

The auxhook package

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Abstract

Package `auxhook` provides hooks for adding stuff at the begin of `.aux` files.

Contents

| | | |
|----------|---|----------|
| 1 | User interface | 1 |
| 2 | Implementation | 2 |
| 2.1 | Identification | 2 |
| 2.2 | Hook setup | 2 |
| 2.3 | User macros | 2 |
| 2.4 | Patches | 3 |
| 2.4.1 | <code>\document</code> | 3 |
| 2.4.2 | <code>\@include</code> | 3 |
| 3 | Installation | 4 |
| 3.1 | Some details for the interested | 4 |
| 4 | References | 5 |
| 5 | History | 5 |
| | [2006/05/31 v1.0] | 5 |
| 6 | Index | 5 |

1 User interface

There are two kinds of `.aux` files, the main `.aux` file and the `.aux` file that belongs to an included file, specified by `\include`.

Some packages write macros in the auxiliary files. If the user stops using the package, these macros will usually cause error messages because of unknown commands. Prominent example is package `babel`'s `\select@language`.

But such a package could be written more cooperative. It can also provide a definition in the auxiliary file (`\providecommand`) that silently disables the macros of the package if the package is no longer in use.

In case of the main auxiliary file, `\AtBeginDocument` can be used for this purpose. Especially if several packages are involved, the order cannot be controlled always (e.g., see package `hypdestopt` that hooks into `hyperref`'s macros). And there isn't any hook for the auxiliary files of the `\include` feature.

Thus this package patches L^AT_EX's macros `\document` and `\@include` to add the hooks where the auxiliary files are opened and the first line with `\relax` is written.

The patching can fail, if these macros are redefined by some other package. If the other package still uses the original definition, then load package `auxhook`

earlier. (With `\RequirePackage` the package also can be loaded before the class). If the redefinition doesn't use the original meaning, then you can try to load package `auxhook` afterwards, but you need luck that the patch succeeds.

The hooks are macros:

`\@beginmainauxhook`: Start of the main auxiliary file. The hook is called after the first line with `\relax` is written.

`\@beginpartauxhook`: The same for the auxiliary files that belongs to the files that are included by `\include`.

If you want to add something to these hooks, you can use `\g@addto@macro` from L^AT_EX's kernel. But the package provides macros to add code that adds a line to the auxiliary file:

```
\AddLineBeginMainAux{\line}
\AddLineBeginPartAux{\line}
\AddLineBeginAux{\line}
```

The `\line` is added at the begin of the main auxiliary file by `\AddLineBeginMainAux` and at the begin of the auxiliary files of included files by `\AddLineBeginPartAux`. `\AddLineBeginAux` writes in both kinds of auxiliary files.

Examples, see packages `hypdestopt` ([1]) and `zref` ([3]).

2 Implementation

2.1 Identification

```
1 \<package>
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{auxhook}%
4 [2006/05/31 v1.0 Hooks for auxiliary files (H0)]
```

2.2 Hook setup

`\@beginmainauxhook` The hook for the main auxiliary file, initially empty.

```
5 \providecommand*\@beginmainauxhook{}
```

`\@beginpartauxhook` The hook for auxiliary files of included files, initially empty.

```
6 \providecommand*\@beginpartauxhook{}
```

2.3 User macros

`\AddLineBeginMainAux`

```
7 \newcommand{\AddLineBeginMainAux}[1]{%
8   \g@addto@macro\@beginmainauxhook{%
9     \immediate\write\@mainaux{#1}%
10  }%
11 }
```

`\AtBeginPartAuxLine`

```
12 \newcommand{\AddLineBeginPartAux}[1]{%
13   \g@addto@macro\@beginpartauxhook{%
14     \immediate\write\@partaux{#1}%
15   }%
16 }
```

`\AddLineBeginAux`

```

17 \newcommand{\AddLineBeginAux}[1]{%
18   \AddLineBeginMainAux{#1}%
19   \AddLineBeginPartAux{#1}%
20 }

```

2.4 Patches

2.4.1 `\document`

```

21 \begingroup
22   \def\y#1\immediate\write\@mainaux#2#3\auxhook@nil{%
23     \toks@{%
24       #1\immediate\write\@mainaux{#2}%
25       \@beginmainauxhook
26       #3%
27     }%
28     \xdef\document{\the\toks@}%
29   \endgroup
30 }%
31 \def\x#1\immediate\write\@mainaux#2#3\auxhook@nil{%
32   \toks@{#3}%
33   \edef\x{\the\toks@}%
34   \ifx\x\@empty
35     \PackageWarningNoLine{auxhook}{%
36       Cannot patch \string\document,\MessageBreak
37       use \string\AtBeginDocument\space instead%
38     }%
39   \endgroup
40   \AtBeginDocument{%
41     \if@filesw
42       \@beginmainauxhook
43     \fi
44   }%
45   \else
46     \expandafter\y\document\auxhook@nil
47   \fi
48 }%
49 \expandafter\x\document\immediate\write\@mainaux{}\auxhook@nil

```

2.4.2 `\@include`

```

50 \begingroup
51   \def\y#1\immediate\write\@partaux#2#3\auxhook@nil{%
52     \endgroup
53     \def\@include##1 {%
54       #1\immediate\write\@partaux{#2}%
55       \@beginpartauxhook
56       #3%
57     }%
58   }%
59   \def\x#1\immediate\write\@partaux#2#3\auxhook@nil{%
60     \toks@{#3}%
61     \edef\x{\the\toks@}%
62     \ifx\x\@empty
63       \PackageWarningNoLine{auxhook}{%
64         Cannot patch \string\@include,\MessageBreak
65         patch dropped%
66       }%
67     \endgroup
68   \else
69     \expandafter\y\@include{##1} \auxhook@nil
70   \fi

```

```

71 }%
72 \expandafter\x\@include{#1} \immediate\write\@partaux{}\auxhook@nil
73 \</package>

```

3 Installation

CTAN. This package is available on CTAN¹:

[CTAN:macros/latex/contrib/oberdiek/auxhook.dtx](#) The source file.

