

readprov

Get File Info without Loading*

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Abstract

`readprov.sty` renders `\GetFileInfo` from L^AT_EX's `doc.sty`¹ (without the latter being required) and new robust (expandable) variants of it, usable with files that are not really loaded (they are quit when their file info is found, cf. the `zwgetfddate` package²). So, e.g., you can describe packages that are incompatible with each other or with packages that your document uses. You even can report about various class files.

Such packages then also appear with L^AT_EX's `\listfiles`. You may consider this a bug ... `myfilist.sty` makes it a feature (see `myfilist.pdf`).

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1 Installing

The file `readprov.sty` is provided ready, installation only requires putting it somewhere where T_EX finds it (which may need updating the filename data base).³

*This file describes version [v0.5](#) of `readprov.sty` as of 2012/11/22.

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¹<http://ctan.org/pkg/doc>

²<http://ctan.org/pkg/zwgetfddate>

³<http://www.tex.ac.uk/cgi-bin/texfaq2html?label=inst-wlcf>

2 File Info Header

```

1 %% readprov.sty
2 %% --
3 %% get file infos without reading the entire file
4
5 \def \fileversion {0.5} \def \filedate {2012/11/22}
6
7 %% copyright (C) 2008, 2010, 2011, 2012 Uwe Lueck,
8 %% http://www.contact-ednotes.sty.de.vu
9 %% -- author-maintained in the sense of LPPL below.
10 %%
11 %% This file can be redistributed and/or modified under
12 %% the terms of the LaTeX Project Public License; either
13 %% version 1.3c of the License, or any later version.
14 %% The latest version of this license is in
15 %% http://www.latex-project.org/lppl.txt
16 %% We did our best to help you, but there is NO WARRANTY.
17 %%
18 %% Please report bugs, problems, and suggestions via
19 %%
20 %% http://www.contact-ednotes.sty.de.vu
21 %%

```

3 Usage

Loading: The functionality of `readprov.sty` is activated by

```
\usepackage{readprov}
```

or

```
\RequirePackage{readprov}
```

(this one may precede `\documentclass`) in the document preamble. `readprov` does not have any package options.

Inserting: Recall that

`\GetFileInfo{filename}` (including extension)

from L^AT_EX's `doc.sty` sets macro `\filename` to *filename* (including extension) and furthermore sets macros `\filedate`, `\fileversion`, and `\fileinfo` to the *date*, *version*, and further *info* associated with *filename* earlier “some way” ... This means that file *filename* has been `\input` before and identified itself by `\ProvidesPackage`, or `\ProvidesClass`.

`readprov` simply copies `\GetFileInfo` from `doc.sty` so the same functionality is *provided* independently of other `doc.sty` features—without loading L^AT_EX's `doc.sty`.

Unfortunately, `\GetFileInfo` is *fragile*, it is especially unhelpful for referring to *two* packages in the same `\thanks` footnote. So we introduce (do compare `zwgetfddate!`)

`\UseDateOf{⟨filename⟩}` `\UseVersionOf{⟨filename⟩}` (with extension)

These commands are *robust* (even *expandable*). Instead of

`\GetFileInfo{⟨filename⟩}\fileversion{}` as of `\filedate`

you can type

`\UseFileVersionOf{⟨filename⟩}` as of `\UseFileDateOf{⟨filename⟩}`

Extracting: `\GetFileInfo`, `\UseDateOf`, and `\UseVersionOf` need the data from `\ProvidesPackage`, `\ProvidesClass`, or Instead of getting them by `\usepackage`, `\documentclass`, or `\input`, they can be obtained with the following commands.

`\ReadFileInfos{⟨list-of-filenames⟩}` (with extensions)

applies to all kinds of files—*provided* such a file contains such a `\Provide...` command.

`\ReadPackageInfos{⟨list-of-filenames⟩}` (without extensions)

searches `.sty` files from `⟨list-of-filenames⟩` for `\ProvidesPackage`.

The two former commands accept lists with commas as separators almost like with `\usepackage` (currently we must use “%” to hide a line break in the script, and there must be no spaces in the list).

`\ReadClassInfo{⟨filename⟩}` (without extension)

searches `⟨filename⟩.cls` for `\ProvidesClass`. At present [TODO] it can be used once only, and only for use with `myfilist.sty`. But you can use `\ReadFileInfos` for reporting on *various* classes, even in a document!

`\ReadShInfos{⟨list-of-filenames⟩}` (with extensions)

is a variant of `\ReadFileInfos{⟨list-of-filenames⟩}` that for each `⟨file⟩` in `⟨list-of-filenames⟩` processes

`# \ProvidesFile{<file>}[<info>]`

in `⟨file⟩` (new with v0.5).

Note: (i) So far, [TODO] the `\Read...` commands explained before do not work after `\begin{document}` (with rare exceptions, `\NeedTeXFormat` is one obstacle—may be `zwgetfddate` really is better). (ii) Those `\Read...` commands execute `\GetFileInfo` (with the final file from the list). So you may be lucky to get the intended `\filename`, `\filedate`, `\fileversion`, and `\fileinfo` without using `\GetFileInfo`. The chance is the better the later the `\Read...` command is used, best right before `\begin{document}`. Even then it may *fail*—when the latter command loads a package redefining `\filedate` etc. ...

