’s the case by default for fatal errors). The corresponding notes will then appear directly under the main `FiXme` key. For that reason, a non empty subkey must end with an exclamation mark.

```
\fixmenoteprefix
\fixmewarningprefix
\fixmeerrorprefix
\fixmefatalprefix
\fixmefatalindexname
\fixmeindexname
\fixmenoteindexname
\fixmewarningindexname
\fixmeerrorindexname
\fixmefatalindexname
```

`\listfixmename` `\listfixmename` defines the title for the “list of fixmes” section.

4 AUC- \TeX support

AUC- \TeX is a powerful major mode for editing \TeX documents in **Emacs** or **XEmacs**. In particular, it provides automatic completion of macro names once they are known. **FiXme** supports AUC- \TeX by providing a style file named `fixme.el` which contains AUC- \TeX definitions for the relevant macros. This file should be installed in a place where AUC- \TeX can find it (usually in a subdirectory of your \LaTeX styles directory). Please refer to the AUC- \TeX documentation for more information on this.

5 Changes

- v3.1 Fix bug reported by Arnold Beckmann: the environments were visible in final mode.
- v3.0 Added environments corresponding to the note insertion commands.
Added an optional first argument to the note insertion commands to change the layout locally.
Fix bug reported by Akim Demaille: marginal notes could mess up the document’s layout by flushing it right.
- v2.2 New option `silent` to suppress notes logging
Support for Danish thanks to Kim Rud Bille <krbi01@control.auc.dk>
- v2.1 Use `\nobreakspace` instead of the tilda character. This avoids conflicts with Babel in Spanish environments.
Fix bug reported by Knut Lickert: index entries were unconditionally built.
- v2.0 New feature: note levels
New feature: **FiXme** note counters and usage summary
Suggestions from Kasper B. Graversen <kb@dkik.dk>
Support for Spanish thanks to Agustín Martín <agusmba@terra.es>
- v1.5 New appearance option: `inline`.
- v1.4 Support for the koma-script classes
Fix bug reported by Ulf Jaenicke-Roessler: the `\listoffixmes` command didn’t work when called before the first **FiXme** note.
- v1.3 Support for Italian thanks to Riccardo Murri <murri@phc.unipi.it>
- v1.2 Support for German thanks to Harald Harders <h.harders@tu-bs.de>

6 The Code

`\fixmelogo` Here’s the preamble:

```

1 \NeedsTeXFormat{LaTeX2e}
2 \ProvidesPackage{fixme}[2005/01/31 v3.1
3             Insert fixme notes in your documents]
4
5 \RequirePackage{ifthen}
6 \RequirePackage{verbatim}
7
8 \newcommand*\fixmeloogo{\textsf{FiXme}}
9

```

6.1 List macros

`\listoffixmes` `\listoffixmes` is empty by default. The `final` or `draft` options will provide the proper definition. Lists are output in a document class dependant fashion. Classes currently recognized are `article`, `report`, `book` and their koma-script replacements.

In order to prevent the List of Fixme's chapter heading from being generated when there are no fixmes, a test on the existence of the `lox` file is performed. There's a slight bug left however: after removing the last fixme, one ends up with an empty `lox` file, so the heading still appear. Previously, this was done by checking if some fixmes were given, but that was buggy: the list of fixme's could not appear before the first fixme note...I should try to detect whether the file is empty.

```

10 \newcommand\listoffixmes{}
11 \def\listoffixmes@final{}
12 \def\listoffixmes@draft{%
13   \IfFileExists{\jobname .lox}{\@listoffixmes@pretoc}{}%
14   \@starttoc{lox}%
15   \IfFileExists{\jobname .lox}{\@listoffixmes@posttoc}{}%
16 }
17

```

`\listfixmename` In order to redefine the list title, users have to call `\renewcommand`. I don't like this much: it would be cleaner to provide a real command that redefines the title internally. However, I'll stick with the current scheme because it is consistent with the rest of L^AT_EX 2_ε's lists.

```

18 \newcommand*\listfixmename{}
19

