The hypgotoe package

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Abstract

Experimental package for links to embedded files.

Contents

1 Documentation **1**
- 1.1 Introduction . . . 1
- 1.2 User interface . . . 2
- 1.3 Example . . . 2

2 Implementation **3**
- 2.1 Identification . . . 3
- 2.2 Load packages . . . 3
- 2.3 Color support . . . 4
- 2.4 Extend `\href` . . . 4
- 2.5 Implement gotoe action . . . 4
- 2.6 Keys for gotoe action . . . 5

3 Installation **6**
- 3.1 Download . . . 6
- 3.2 Bundle installation . . . 6
- 3.3 Package installation . . . 6
- 3.4 Refresh file name databases . . . 7
- 3.5 Some details for the interested . . . 7

4 References **7**

5 History **7**
- [2007/10/30 v0.1] . . . 7
- [2016/05/16 v0.2] . . . 7
- [2019/12/29 v0.3] . . . 7

6 Index **8**

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

1 Documentation

1.1 Introduction

This is a first experiment for links to embedded files. The package hypgotoe is named after the PDF action name `/GoToE`. Feedback is welcome, especially to the user interface.

- Currently only embedded files and named destinations are supported.
- Missing are support for destination arrays and attachted files.
- Special characters aren't supported either.

In the future the package may be merged into package hyperref.

1.2 User interface

`\href` is extended to detect the prefix '`gotoe:`'. The part after the prefix is evaluated as key value list from left to right. For details, see "8.5.3 Action Types, Embedded Go-To Actions" [1].

dest: The destination name. The destination name can be set by `\hypertarget` in the target document. Or check the `.aux` file for destination names of `\label` commands. Also the target PDF file can be inspected, look for `/Dests` in the /Names entry of the catalog for named destinations. (Required.)

root: The file name of the root document. (Optional.)

parent: Go to the parent document. (No value, optional.)

embedded: Go to the embedded document. The value is the file name as it appears in /EmbeddedFiles of the current document.

The colors are controlled by hyperref's options gotoecolor and gotobordercolor. They can be set in `\hypersetup`, for example. Default is the color of file links.

1.3 Example

```
⟨*example⟩
\NeedsTeXFormat{LaTeX2e}
\RequirePackage{filecontents}
\begin{filecontents}{hypgotoe-child.tex}
\NeedsTeXFormat{LaTeX2e}
\documentclass{article}
\usepackage{hypgotoe}[2019/12/29]
\begin{document}
\section{This is the child document.}
\href{gotoe:%
  dest={page.1},parent%
}{Go to first page of main document}\\
\href{gotoe:%
  dest={page.2},parent%
}{Go to second page of main document}
\newpage
\section{This is the second page of the child document.}
\href{gotoe:%
  dest={page.1},parent%
}{Go to first page of main document}\\
```

```
\href{gotoe:%
  dest={page.2},parent%
}{Go to second page of main document}

\hypertarget{foobar}{}
Anker foobar is here.
\end{document}
\end{filecontents}
\documentclass{article}
\usepackage{hypgotoe}[2019/12/29]
\usepackage{embedfile}
\IfFileExists{hypgotoe-child.pdf}{%
  \embedfile{hypgotoe-child.pdf}%
}{%
  \typeout{}%
  \typeout{--> Run hypgotoe-child.tex through pdflatex}%
  \typeout{}%
}
\begin{document}
\section{First page of main document}
\href{gotoe:%
  dest=page.1,embedded=hypgotoe-child.pdf%
}{Go to first page of child document}\\
\href{gotoe:%
  dest=page.2,embedded=hypgotoe-child.pdf%
}{Go to second page of child document}\\
\href{gotoe:%
  dest=foobar,embedded=hypgotoe-child.pdf%
}{Go to foobar in child document}
\newpage
\section{Second page of main document}
\href{gotoe:%
  dest=section.1,embedded=hypgotoe-child.pdf%
}{Go to first section of child document}\\
\href{gotoe:%
  dest=section.2,embedded=hypgotoe-child.pdf%
}{Go to second section of child document}\\
\href{gotoe:%
  dest=foobar,embedded=hypgotoe-child.pdf%
}{Go to foobar in child document}
\end{document}
⟨/example⟩
```

