readprov

—

Get File Info without Loading*

Uwe Lück†

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Abstract

readprov.sty renders `\GetFileInfo` from LaTeX'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 zwgetfdate package[2]). 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 LaTeX's `\listfiles`. You may consider this a bug ... myfilist.sty makes it a feature (see `myfilist.pdf`).

Contents

1 Installing

The file readprov.sty is provided ready, installation only requires putting it somewhere where TeX 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.

†`http://contact-ednotes.sty.de.vu`

[1] `http://ctan.org/pkg/doc`

[2] `http://ctan.org/pkg/zwgetfdate`

[3] `http://www.tex.ac.uk/cgi-bin/texfaq2html?label=inst-wlcf`

2 File Info Header

```
%% readprov.sty
%% --
%% get file infos without reading the entire file

\def \fileversion {0.5} \def \filedate {2012/11/22}

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%%
```

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 `\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 zwgetfdate!)

\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 zwgetfdate 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

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

Inserting:

`\GetFileInfo{`⟨*filename*⟩`}` (with extension)

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

```
\def\GetFileInfo#1{%
  \def\filename{#1}%
  \def\@tempb##1 ##2 ##3\relax##4\relax{%
    \def\filedate{##1}%
    \def\fileversion{##2}%
    \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`:

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

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

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

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

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

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

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

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

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

Extracting:

`\ReadPackageInfos{`⟨*list-of-filenames*⟩`}` without extensions:

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

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

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

```
\newcommand*{\ReadClassInfo}{%
    \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:

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

`\ReadFileInfos{`⟨*list-of-filenames*⟩`}` with extensions:

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

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

```
    \let\RP@@provfile\@providesfile
    \def\@providesfile##1[##2]{\RP@@provfile{##1}[{##2}]\endinput}%
    %% 2008/03/19:
    \def\ProvidesClass  ##1{\ProvidesFile{##1.\@clsextension}}%
    \def\ProvidesPackage##1{\ProvidesFile{##1.\@pkgextension}}%
    \@for\@tempa:=#1\do{%
      \edef\@tempa{\expandafter\read@no@spaces\@tempa\@nil}%
      \input{\@tempa}%
      \global\let\@gtempa\@tempa}   %% 2010/11/26
  \endgroup
  \GetFileInfo\@gtempa              %% 2010/11/26
}
\def\read@no@spaces#1#2\@nil{#1#2}  %% 2008/03/23
```

`\ReadShInfos{`⟨*list-of-filenames*⟩`}` with extensions:

```
\newcommand*{\ReadShInfos}[1]{%                    %% 2012/11/22
    {\catcode`\#9  % ignore .sh comment characters
     \catcode`\!14 % ignore content of shebang line
     \ReadFileInfos{#1}}}
\endinput

%% VERSION HISTORY
v0.1    2008/03/19  created file ``readprov.sty''
        2008/03/23  smart file name separation, \ifx$ for \ifcat$
        2008/05/22  typo ist -> it
v0.2    2010/04/03  renamed ``myfiles.sty'';
                    broke long lines etc. for doc
v0.3    2010/11/25  split off from former ``myfiles.sty'',
                    added \GetFileInfo
        2010/11/26  automatic \GetFileInfo
        2010/11/27  new/real documentation; more \newcommand*s;
                    \GetFileInfo redefined, \Use...;
                    \docnewline -> \\; NOTE etc.
v0.3a   2012/03/16  doc.: grammar fix
v0.3b   2012/03/20  typo fix ``Of''
v0.4    2012/11/10  reimplementation for `filedate'
                    (\@pr@videpackage, \@providefile)
v0.5    2012/11/22  \ReadShInfos

```