```

6.1.1 Standard classes

`\listoffixmes@pretoc@article` Let's start with the article version:
`\listoffixmes@posttoc@article`
`\l@fixme@article`

```

20 \def\@listoffixmes@pretoc@article{%
21   \section*{\listfixmename%
22     \@mkboth{\MakeUppercase\listfixmename}{\MakeUppercase\listfixmename}}%
23 }
24 \def\@listoffixmes@posttoc@article{}
25 \def\l@fixme@article{\@dottedtocline{1}{1.5em}{2.3em}}
26

```

`\listoffixmes@pretoc@report` Here's the report version:
`\listoffixmes@posttoc@report`
`\l@fixme@report`

```

27 \def\@listoffixmes@pretoc@report{%
28   \if@twocolumn
29     \@restonecoltrue\onecolumn
30   \else
31     \@restonecolfalse
32   \fi
33   \chapter*{\listfixmenename%
34     \mkboth{\MakeUppercase\listfixmenename}{\MakeUppercase\listfixmenename}}%
35   }
36 \def\@listoffixmes@posttoc@report{\if@restonecol\twocolumn\fi}
37 \def\l@fixme@report{\@dottedtocline{1}{1.5em}{2.3em}}
38

```

And here's the book version:

```

\listoffixmes@pretoc@book
\listoffixmes@posttoc@book
\l@fixme@book
39 \def\@listoffixmes@pretoc@book{%
40   \if@twocolumn
41     \@restonecoltrue\onecolumn
42   \else
43     \@restonecolfalse
44   \fi
45   \chapter*{\listfixmenename%
46     \mkboth{\MakeUppercase\listfixmenename}{\MakeUppercase\listfixmenename}}%
47   }
48 \def\@listoffixmes@posttoc@book{\if@restonecol\twocolumn\fi}
49 \def\l@fixme@book{\@dottedtocline{1}{1.5em}{2.3em}}
50

```

6.1.2 koma-script classes

Let's start with the scrartcl version:

```

\listoffixmes@pretoc@scrartcl
\listoffixmes@posttoc@scrartcl
\l@fixme@scrartcl
51 \def\@listoffixmes@pretoc@scrartcl{%
52   \section*{\listfixmenename%
53     \mkboth{\listfixmenename}{\listfixmenename}}%
54   }
55 \def\@listoffixmes@posttoc@scrartcl{}
56 \def\l@fixme@scrartcl{\@dottedtocline{1}{1.5em}{2.3em}}
57

```

Here's the scrreprt version:

```

\listoffixmes@pretoc@scrreprt
\listoffixmes@posttoc@scrreprt
\l@fixme@scrreprt
58 \def\@listoffixmes@pretoc@scrreprt{%
59   \if@twocolumn
60     \@restonecoltrue\onecolumn
61   \else
62     \@restonecolfalse
63   \fi
64   \chapter*{\listfixmenename%
65     \mkboth{\listfixmenename}{\listfixmenename}}%
66   }
67 \def\@listoffixmes@posttoc@scrreprt{\if@restonecol\twocolumn\fi}
68 \def\l@fixme@scrreprt{\@dottedtocline{1}{1.5em}{2.3em}}
69

```

And here's the scrbook version:

```

\listoffixmes@pretoc@scrbook
\listoffixmes@posttoc@scrbook
\l@fixme@scrbook

```

```

70 \def\@listoffixmes@pretoc@scrbook{%
71   \if@twocolumn
72     \@restonecoltrue\onecolumn
73   \else
74     \@restonecolfalse
75   \fi
76   \chapter*{\listfixmename%
77     \@mkboth{\listfixmename}{\listfixmename}}%
78 }
79 \def\@listoffixmes@posttoc@scrbook{\if@restonecol\twocolumn\fi}
80 \def\l@fixme@scrbook{\@dottedtocline{1}{1.5em}{2.3em}}
81

```

6.2 Layout macros

`\FXInline` The macros to implement different layouts for the fixme notes:

```

\FXMargin
\FXFootnote
82 \newcommand\FXInline[2]{%
83   \textbf{#1}: \emph{#2}}
84 \newcommand\FXMargin[2]{%
85   \marginpar{\footnotesize\raggedleft\textbf{#1}: \emph{#2}}}
86 \newcommand\FXFootnote[2]{%
87   \footnote{\textbf{#1}: \emph{#2}}}
88

