

The auxhook package

Heiko Oberdiek*

<heiko.oberdiek at gmail.com>

2016/05/16 v1.4

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	3
2.4	Patches	3
2.4.1	<code>\document</code>	3
2.4.2	<code>\@include</code>	4
3	Installation	4
3.1	Download	4
3.2	Bundle installation	5
3.3	Package installation	5
3.4	Refresh file name databases	5
3.5	Some details for the interested	5
4	Catalogue	6
5	References	6
6	History	6
	[2006/05/31 v1.0]	6
	[2007/04/06 v1.1]	6
	[2009/12/14 v1.2]	6
	[2011/03/04 v1.3]	6
	[2016/05/16 v1.4]	7
7	Index	7

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`.

*Please report any issues at <https://github.com/ho-tex/oberdiek/issues>

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 [2016/05/16 v1.4 Hooks for auxiliary files (HO)]%
```

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{}

7 \ifx\AtBeginDocument\@firstofone
8   \global\let\@beginmainauxhook\relax
9 \else
10  \g@addto@macro{\@beginmainauxhook}{%
11    \global\let\@beginmainauxhook\relax
12  }%
13 \fi
```

2.3 User macros

`\AddLineBeginMainAux`

```
14 \newcommand{\AddLineBeginMainAux}[1]{%
15   \ifx\@beginmainauxhook\relax
16     \if@files
17       \PackageInfo{auxhook}{%
18         \@backslashchar AddLineBeginMainAux comes a little late,%
19         \MessageBreak
20         because the main .aux file is already opened%
21       }%
22       \immediate\write\@mainaux{#1}%
23     \fi
24   \else
25     \g@addto@macro\@beginmainauxhook{%
26       \immediate\write\@mainaux{#1}%
27     }%
28   \fi
29 }
```

`\AtBeginPartAuxLine`

```
30 \newcommand{\AddLineBeginPartAux}[1]{%
31   \g@addto@macro\@beginpartauxhook{%
32     \immediate\write\@partaux{#1}%
33   }%
34 }
```

`\AddLineBeginAux`

```
35 \newcommand{\AddLineBeginAux}[1]{%
36   \AddLineBeginMainAux{#1}%
37   \AddLineBeginPartAux{#1}%
38 }
```

2.4 Patches

2.4.1 `\document`

```
39 \begingroup
40   \@ifundefined{beamer@origdocument}{%
41     \def\auxhook@document{\document}%
42   }{%
43     \def\auxhook@document{\beamer@origdocument}%
44   }%
45   \long\def\y#1\immediate\write\@mainaux#2#3\auxhook@nil{%
46     \toks@{%
47       #1\immediate\write\@mainaux{#2}%
48       \@beginmainauxhook
49       #3%
50     }%
51     \expandafter\xdef\auxhook@document{\the\toks@}%
52   \endgroup
53 }%
54 \long\def\x#1\immediate\write\@mainaux#2#3\auxhook@nil{%
55   \toks@{#3}%
56   \edef\x{\the\toks@}%
57   \ifx\x\@empty
58     \PackageWarningNoLine{auxhook}{%
59       Cannot patch \expandafter\string\auxhook@document,%
60       \MessageBreak
61       using \string\AtBeginDocument\space instead%
62     }%
63   \endgroup
64   \AtBeginDocument{%
```

```

65     \if@filesw
66     \@beginmainauxhook
67     \fi
68   }%
69 \else
70   \expandafter\expandafter\expandafter\y\auxhook@document
71   \auxhook@nil
72 \fi
73 }%
74 \expandafter\expandafter\expandafter\x\auxhook@document
75 \immediate\write\@mainaux{}\auxhook@nil

```

2.4.2 \@include

```

76 \begingroup
77 \long\def\y#1\immediate\write\@partaux#2#3\auxhook@nil#4{%
78   \endgroup
79   \def#4##1 {%
80     #1\immediate\write\@partaux{#2}%
81     \@beginpartauxhook
82     #3%
83   }%
84 }%
85 \long\def\x#1\immediate\write\@partaux#2#3\auxhook@nil#4{%
86   \toks@{#3}%
87   \edef\x{\the\toks@}%
88   \ifx\x\@empty
89     \PackageWarningNoLine{auxhook}{%
90       Cannot patch \string#4,\MessageBreak
91       patch dropped%
92     }%
93   \endgroup
94 \else
95   \expandafter\y#4{##1} \auxhook@nil#4%
96 \fi
97 }%
98 \ifundefined{ReFiCh@org@include}{%
99   \expandafter\x\@include{#1} %
100 \immediate\write\@partaux{}\auxhook@nil\@include
101 }{%
102   \expandafter\x\ReFiCh@org@include{#1} %
103   \immediate\write\@partaux{}\auxhook@nil\ReFiCh@org@include
104 }%
105 \endpackage

```

3 Installation

3.1 Download

Package. This package is available on CTAN¹:

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

[CTAN:macros/latex/contrib/oberdiek/auxhook.pdf](http://ctan.org/macros/latex/contrib/oberdiek/auxhook.pdf) Documentation.

Bundle. All the packages of the bundle ‘oberdiek’ are also available in a TDS compliant ZIP archive. There the packages are already unpacked and the documentation files are generated. The files and directories obey the TDS standard.