2 Implementation

2.1 Identification

```
⟨*package⟩
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{hypgotoe}%
  [2019/12/29 v0.3 Links to embedded files (HO)]%
```

2.2 Load packages

```
\RequirePackage{iftex}[2019/11/07]
\ifpdf
\else
  \PackageError{hypgotoe}{%
    Other drivers than pdfTeX in PDF mode are not supported.%
```

```
    \MessageBreak
    Package loading is aborted%
  }\@ehc
  \expandafter\endinput
\fi
\RequirePackage{pdfescape}[2007/10/27]
\RequirePackage{hyperref}[2019/12/29]
```

2.3 Color support

```
\define@key{Hyp}{gotoebordercolor}{%
  \HyColor@HyperrefBordercolor{#1}%
  \@gotoebordercolor{hyperref}{gotoebordercolor}%
}
\providecommand*{\@gotoecolor}{\@filecolor}
\providecommand*{\@gotoebordercolor}{\@filebordercolor}
```

2.4 Extend \href

\@hyper@readexternallink

```
\def\@hyper@readexternallink#1#2#3#4:#5:#6\\#7{%
  \ifx\\#6\\%
    \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
  \else
    \ifx\\#4\\%
      \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
    \else
      \def\@pdftempa{#4}%
      \ifx\@pdftempa\@pdftempwordfile
        \expandafter\@hyper@linkfile#7\\{#3}{#2}%
      \else
        \ifx\@pdftempa\@pdftempwordrun
          \expandafter\@hyper@launch#7\\{#3}{#2}%
        \else
          \ifx\@pdftempa\@pdftempwordgotoe
            \hyper@linkgotoe{#3}{#5}%
          \else
            \hyper@linkurl{#3}{#7\ifx\\#2\\\else\hyper@hash#2\fi}%
          \fi
        \fi
      \fi
    \fi
  \fi
}
```

\@pdftempwordgotoe

```
\def\@pdftempwordgotoe{gotoe}
```

2.5 Implement gotoe action

\hyper@linkgotoe

```
\def\hyper@linkgotoe#1#2{%
  \begingroup
    \let\HyGoToE@Root\@empty
    \let\HyGoToE@Dest\@empty
    \let\HyGoToE@TBegin\@empty
    \let\HyGoToE@TEnd\@empty
    \setkeys{HyGoToE}{#2}%
    \leavevmode
```

```
    \pdfstartlink
      attr{%
        \Hy@setpdfborder
        \ifx\@pdfhightlight\@empty
        \else
          /H\@pdfhighlight
        \fi
        \ifx\@urlbordercolor\relax
        \else
          /C[\@urlbordercolor]%
        \fi
      }%
      user{%
       /Subtype/Link%
       /A<<%
         /Type/Action%
         /S/GoToE%
         \Hy@SetNewWindow
         \HyGoToE@Root
         \HyGoToE@Dest
         \HyGoToE@TBegin
         \HyGoToE@TEnd
       >>%
      }%
      \relax
    \Hy@colorlink\@gotoecolor#1%
    \close@pdflink
  \endgroup
}
```

2.6 Keys for gotoe action

```
\define@key{HyGoToE}{root}{%
  \EdefEscapeString\HyGoToE@temp{#1}%
  \edef\HyGoToE@Root{%
    /F<<%
      /Type/Filespec%
      /F(\HyGoToE@temp)%
    >>%
  }%
}
\define@key{HyGoToE}{dest}{%
  \EdefEscapeString\HyGoToE@temp{#1}%
  \edef\HyGoToE@Dest{%
    /D(\HyGoToE@temp)%
  }%
}
\define@key{HyGoToE}{parent}[]{%
  \def\HyGoToE@temp{#1}%
  \ifx\HyGoToE@temp\@empty
  \else
    \PackageWarning{hypgotoe}{Ignore value for 'parent'}%
  \fi
  \edef\HyGoToE@TBegin{%
    \HyGoToE@TBegin
    /T<<%
    /R/P%
  }%
```

```
  \edef\HyGoToE@TEnd{%
    \HyGoToE@TEnd
    >>%
  }%
}
\define@key{HyGoToE}{embedded}{%
  \EdefEscapeString\HyGoToE@temp{#1}%
  \edef\HyGoToE@TBegin{%
    \HyGoToE@TBegin
    /T<<%
    /R/C%
    /N(\HyGoToE@temp)%
  }%
  \edef\HyGoToE@TEnd{%
    \HyGoToE@TEnd
    >>%
  }%
}
```

⟨/package⟩

3 Installation

3.1 Download

Package. This package is available on CTAN[1]:

CTAN:macros/latex/contrib/oberdiek/hypgotoe.dtx The source file.

