

Running Headers for Endnotes*

John Burt
burt@brandeis.edu

April 5, 2017

Abstract

`endheads` provides running headers of the form “Notes to pp. xx–yy” for endnotes. `endheads` is designed to work with `endnotes`.

Contents

1	Introduction	1
2	Setup	2
3	Using <code>endheads</code> in a Multilingual World	3
4	Using <code>endheads</code> with <code>biblatex</code>	4
5	Known Issues	4
6	Implementation	4
6.1	General Purpose Routines	4
6.2	Building Blocks	5
6.3	User Code	7

1 Introduction

It is a convenience, if you are flipping through the endnotes of a book, to be able to find the endnote you are looking for by looking at the running header. `endheads` uses the `\mark` mechanism to update the running header continuously, so that it always indicates to what pages in the main text the notes on a particular page refer. `endheads` also enables one to reset endnote numbering at the beginning of each chapter.

`endheads` requires the following packages to work correctly: with the standard document classes, or the `komascript` classes: `endnotes` (obviously), `fancyhdr`

*This document corresponds to `endheads` 1.6, dated 5 April 2017.

(also obviously), `ifthen` (for comparing page numbers), `needspace` (to prevent widowed chapter titles in notes sections when resetting notes by chapter using either `\notesbychapter` or `\resetendnotes`), and `titleref` (to send the chapter titles to the notes section).

With `memoir` class, `endheads` requires fewer packages, since many of the package functions are built into `memoir` and some, `fancyhdr` most especially, conflict with it. Minimally, you will need `endnotes` and `ifthen`. You might wish to call `memoir` with the `oldfontcommands` option.

2 Setup

`\setupendnoteheaders` This is the only macro you need to call to use this package. If you use `\setupendnoteheaders` you should remember to start your endnotes on a new page. `\setupendnoteheaders` sets the first page of the notes section to the `empty` pagestyle, since you normally don't have running headers on the first page of a section. And it changes the pagestyle for subsequent pages to have a running header of the form "Notes to pages xx–yy." This header will appear in the center of each header. Then it modifies the `\endnote` command, having it increment a counter that keeps track of all the endnotes (even if you are resetting the number by chapter), and defines a label for that note. Finally, it writes on the external file for the endnotes a command to set the `\mark` for that page of the endnotes using a `\pageref` to the label it has just defined. `endheads` creates a label and a `pageref` for every note.

`\notesbychapter` `\notesbychapter` resets the note counter every time you issue a `\chapter` command, and it puts a centered line reading "Chapter <chapter number> <chapter title>" in the notes at that point. If you want only the chapter number, not its title, issue `\titleinnotesfalse` in your preamble. Please note that with the standard classes `endheads` modifies `@chapter`, adding a few lines on to the end of the command. If some other package does the same, you may need to reconcile them. With `memoir` class, `\chapter` is modified only if `\notesbychapter` is issued.

`\setstyleforchapternotebegin` `\setstyleforchapternotebegin` and `\setstyleforchapternoteend` allows you to customize the appearance of the line that separates chapters in the endnotes. If, for instance, rather having a centered line in the small font size, you want a flushleft line in the large fontsize, issue `\setstyleforchapternotebegin{\begin{flushleft}\large}` and `\setstyleforchapternoteend{\end{flushleft}}` in your preamble. To set these lines in italic or bold, issue `\setstyleforchapternotebegin{\em}` or `\setstyleforchapternotebegin{\bf}` in your preamble. (It's safe, indeed required, to use the old style font commands here, since the chapter title line in the notes is confined to a group, which restricts the scope of the font style command to the line. If you are using `memoir` class, you should use the `oldfontcommands` option if you plan on issuing `\setstyleforchapternotebegin` and `\setstyleforchapternoteend`.) Remember that if you open an environment with `\setstyleforchapternotebegin` you must close it in `\setstyleforchapternoteend`. So, for instance, if you wish the chapter

line to be set flushleft, in boldface, in normal font size, you would issue `\setstyleforchapternotebegin{\begin{flushleft}\begin{bf}\normalsize}` and `\setstyleforchapternoteend{\end{bf}\end{flushleft}}` in your preamble.

