

readprov

Get File Info without Loading*

Uwe Lück[†]

March 18, 2012

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`).

Contents

1	Installing	1
2	File Info Header	2
3	Usage	2
4	Implementation	3

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 [v0.3a](#) of `readprov.sty` as of 2012/03/16.

[†]<http://contact-ednotes.sty.de.vu>

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 {0.3a} \def \filedate {2012/03/16}
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 `LATEX`'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 `\ProvidesFile`, `\ProvidesPackage`, or `\ProvidesClass`.

`readprov` simply copies `\GetFileInfo` from `doc.sty` so the same functionality is *provided* independently of other `doc.sty` features—without loading `LATEX`'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 `\ProvidesFile`. 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!

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:

```

42 \newcommand*{\ReadClassInfo}{%
43   \read@package@infos\LoadClass{cls}}
44 \newcommand*{\read@package@infos}[3]{%
45   %% #1 \Req.../Load..., #2 extension, #3 name list
46   \begingroup                %% 2010/11/26
47   \let\@pr@videpackage\read@pr@videpackage
48   #1{#3}%
49   \endgroup \GetFileInfo{#3.#2}%      %% 2010/11/26
50 }
51 %% <- TODO more classes 2008/03/16
52 \def\read@pr@videpackage[#1]{%
53   \expandafter\xdef\csname ver@\@currname.\@current\endcsname{#1}%
54   \ifx\@current\@clsextension
55     \typeout{Document Class: \@gtempa\space#1}%
56   \else
57     \wlog{Package: \@gtempa\space#1}%
58   \fi
59   \endinput}%
60 %% <- TODO \let\read@@... and just add \endinput 2008/03/19

```

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

```

61 \newcommand*{\ReadFileInfos}[1]{%
62   \begingroup
63   \def\@providesfile##1[##2]{%
64     %% <- cf. second/final LaTeX def. 2008/03/19
65     \wlog{File: ##1 ##2}%
66     \expandafter\xdef\csname ver@##1\endcsname{##2}%
67   \endgroup \endinput}%
68   %% <- TODO \let\read@@... and just add
69   %% \endgroup\endinput 2008/03/19
70   %% 2008/03/19:
71   \def\ProvidesClass ##1{\ProvidesFile{##1.\@clsextension}}%
72   \def\ProvidesPackage##1{\ProvidesFile{##1.\@pkgextension}}%
73   \@for\@tempa:=#1\do{%
74     \edef\@tempa{\expandafter\read@no@spaces\@tempa\@nil}%
75     \input{\@tempa}%
76     \global\let\@gtempa\@tempa}    %% 2010/11/26
77   \endgroup
78   \GetFileInfo\@gtempa              %% 2010/11/26
79 }
80 \def\read@no@spaces#1#2\@nil{#1#2} %% 2008/03/23
81 \endinput
82
83 %% VERSION HISTORY
84 v0.1    2008/03/19  created file ‘readprov.sty’
85          2008/03/23  smart file name separation, \ifx$ for \ifcat$
86          2008/05/22  typo ist -> it
87 v0.2    2010/04/03  renamed ‘myfiles.sty’;
88          broke long lines etc. for doc
89 v0.3    2010/11/25  split off from former ‘myfiles.sty’,

```

```
90          added \GetFileInfo
91      2010/11/26  automatic \GetFileInfo
92      2010/11/27  new/real documentation; more \newcommand*s;
93                  \GetFileInfo redefined, \Use...;
94                  \docnewline -> \\\; NOTE etc.
95  v0.3a  2012/03/16  doc.: grammar fix
96
```