```

`\fixmeindexname` The macros for index generation:

```

\FXIndex
89 \newcommand*\fixmeindexname{}
90 \newcommand\FXIndex[1]{%
91   \index{***@\fixmeindexname: !#1}}
92

```

`\fixmefatalprefix` Apart from `\fixmefatalprefix`, the following macros are kept only to preserve backward compatibility. They are used only by critical notes and are made to call the new versions by default:

```

\FiXmeInline
\FiXmeMargin
\FiXmeFootnote
\FiXmeUser
\FiXmeIndex
\FiXmeInfo
\FiXmeWarning
93 \newcommand*\fixmefatalprefix{}
94 \newcommand\FiXmeInline[1]{\FXInline{\fixmefatalprefix}{#1}}
95 \newcommand\FiXmeMargin[1]{\FXMargin{\fixmefatalprefix}{#1}}
96 \newcommand\FiXmeFootnote[1]{\FXFootnote{\fixmefatalprefix}{#1}}
97 \newcommand\FiXmeUser[1]{}
98 \let\FiXmeUser\empty
99
100 \newcommand\FiXmeIndex[1]{\FXIndex{#1}}
101 \newcommand\FiXmeInfo[1]{}
102 \newcommand\FiXmeWarning[1]{}
103

```

Booleans that control which layouts are selected:

```

104 \newif\iffixme@inline
105 \newif\iffixme@margin
106 \newif\iffixme@footnote
107 \newif\iffixme@user
108 \newif\iffixme@index
109

```


`\fixme@text` This macro implements the common (textual) part of all notes:

```

110 \def\fixme@text#1#2{%
111   \iffixme@inline\FXInline{#1}{#2}\fi%
112   \iffixme@margin\FXMargin{#1}{#2}\fi%
113   \iffixme@footnote\FXFootnote{#1}{#2}\fi%
114   \iffixme@user\FXUser{#1}{#2}\fi}
115

```

Options that control which layouts are selected:

```

116 \DeclareOption{inline}{\fixme@inlinetrue}
117 \DeclareOption{noinline}{\fixme@inlinefalse}
118 \DeclareOption{margin}{\fixme@margintrue}
119 \DeclareOption{nomargin}{\fixme@marginfalse}
120 \DeclareOption{footnote}{\fixme@footnotetrue}
121 \DeclareOption{nofootnote}{\fixme@footnotefalse}
122 \DeclareOption{user}{\fixme@usertrue}
123 \DeclareOption{nouser}{\fixme@userfalse}
124 \DeclareOption{index}{\fixme@indextrue}
125 \DeclareOption{noindex}{\fixme@indexfalse}
126

```

The following options are here for backward compatibility, but are not used anymore:

```

127 \DeclareOption{info}{}
128 \DeclareOption{noinfo}{}
129 \DeclareOption{warning}{}
130 \DeclareOption{nowarning}{}
131

```

6.3 Logging macros

`\FXNote` The macros for controlling logging (log file and terminal output):

```

\FXWarning
\FXerror 132 \newcommand\FXNote[1]{%
\FXFatal 133   \GenericInfo{%
134     (FixMe)\@spaces\@spaces\@spaces\@spaces}{%
135     Package FixMe Note: '#1'}}
136 \newcommand\FXWarning[1]{%
137   \PackageWarning{FixMe}{'#1'}}
138 \newcommand\FXError[1]{%
139   \GenericWarning{%
140     (FixMe)\@spaces\@spaces\@spaces\@spaces}{%
141     Package FixMe Error: '#1'}}
142 \newcommand\FXFatal[1]{%
143   \GenericWarning{%
144     (FixMe)\@spaces\@spaces\@spaces\@spaces}{%
145     Package FixMe: '#1'}}
146

```

Boolean that control whether to stay silent or not:

```

147 \newif\iffixme@silent
148

```

Options that control whether to be silent or not:

```

149 \DeclareOption{silent}{\fixme@silenttrue}
150 \DeclareOption{nosilent}{\fixme@silentfalse}
151

