The \texttt{endnotes-hy} Package

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1 Introduction

This package is an extension of \texttt{endnotes}.

Background: A colleague—a dedicated user of the \texttt{endnotes} package—complained to me (for some reason) that links created by \texttt{hyperref} do not point to the endnotes at the end of the file; for example, if we say

\begin{verbatim}
\endnote{label{⟨name⟩}{⟨text⟩}}
\end{verbatim}

then any link, such as \texttt{\hyperref[⟨name⟩]{\endnote^*{⟨name⟩}}}} jumps to the most recent anchor (\texttt{Doc-Start}, for example); no hypertext anchor is created where the endnote is inserted into the document. This short package is an attempt to rectify this problem.

Syntax: The \texttt{\endnote} command has been modified to conform to the following syntax:

\begin{verbatim}
\endnote*[⟨num⟩]{⟨text⟩}\label{⟨name⟩}
\end{verbatim}

Refer to the documentation of the \texttt{endnotes} package for a description of the \texttt{\endnote} command and its \texttt{(num)} and \texttt{(text)} arguments. If the \texttt{*}-option (new
syntax) is used, the endnote mark is not placed, but the endnote is written to
the ENT file. Such a “secret” endnote can be referred to using standard hyperref
commands, see the endnote 1 on page 4 for more information. The placement
of the \label has changed for this package as well. To define an endnote label,
place \label{name} following the \endnote command, a more traditional loca-
tion. This was done to get access to the \textit{name}, if it exist. This enables the
package to place a hypertext link around the endnote mark.\footnote{The optional \langle num\rangle can be used to write special endnotes.} As a side benefit to this new syntax,
you can place verbatim text into an endnote.\footnote{If there is no \label following
\endnote, no hypertext link is created.} Note: This package will work correctly without the hyperref package (of course, no
links). The advantage of using endnotes-hy without hyperref is to use the extended
syntax: \endnote\langle\text{num}\rangle\langle\text{text}\rangle\label{\langle\text{name}\rangle}

2 Required packages

2 \RequirePackage{endnotes}

Require etoolbox because we redefine several commands using \patchcmd; this is
not really necessary, we could have redefined the whole command instead.

3 \RequirePackage{etoolbox}

3 Package code

We allow the author not to use hyperref; this enables the use of the extended
syntax of the \endnote command.

\phantomendnote The key is to create an hyperref anchor to reference; this definition is based on
\phantomsection of hyperref. This is used internally.

\endoendnotes Redefinition of \theendnotes

\endnote Redefine \endnote to take an optional *; if this option is used, the mark does not
appear in the text. This enables us to easily define an endnote and refer to it even
with multiple paragraphs. I didn’t like the syntax of inserting the \label within
the argument of \texttt{\endnote}, this seems to have problems. The new syntax is as follows:

Syntax: \texttt{\endnote*[{\texttt{\num}}]{\texttt{(text)}}\texttt{\label{\texttt{name}}}}

This new syntax could be a problem if an author has already used endnotes and then converts to endnotes-hy. In endnotes the \*-option is note defined and the \texttt{\label} command is typically placed within the argument of the \{\texttt{(text)}\}. Labels would have to be moved to a position following \{\texttt{(text)}\}.

To obtain this syntax, we need several stages of parsing. The major problem is to get the label name in time to build a hyperref link around \texttt{\@endnotemark}.

We placed the \{\texttt{text}\} argument into a token register, this removes that argument from the input stream, and allows us to see of the next token is \texttt{\label}, if so, we get the label name argument.

\begin{verbatim}
\newtoks\@entoks
\def\endnote{
\let\@encurrlabelname\@empty
\@ifstar{\let\@noMrk1\endnote@i}{\let\@noMrk0\endnote@i}
\def\endnote@i{
\@ifnextchar\[%\]
\@xendnote
\{\stepcounter{endnote}\
\protected@xdef\@theenmark{\theendnote}\
 We placed the \{\texttt{text}\} argument into a token register, this removes that argument from the input stream, and allows us to see of the next token is \texttt{\label}, if so, we get the label name argument.
\endverbatim

If the next token is \texttt{\label}, get the label name with \texttt{\endnote@iii}, otherwise, move on to \texttt{\endnote@iv}, the final step.

\begin{verbatim}
\def\endnote@ii{
\@ifnextchar\label{\endnote@iii}{\endnote@iv}}
\def\endnote@iii\label#1{\def\@encurrlabelname{#1}\endnote@iv}
\endverbatim

If the flag \texttt{\@noMrk} is 0 (mark is typeset), and if there is a label name, we make an hypertext link.

\begin{verbatim}
\def\endnote@iv{%
\if\@noMrk0\relax
\ifx\@encurrlabelname\@empty
\@endnotemark\else
\hyperref@en{\@encurrlabelname}{\@endnotemark}\fi
\fi
Finish by expanding \texttt{\@endnotetext} with its argument that was saved in the \texttt{\@entoks} register.
\endverbatim

We patch into \texttt{\@endnotetext} just after \texttt{\def\next{\#1}. If there was a \texttt{\label}, we insert it back into the argument of \texttt{\endnote}.

\begin{verbatim}
\patchcmd{\@endnotetext}{\def\next{\#1}}{\ifx\@encurrlabelname\@empty
\def\next{\#1}\else
\edef\x{\noexpand\label{\@encurrlabelname}}% 
\expandafter\def\expandafter\next\expandafter{\x\@\fi}{\@}}{}{}
\end{verbatim}
If \endnote has an optional argument, the flow passes to \xendnote. We replace \@endnotemark\@endnotetext by redirecting flow to to \endnote@ii, after saving the argument in \@entoks.

\patchcmd{\@xendnote}
{\@endnotemark\@endnotetext}
{\afterassignment\endnote@ii\@entoks}
{}{}

Notes

1. An endnote created with *-option
2. This is normal endnote
3. This is special endnote
4. Some verbatim text \%^$^&$%^&
5. No hypertext link created
4 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; numbers in roman refer to the code lines where the entry is used.

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5 Change History

v0.1 (2020/04/08)

General: First published version of this package. . 1