4 Implementation

```

22 \NeedsTeXFormat{LaTeX2e}[1994/12/01] %% \newcommand* etc.
23 \ProvidesPackage{readprov}
24     [\filedate\space v\fileversion \space
25     file infos without loading (UL)]

```

Inserting:

`\GetFileInfo{\filename}` (with extension)

just was stolen from Standard L^AT_EX's doc.sty (before I varied it). It is *fragile*.

```

26 \def\GetFileInfo#1{%
27     \def\filename{#1}%
28     \def\@tempb##1 ##2 ##3\relax##4\relax{%
29         \def\filedate{##1}%
30         \def\fileversion{##2}%
31         \def\fileinfo{##3}}%

```

Here was:

```

\edef\@tempa{\csname ver@#1\endcsname}%
\expandafter\@tempb\@tempa\relax? ? \relax\relax}

```

We can do it a little more elegantly with the internals (that vary the original `\GetFileInfo`) for our new `\UseDateOf` and `\UseVersionOf`:

```

32 \read@file@info\@tempb{#1}

```

(Will be overwritten without warning when doc.sty is loaded afterwards.)

```

33 \newcommand*{\read@file@info}[2]{%           new 2010/11/27
34     \expandafter \expandafter \expandafter
35     #1\csname ver@#2\endcsname \relax? ? \relax\relax}

```

`\UseDateOf{\filename}` is *robust* (*expandable*):

```

36 \newcommand*{\UseDateOf}{\read@file@info\read@file@date}

```

The internal reading commands vary `\@tempb` from the original `\GetFileInfo`:

```

37 \def\read@file@date #1 #2\relax#3\relax{#1}

```

`\UseVersionOf{\filename}` is *robust* (*expandable*) as well:

```

38 \newcommand*{\UseVersionOf}{\read@file@info\read@file@version}
39 \def\read@file@version#1 #2 #3\relax#4\relax{#2}

```

Extracting:

`\ReadPackageInfos{(list-of-filenames)}` without extensions:

```
40 \newcommand*{\ReadPackageInfos}{%
41   \read@package@infos\RequirePackage{sty}}
```

`\@pkgextension` and `\@clsextension` are bad for using `\filename` in the document (`\@onlypreamble`).

`\ReadClassInfo{(filename)}` without extension (v0.5):

```
42 \newcommand*{\ReadClassInfo}{%
43   \read@package@infos\LoadClass{cls}}
```

Before v0.4, the modified ultimate expansion of `\@pr@videpackage` was fixed or “static.” Now `\@pr@videpackage` is modified at each call of `\ReadClassInfo` or `\ReadPackageInfos` in such a way that the *current* meaning of `\@pr@videpackage` is used by the modified one—*another* package (filedate) may have modified `\@pr@videpackage` before, and the latter’s meaning may change several times during a `\TeX` run:

```
44 \newcommand*{\read@package@infos}[3]{%
45   %% #1 \Req.../Load..., #2 extension, #3 name list
46   \begingroup                               %% 2010/11/26
47     \let\RP@@provpkg\@pr@videpackage
48     \def\@pr@videpackage[##1]{\RP@@provpkg[##1]\endinput}%
49     #1{#3}%
50   \endgroup \GetFileInfo{#3.#2}%           %% 2010/11/26
51 }
52 %% <- TODO more classes 2008/03/16
```

`\ReadFileInfos{(list-of-filenames)}` with extensions:

```
53 \newcommand*{\ReadFileInfos}[1]{%
54   \begingroup
```

v0.4 treats `\@providesfile` by analogy to `\@pr@videpackage` above:

```
55   \let\RP@@provfile\@providesfile
56   \def\@providesfile##1[##2]{\RP@@provfile{##1}[##2]\endinput}%
57   %% 2008/03/19:
58   \def\ProvidesClass ##1{\ProvidesFile{##1.\@clsextension}}%
59   \def\ProvidesPackage##1{\ProvidesFile{##1.\@pkgextension}}%
60   \@for\@tempa:=#1\do{%
61     \edef\@tempa{\expandafter\read@no@spaces\@tempa\@nil}%
62     \input{\@tempa}%
63     \global\let\@gtempa\@tempa} %% 2010/11/26
64   \endgroup
65   \GetFileInfo\@gtempa           %% 2010/11/26
66 }
67 \def\read@no@spaces#1#2\@nil{#1#2} %% 2008/03/23
```

`\ReadShInfos{(list-of-filenames)}` with extensions:

```

68 \newcommand*{\ReadShInfos}[1]{%                               %% 2012/11/22
69     {\catcode'\#9 % ignore .sh comment characters
70     \catcode'\!14 % ignore content of shebang line
71     \ReadFileInfos{#1}}}
72 \endinput
73
74 %% VERSION HISTORY
75 v0.1    2008/03/19  created file ‘readprov.sty’
76          2008/03/23  smart file name separation, \ifx$ for \ifcat$
77          2008/05/22  typo ist -> it
78 v0.2    2010/04/03  renamed ‘myfiles.sty’;
79          broke long lines etc. for doc
80 v0.3    2010/11/25  split off from former ‘myfiles.sty’,
81          added \GetFileInfo
82          2010/11/26  automatic \GetFileInfo
83          2010/11/27  new/real documentation; more \newcommand*s;
84          \GetFileInfo redefined, \Use...;
85          \docnewline -> \; NOTE etc.
86 v0.3a   2012/03/16  doc.: grammar fix
87 v0.3b   2012/03/20  typo fix ‘Of’
88 v0.4    2012/11/10  reimplementation for ‘filedate’
89          (\@pr@videpackage, \@providefile)
90 v0.5    2012/11/22  \ReadShInfos
91

```