CTAN:macros/latex/contrib/oberdiek/hypgotoe.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

TDS refers to the standard "A Directory Structure for TEX Files" (CTAN:pkg/tds). Directories with `texmf` in their name are usually organized this way.

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
```

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 hypgotoe.dtx
```

[1] CTAN:pkg/hypgotoe

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

```
hypgotoe.sty         → tex/latex/oberdiek/hypgotoe.sty
hypgotoe.pdf         → doc/latex/oberdiek/hypgotoe.pdf
hypgotoe-example.tex → doc/latex/oberdiek/hypgotoe-example.tex
hypgotoe.dtx         → source/latex/oberdiek/hypgotoe.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 (TEX Live, MiKTEX, ...) relies on file name databases, you must refresh these. For example, TEX Live users run `texhash` or `mktexlsr`.

3.5 Some details for the interested

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 intention:

```
latex \let\install=y\input{hypgotoe.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 pdfLATEX:

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

4 References

[1] Adobe Systems Incorporated: *PDF Reference, Sixth Edition, Version 1.7*, Oktober 2006; http://www.adobe.com/devnet/pdf/pdf_reference.html.

5 History

[2007/10/30 v0.1]

- First experimental version.

[2016/05/16 v0.2]

- Documentation updates.

[2019/12/29 v0.3]

- iftex package

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

Symbols

\@ehc 74
\@empty . . . 112, 113, 114, 115, 121, 164
\@filebordercolor 84
\@filecolor 83
\@gotoebordercolor 81, 84
\@gotoecolor 83, 143
\@hyper@launch 97
\@hyper@linkfile 87, 90, 94
\@hyper@readexternallink 85
\@pdfhighlight 123
\@pdfhightlight 121
\@pdftempa 92, 93, 96, 99
\@pdftempwordfile 93
\@pdftempwordgotoe 99, 109
\@pdftempwordrun 96
\@urlbordercolor 125, 127
\\ 12, 20, 43, 46, 54, 57, 85, 86, 87, 89, 90, 94, 97, 102

B

\begin 4, 8, 39

C

\close@pdflink 144

D

\define@key 79, 147, 156, 162, 178
\documentclass 6, 29

E

\EdefEscapeString 148, 157, 179
\embedfile 33
\end 27, 28, 61
\endinput 75

H

\href 10, 13, 18, 21, 41, 44, 47, 52, 55, 58
\Hy@colorlink 143
\Hy@SetNewWindow 135
\Hy@setpdfborder 120
\HyColor@HyperrefBordercolor . . . 80
\HyGoToE@Dest 113, 137, 158
\HyGoToE@Root 112, 136, 149
\HyGoToE@TBegin 114, 138, 168, 169, 180, 181
\HyGoToE@temp 148, 152, 157, 159, 163, 164, 179, 184
\HyGoToE@TEnd 115, 139, 173, 174, 186, 187
\hyper@hash 102
\hyper@linkgotoe 100, 110
\hyper@linkurl 102
\hypertarget 25

I

\IfFileExists 32
\ifpdf 68
\ifx 86, 89, 93, 96, 99, 102, 121, 125, 164

L

\leavevmode 117

M

\MessageBreak 72

N

\NeedsTeXFormat 2, 5, 64
\newpage 16, 50

P

\PackageError 70
\PackageWarning 166
\pdfstartlink 118
\providecommand 83, 84
\ProvidesPackage 65

R

\RequirePackage 3, 67, 77, 78

S

\section 9, 17, 40, 51
\setkeys 116

T

\typeout 35, 36, 37

U

\usepackage 7, 30, 31