```

6.4 FiXme notes

```

\thefixmecount Here are the counters:
\thefixmenotecount 152 \newcounter{fixmecount}
\thefixmewarningcount 153 \newcounter{fixmenotecount}
\thefixmeerrorcount 154 \newcounter{fixmewarningcount}
\thefixmefatalcount 155 \newcounter{fixmeerrorcount}
156 \newcounter{fixmefatalcount}
157

\fixmenoteprefix The different flavors of fixme notes. Proper definitions will be selected by the
\fixmenoteindexname draft or final options. Let's start with the note notes:
\fixme@note@draft 158 \newcommand*\fixmenoteprefix{}
\fixme@note@final 159 \newcommand*\fixmenoteindexname{}
160 \def\fixme@note@draft#1{%
161 \fixme@text{\fixmenoteprefix}{#1}%
162 \iffixme@index\FXIndex{\fixmenoteindexname\thefixmenotecount: #1}\fi%
163 \iffixme@silent\else\FXNote{#1}\fi%
164 \addcontentsline{lox}{fixme}{\fixmenoteprefix: #1}}
165 \def\fixme@note@final#1{%
166 \iffixme@silent\else\FXNote{#1}\fi%
167 \addcontentsline{lox}{fixme}{\fixmenoteprefix: #1}}
168

\fixmewarningprefix Here are the warnings notes:
\fixmewarningindexname 169 \newcommand*\fixmewarningprefix{}
\fixme@warning@draft 170 \newcommand*\fixmewarningindexname{}
\fixme@warning@final 171 \def\fixme@warning@draft#1{%
172 \fixme@text{\fixmewarningprefix}{#1}%
173 \iffixme@index\FXIndex{\fixmewarningindexname\thefixmewarningcount: #1}\fi%
174 \iffixme@silent\else\FXWarning{#1}\fi%
175 \addcontentsline{lox}{fixme}{\fixmewarningprefix: #1}}
176 \def\fixme@warning@final#1{%
177 \iffixme@silent\else\FXWarning{#1}\fi%
178 \addcontentsline{lox}{fixme}{\fixmewarningprefix: #1}}
179

\fixmeerrorprefix Here are the errors notes:
\fixmeerrorindexname 180 \newcommand*\fixmeerrorprefix{}
\fixme@error@draft 181 \newcommand*\fixmeerrorindexname{}
\fixme@error@final 182 \def\fixme@error@draft#1{%
183 \fixme@text{\fixmeerrorprefix}{#1}%
184 \iffixme@index\FXIndex{\fixmeerrorindexname\thefixmeerrorcount: #1}\fi%
185 \iffixme@silent\else\FXError{#1}\fi%
186 \addcontentsline{lox}{fixme}{\fixmeerrorprefix: #1}}
187 \def\fixme@error@final#1{%
188 \iffixme@silent\else\FXError{#1}\fi%
189 \addcontentsline{lox}{fixme}{\fixmeerrorprefix: #1}}
190