[CTAN:install/macros/latex/contrib/oberdiek.tds.zip](http://ctan.org/install/macros/latex/contrib/oberdiek.tds.zip)

TDS refers to the standard “A Directory Structure for T_EX Files” ([CTAN:tds/tds.pdf](http://ctan.org/tds/tds.pdf)). Directories with `texmf` in their name are usually organized this way.

¹<http://ctan.org/pkg/auxhook>

3.2 Bundle installation

Unpacking. Unpack the oberdiek.tds.zip in the TDS tree (also known as `texmf` tree) of your choice. Example (linux):

```
unzip oberdiek.tds.zip -d ~/texmf
```

Script installation. Check the directory `TDS:scripts/oberdiek/` for scripts that need further installation steps. Package `attachfile2` comes with the Perl script `pdfatfi.pl` that should be installed in such a way that it can be called as `pdfatfi`. Example (linux):

```
chmod +x scripts/oberdiek/pdfatfi.pl
cp scripts/oberdiek/pdfatfi.pl /usr/local/bin/
```

3.3 Package installation

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`.

3.4 Refresh file name databases

If your `TEX` distribution (te`TEX`, mik`TEX`, ...) relies on file name databases, you must refresh these. For example, te`TEX` users run `texhash` or `mktextlsr`.

3.5 Some details for the interested

Unpacking with L^AT_EX. The `.dtx` chooses its action depending on the format:
plain T_EX: Run `docstrip` and extract the files.

L^AT_EX: Generate the documentation.

If you insist on using L^AT_EX for `docstrip` (really, `docstrip` does not need L^AT_EX), then inform the autodetect routine about your intention:

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

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

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 Catalogue

The following XML file can be used as source for the [T_EX Catalogue](#). The elements `caption` and `description` are imported from the original XML file from the Catalogue. The name of the XML file in the Catalogue is `auxhook.xml`.

```
106 (*catalogue)
107 <?xml version='1.0' encoding='us-ascii'?>
108 <!DOCTYPE entry SYSTEM 'catalogue.dtd'>
109 <entry datestamp='$Date$' modifier='$Author$' id='auxhook'>
110   <name>auxhook</name>
111   <caption>Hooks for auxiliary files.</caption>
112   <authorref id='auth:oberdiek' />
113   <copyright owner='Heiko Oberdiek' year='2006,2007,2009,2011' />
114   <license type='lppl1.3' />
115   <version number='1.4' />
116   <description>
117     This package auxhook provides hooks for adding stuff at
118     the begin of <tt>.aux</tt> files.
119   <p/>
120     The package is part of the <xref refid='oberdiek'>oberdiek</xref> bundle.
121   </description>
122   <documentation details='Package documentation'
123     href='ctan:/macros/latex/contrib/oberdiek/auxhook.pdf' />
124   <ctan file='true' path='/macros/latex/contrib/oberdiek/auxhook.dtx' />
125   <miktex location='oberdiek' />
126   <texlive location='oberdiek' />
127   <install path='/macros/latex/contrib/oberdiek/oberdiek.tds.zip' />
128 </entry>
129 </catalogue>
```

5 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](#).

6 History

[2006/05/31 v1.0]

- First version.

[2007/04/06 v1.1]

- Fix for class `beamer`.

[2009/12/14 v1.2]

- Support for package `rerunfilecheck` added (`\@include`).

[2011/03/04 v1.3]

- `\AddLineBeginMainAux` also supports write requests after the main `.aux` file is opened.

[2016/05/16 v1.4]

- Documentation updates.

7 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; plain numbers refer to the code lines where the entry is used.

Symbols	\immediate 22, 26, 32, 45, 47, 54, 75, 77, 80, 85, 100, 103
\@backslashchar 18	
\@beginmainauxhook	
. 5, 8, 10, 11, 15, 25, 48, 66	M
\@beginpartauxhook 6, 31, 81	\MessageBreak 19, 60, 90
\@empty 57, 88	
\@firstofone 7	N
\@ifundefined 40, 98	\NeedsTeXFormat 2
\@include 99, 100	\newcommand 14, 30, 35
\@mainaux 22, 26, 45, 47, 54, 75	
\@partaux 32, 77, 80, 85, 100, 103	P
A	\PackageInfo 17
\AddLineBeginAux 35	\PackageWarningNoLine 58, 89
\AddLineBeginMainAux 2, 14, 36	\providecommand 5, 6
\AddLineBeginPartAux 30, 37	\ProvidesPackage 3
\AtBeginDocument 7, 61, 64	R
\AtBeginPartAuxLine 30	\ReFiCh@org@include 102, 103
\auxhook@document	
. 41, 43, 51, 59, 70, 74	S
\auxhook@nil 45,	\space 61
54, 71, 75, 77, 85, 95, 100, 103	T
B	\the 51, 56, 87
\beamer@origdocument 43	\toks@ 46, 51, 55, 56, 86, 87
D	
\document 41	W
G	\write 22, 26, 32, 45, 47, 54, 75, 77, 80, 85, 100, 103
\g@addto@macro 10, 25, 31	X
I	\x 54, 56, 57, 74, 85, 87, 88, 99, 102
\if@filesw 16, 65	Y
\ifx 7, 15, 57, 88	\y 45, 70, 77, 95