[CTAN:macros/latex/contrib/oberdiek/auxhook.pdf](#) Documentation.

Unpacking. The `.dtx` file is a self-extracting `docstrip` archive. The files are extracted by running the `.dtx` through plain- \TeX :

```
tex auxhook.dtx
```

TDS. Now the different files must be moved into the different directories in your installation TDS tree (also known as `texmf` tree):

```

auxhook.sty  → tex/latex/oberdiek/auxhook.sty
auxhook.pdf  → doc/latex/oberdiek/auxhook.pdf
auxhook.dtx  → source/latex/oberdiek/auxhook.dtx

```

If you have a `docstrip.cfg` that configures and enables `docstrip`'s TDS installing feature, then some files can already be in the right place, see the documentation of `docstrip`.

Refresh file databases. If your \TeX distribution (`te \TeX` , `mik \TeX` , ...) rely on file databases, you must refresh these. For example, `te \TeX` users run `texhash` or `mktexlsr`.

3.1 Some details for the interested

Attached source. The PDF documentation on CTAN also includes the `.dtx` source file. It can be extracted by AcrobatReader 6 or higher. Another option is `pdftk`, e.g. unpack the file into the current directory:

```
pdftk auxhook.pdf unpack_files output .
```

Unpacking with \LaTeX . The `.dtx` chooses its action depending on the format:

plain- \TeX : Run `docstrip` and extract the files.

\LaTeX : Generate the documentation.

If you insist on using \LaTeX for `docstrip` (really, `docstrip` does not need \LaTeX), then inform the autodetect routine about your intension:

```
latex \install=y\input{auxhook.dtx}
```

Do not forget to quote the argument according to the demands of your shell.

¹<http://ftp.ctan.org/tex-archive/>

Generating the documentation. You can use both the `.dtx` or the `.drv` to generate the documentation. The process can be configured by the configuration file `ltxdoc.cfg`. For instance, put this line into this file, if you want to have A4 as paper format:

```
\PassOptionsToClass{a4paper}{article}
```

An example follows how to generate the documentation with pdfL^AT_EX:

```
pdflatex auxhook.dtx
makeindex -s gind.ist auxhook.idx
pdflatex auxhook.dtx
makeindex -s gind.ist auxhook.idx
pdflatex auxhook.dtx
```

4 References

- [1] Heiko Oberdiek: *The hypdestopt package*; 2006/05/30 v1.0; [CTAN:macros/latex/contrib/oberdiek/hypdestopt.pdf](#).
- [2] Sebastian Rahtz, Heiko Oberdiek: *The hyperref package*; 2006/08/16 v6.75c; [CTAN:macros/latex/contrib/hyperref/](#).
- [3] Heiko Oberdiek: *The zref package*; 2006/05/25 v1.2; [CTAN:macros/latex/contrib/oberdiek/zref.pdf](#).

5 History

[2006/05/31 v1.0]

- First version.

6 Index

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.

| Symbols | | I | |
|-----------------------------------|--------------------------------|------------------------------------|------------------------------------|
| <code>\@beginmainauxhook</code> | 5, 8, 25, 42 | <code>\if@files</code> | 41 |
| <code>\@beginpartauxhook</code> | 6, 13, 55 | <code>\ifx</code> | 34, 62 |
| <code>\@empty</code> | 34, 62 | <code>\immediate</code> | 9, |
| <code>\@include</code> | 53, 64, 69, 72 | | 14, 22, 24, 31, 49, 51, 54, 59, 72 |
| <code>\@mainaux</code> | 9, 22, 24, 31, 49 | M | |
| <code>\@partaux</code> | 14, 51, 54, 59, 72 | <code>\MessageBreak</code> | 36, 64 |
| A | | N | |
| <code>\AddLineBeginAux</code> | 17 | <code>\NeedsTeXFormat</code> | 2 |
| <code>\AddLineBeginMainAux</code> | 2, 7, 18 | <code>\newcommand</code> | 7, 12, 17 |
| <code>\AddLineBeginPartAux</code> | 12, 19 | P | |
| <code>\AtBeginDocument</code> | 37, 40 | <code>\PackageWarningNoLine</code> | 35, 63 |
| <code>\AtBeginPartAuxLine</code> | 12 | <code>\providecommand</code> | 5, 6 |
| <code>\auxhook@nil</code> | 22, 31, 46, 49, 51, 59, 69, 72 | <code>\ProvidesPackage</code> | 3 |
| D | | S | |
| <code>\document</code> | 28, 36, 46, 49 | <code>\space</code> | 37 |
| G | | T | |
| <code>\g@addto@macro</code> | 8, 13 | <code>\the</code> | 28, 33, 61 |
| | | <code>\toks@</code> | 23, 28, 32, 33, 60, 61 |

| | W | | Y |
|--------|---------------------------------------|----|----------------|
| \write | 9, 14, 22, 24, 31, 49, 51, 54, 59, 72 | \y | 22, 46, 51, 69 |
| | X | | |
| \x | 31, 33, 34, 49, 59, 61, 62, 72 | | |