```

```

\fixmefatalindexname And here are the fatal ones:
\fixme@fatal@draft
\fixme@fatal@final
191 \newcommand*\fixmefatalindexname{}
192 \def\fixme@fatal@draft#1{%
193   \iffixme@inline\FiXmeInline{#1}\fi%
194   \iffixme@margin\FiXmeMargin{#1}\fi%
195   \iffixme@footnote\FiXmeFootnote{#1}\fi%
196   \iffixme@user\FiXmeUser{#1}\fi%
197   \iffixme@index\FiXmeIndex{%
198     \fixmefatalindexname\thefixmefatalcount: #1}\fi%
199   \iffixme@silent\else\FXFatal{#1}\fi%
200   \addcontentsline{lox}{fixme}{\fixmefatalprefix: #1}}
201 \def\fixme@fatal@final#1{%
202   \PackageError{FiXme}{‘#1’ fixme left in final version}{%
203     You are processing your document in final mode,\MessageBreak
204     but you still have some critical FiXme’s left behind.\MessageBreak
205     Type X to quit, fix your document, and rerun LaTeX.}}
206

\@fixme Here are the notes insertion macros. The different versions are \let to the draft
\fxnote of final flavors defined above by the draft or final options.
\fxwarning
\fxerror
\fixme
207 \def\@@fixme#1#2{%
208   \stepcounter{fixmecount}%
209   \stepcounter{fixme#1count}%
210   \csname fixme@#1\endcsname{#2}}
211 \def\@fixme#1[#2]#3{%
212   \bgroup%
213   \fixme@inlinefalse%
214   \fixme@marginfalse%
215   \fixme@footnotefalse%
216   \fixme@userfalse%
217   \fixme@indexfalse%
218   \@for\fixme@option:=#2\do{%
219     \expandafter\ifx\csname fixme@\fixme@option true\endcsname\relax
220     \PackageError{FiXme}{Unknown layout option ‘\fixme@option’}{%
221       You have given an invalid option to \string\fixme, %
222       or an \string\fx command.\MessageBreak
223       Valid options are ‘inline’, ‘margin’, ‘footnote’ and ‘index’.%
224       \MessageBreak
225       Type X to quit, fix your document, and rerun LaTeX.}%
226     \else%
227     \csname fixme@\fixme@option true\endcsname%
228     \fi}%
229   \@@fixme{#1}{#3}%
230   \egroup}
231 \newcommand\fxnote{\@ifnextchar[%]
232   {\@fixme{note}}{\@@fixme{note}}}
233 \newcommand\fxwarning{\@ifnextchar[%]
234   {\@fixme{warning}}{\@@fixme{warning}}}
235 \newcommand\fxerror{\@ifnextchar[%]
236   {\@fixme{error}}{\@@fixme{error}}}
237 \newcommand\fixme{\@ifnextchar[%]
238   {\@fixme{fatal}}{\@@fixme{fatal}}}
239

```

6.5 FiXme environments

The FiXme environments use the corresponding macro version to handle inline (and possibly index) layout, and to perform logging. In final mode, verbatim's comment environment is used to suppress output.

```

240 \newcommand\FXEnvBegin{\begin{quotation}}
241 \newcommand\FXEnvEnd{\end{quotation}}
242
243 \def\@fxenvbegin@draft#1#2{%
244   \FXEnvBegin
245   \edef\fixme@args{inline\iffixme@index,index\fi}%
246   \csname#1\endcsname[\fixme@args]{#2}}
247 \def\@fxenvbegin@final#1#2{
248   \edef\fixme@args{inline\iffixme@index,index\fi}%
249   \csname#1\endcsname[\fixme@args]{#2}
250   \comment
251 }
252
253 \def\@fxenvend@draft{\FXEnvEnd}
254 \def\@fxenvend@final{\endcomment}
255
256 \newenvironment{anfxnote}[1][]{%
257   \@fxenvbegin{fxnote}{#1}}{%
258   \@fxenvend}
259 \newenvironment{anfxwarning}[1][]{%
260   \@fxenvbegin{fxwarning}{#1}}{%
261   \@fxenvend}
262 \newenvironment{anfxerror}[1][]{%
263   \@fxenvbegin{fxerror}{#1}}{%
264   \@fxenvend}
265 \newenvironment{afixme}[1][]{%
266   \@fxenvbegin{fixme}{#1}}{%
267   \@fxenvend}
268

```

6.6 Language processing

Options that control which language is selected:

```

269 \DeclareOption{english}{%
270   \renewcommand*\fixmenoteprefix{\fixmologo\nobreakspace Note}
271   \renewcommand*\fixmewarningprefix{\fixmologo\nobreakspace Warning}
272   \renewcommand*\fixmeerrorprefix{\fixmologo\nobreakspace Error}
273   \renewcommand*\fixmefatalprefix{\fixmologo}
274   \renewcommand*\fixmeindexname{\fixmologo}
275   \renewcommand*\fixmenoteindexname{**a@Notes:!!}
276   \renewcommand*\fixmewarningindexname{**b@Warnings:!!}
277   \renewcommand*\fixmeerrorindexname{**c@Errors:!!}
278   \renewcommand*\fixmefatalindexname{}
279   \renewcommand*\listfixmename{List of Corrections}}
280 \DeclareOption{french}{%
281   \renewcommand*\fixmenoteprefix{\fixmologo\nobreakspace Note}
282   \renewcommand*\fixmewarningprefix{\fixmologo\nobreakspace Attention}
283   \renewcommand*\fixmeerrorprefix{\fixmologo\nobreakspace Erreur}
284   \renewcommand*\fixmefatalprefix{\fixmologo}

```

```

285 \renewcommand*\fixmeindexname{\fixmelo}
286 \renewcommand*\fixmenoteindexname{**a@Notes:!!}
287 \renewcommand*\fixmewarningindexname{**b@Avertissements:!!}
288 \renewcommand*\fixmeerrorindexname{**c@Erreurs:!!}
289 \renewcommand*\fixmefatalindexname{}
290 \renewcommand*\listfixmename{Liste des Corrections}}
291 \DeclareOption{francais}{\ExecuteOptions{french}}
292 \DeclareOption{spanish}{%
293 \renewcommand*\fixmenoteprefix{\fixmelo\nobreakspace Nota}
294 \renewcommand*\fixmewarningprefix{\fixmelo\nobreakspace Aviso}
295 \renewcommand*\fixmeerrorprefix{\fixmelo\nobreakspace Error}
296 \renewcommand*\fixmefatalprefix{\fixmelo}
297 \renewcommand*\fixmeindexname{\fixmelo}
298 \renewcommand*\fixmenoteindexname{**a@Notas:!!}
299 \renewcommand*\fixmewarningindexname{**b@Avisos:!!}
300 \renewcommand*\fixmeerrorindexname{**c@Errores:!!}
301 \renewcommand*\fixmefatalindexname{}
302 \renewcommand*\listfixmename{Lista de Correcciones}}
303 \DeclareOption{italian}{%
304 \renewcommand*\fixmenoteprefix{\fixmelo\nobreakspace Nota}
305 \renewcommand*\fixmewarningprefix{\fixmelo\nobreakspace Avviso}
306 \renewcommand*\fixmeerrorprefix{\fixmelo\nobreakspace Errore}
307 \renewcommand*\fixmefatalprefix{\fixmelo}
308 \renewcommand*\fixmeindexname{\fixmelo}
309 \renewcommand*\fixmenoteindexname{**a@Note:!!}
310 \renewcommand*\fixmewarningindexname{**b@Avvisi:!!}
311 \renewcommand*\fixmeerrorindexname{**c@Errori:!!}
312 \renewcommand*\fixmefatalindexname{}
313 \renewcommand*\listfixmename{Corrigenda}}
314 \DeclareOption{german}{%
315 \renewcommand*\fixmenoteprefix{\fixmelo\nobreakspace Anm}
316 \renewcommand*\fixmewarningprefix{\fixmelo\nobreakspace Warnung}
317 \renewcommand*\fixmeerrorprefix{\fixmelo\nobreakspace Fehler}
318 \renewcommand*\fixmefatalprefix{\fixmelo}
319 \renewcommand*\fixmeindexname{\fixmelo}
320 \renewcommand*\fixmenoteindexname{**a@Anmerkungen:!!}
321 \renewcommand*\fixmewarningindexname{**b@Warnungen:!!}
322 \renewcommand*\fixmeerrorindexname{**c@Fehler:!!}
323 \renewcommand*\fixmefatalindexname{}
324 \renewcommand*\listfixmename{Verzeichnis der Korrekturen}}
325 \DeclareOption{ngerman}{%
326 \ExecuteOptions{german}}
327 \DeclareOption{danish}{%
328 \renewcommand*\fixmenoteprefix{\fixmelo\nobreakspace Note}
329 \renewcommand*\fixmewarningprefix{\fixmelo\nobreakspace Advarsel}
330 \renewcommand*\fixmeerrorprefix{\fixmelo\nobreakspace Fejl}
331 \renewcommand*\fixmefatalprefix{\fixmelo}
332 \renewcommand*\fixmeindexname{\fixmelo}
333 \renewcommand*\fixmenoteindexname{**a@Noter:!!}
334 \renewcommand*\fixmewarningindexname{**b@Advarsler:!!}
335 \renewcommand*\fixmeerrorindexname{**c@Fejl:!!}
336 \renewcommand*\fixmefatalindexname{}
337 \renewcommand*\listfixmename{Rettelser}}
338

```

6.7 Document status processing

\fixme@note Here's where the draft or final version of the internal macros are selected.

```

\fixme@warning
\fixme@error 339 \DeclareOption{final}{
340   \let\fixme@note\fixme@note@final
341   \let\fixme@warning\fixme@warning@final
342   \let\fixme@error\fixme@error@final
343   \let\fixme@fatal\fixme@fatal@final
344   \let\@fxenvbegin\@fxenvbegin@final
345   \let\@fxenvend\@fxenvend@final
346   \let\listoffixmes\listoffixmes@final
347 }
348
349 \DeclareOption{draft}{
350   \let\fixme@note\fixme@note@draft
351   \let\fixme@warning\fixme@warning@draft
352   \let\fixme@error\fixme@error@draft
353   \let\fixme@fatal\fixme@fatal@draft
354   \let\@fxenvbegin\@fxenvbegin@draft
355   \let\@fxenvend\@fxenvend@draft
356   \let\listoffixmes\listoffixmes@draft
357   \@ifclassloaded{article}{
358     \let\@listoffixmes@pretoc\@listoffixmes@pretoc@article
359     \let\@listoffixmes@posttoc\@listoffixmes@posttoc@article
360     \let\l@fixme\l@fixme@article}{
361     \@ifclassloaded{report}{
362       \let\@listoffixmes@pretoc\@listoffixmes@pretoc@report
363       \let\@listoffixmes@posttoc\@listoffixmes@posttoc@report
364       \let\l@fixme\l@fixme@report}{
365       \@ifclassloaded{book}{
366         \let\@listoffixmes@pretoc\@listoffixmes@pretoc@book
367         \let\@listoffixmes@posttoc\@listoffixmes@posttoc@book
368         \let\l@fixme\l@fixme@book}{
369         \@ifclassloaded{scrartcl}{
370           \let\@listoffixmes@pretoc\@listoffixmes@pretoc@scrartcl
371           \let\@listoffixmes@posttoc\@listoffixmes@posttoc@scrartcl
372           \let\l@fixme\l@fixme@scrartcl}{
373           \@ifclassloaded{scrreprt}{
374             \let\@listoffixmes@pretoc\@listoffixmes@pretoc@scrreprt
375             \let\@listoffixmes@posttoc\@listoffixmes@posttoc@scrreprt
376             \let\l@fixme\l@fixme@scrreprt}{
377             \@ifclassloaded{scrbook}{
378               \let\@listoffixmes@pretoc\@listoffixmes@pretoc@scrbook
379               \let\@listoffixmes@posttoc\@listoffixmes@posttoc@scrbook
380               \let\l@fixme\l@fixme@scrbook}{
381               %% Use the article layout by default.
382               \let\@listoffixmes@pretoc\@listoffixmes@pretoc@article
383               \let\@listoffixmes@posttoc\@listoffixmes@posttoc@article
384               \let\l@fixme\l@fixme@article}
385           }
386         }
387       }
388     }
389   }

```

```
390 }
391
```

Put us in `english` and `final` mode, and enable the marginal notes.

```
392 \ExecuteOptions{english,final,margin,nosilent}
393 \ProcessOptions*
394
```

Finally, ensure backward compatibility for `\fixme` with `\FixMeUser`, and output a summary giving the number of `fixme` notes at the end of the compilation:

```
395 \AtBeginDocument{%
396   \ifx\FixMeUser\empty
397     \renewcommand\FixMeUser[1]{\FXUser{\fixmefatalprefix}{#1}}
398   \fi}
399
400 \AtEndDocument{%
401   \GenericWarning{%
402     (FixMe)\@spaces\@spaces\@spaces\@spaces
403   }{%
404     Package FixMe Summary: Number of notes: \thefixmenotecount,\MessageBreak%
405     Number of warnings: \thefixmewarningcount,\MessageBreak%
406     Number of errors: \thefixmeerrorcount,\MessageBreak%
407     Number of fatal errors: \thefixmefatalcount,\MessageBreak%
408     Total: \thefixmecount@gobble%
409   }}

```

Well, I think that's it. Enjoy using `FixMe`!