`\resetendnotes` Conceivably you might wish to do what `\notesbychapter` does for each chapter individually. For instance, there may be a chapter without endnotes, in which case `\notesbychapter` would issue the centered line for that chapter, but no notes would follow, which is ugly. Also, since the Bibliography is, as far as L^AT_EX is concerned, a chapter, you must use `\resetendnotes` before each chapter rather issuing `\notesbychapter` in the preamble if you have a bibliography, or odd results will follow.

3 Using endheads in a Multilingual World

By default, `endheads` uses English language running headers. As of version 1.2 these are easily changed.

`\changenotesname` To change the name for the endnote section for notes (the default is Notes), issue `\changenotesname{your version}`. To change the running header (by default “Notes to”) issue `\changenotesheader{your version}`.

`\changenotescontentsname` To change the name for the notes in the table of contents (by default “Notes”) issue `\changenotescontentsname{your version}`.

`\notesincontents` If you do not wish to include a line for the endnotes in the table of contents, issue `\notesincontentsonfalse` (This is the default). To include a line for the endnotes in the table of contents, issue `\notesincontents` or (toggling the boolean) `\notesincontentsontrue`. If you wish to rethink how to present the notes in the table of contents, include an `\addtocontents` line just before you issue `\theendnotes`, the command which will read all of your endnotes into your document at that point. For instance, I set the word “Notes” in the table of contents flush with the left margin, just where the numbers in the preceding chapters are. You might, however, wish to indent that word just a bit, so that it will be flush with the chapter titles above, rather than with the chapter numbers. If you wish to do this, just before issuing `\theendnotes`, issue `\addcontentsline{toc}{chapter}{\protect\numberline{} \the\notescontentsname}`.

`\changesinglepageabbrev` Running headers refer to single pages with the English abbreviation “p.” and to multiple pages with the English abbreviation “pp.” To change these issue `\changesinglepageabbrev{new abbrev}` or `\changemultiplepageabbrev{new abbrev}` respectively. The ultimate outcome is to translate a header of the form “Notes to pp. xx-yy” to the form appropriate for your language.

`\changechapternotesline` If you are using `\resetendnotes` or `\setnotesbychapter` you may also want to change the text of the line those commands add to the endnotes so as to use some other word than “Chapter.” To change this, issue `\changechapternotesline{your version}`.

4 Using endheads with biblatex

If you use biblatex you might get an error message that reads “Package biblatex Error: Patching ‘endnotes’ package failed.” What is happening here is that biblatex and endheads are both trying to modify the `\theendnotes` command from endnotes. If endheads goes first, biblatex can’t find the portion of the command it is trying to modify. Now biblatex redefines `\theendnotes` at `\begin{document}`, and endheads redefines `\theendnotes` when `\setupendnoteheaders` is issued, so issue `\setupendnoteheaders` after `\begin{document}` and everything should be OK.

5 Known Issues

The running headers in endheads will only work correctly if all endnotes are issued on pages with arabic numbering. Endnotes issued on pages with roman numbering will break endheads, because the calculations required to update the headers require arabic numbers.

Normally if you are using `\footnote` in the body of the text you can issue `\let\footnote=\endnote` to get endnotes with endnote. This will break endheads, however, (the running headers will all have your final chapter title, not the proper page numbers) so all of your endnotes must be made with `\endnote`.

6 Implementation

6.1 General Purpose Routines

Essentially these routines are code posted by Heiko Oberdiek to `comp.text.tex`. If you set a counter from a `\pageref`, that `\pageref` is undefined on the first run, and TeX will not only complain about the undefined reference, but give a “missing number” error if you try to do anything with that reference, such as compare one page number to another. These commands enable one to use the `\pageref` without generating the missing number error on the first run.

```
1 \providecommand*\ifrefundefined}[1]{%
2   \expandafter\ifx\csname r@#1\endcsname\relax
3     \expandafter\@firstoftwo
4   \else
5     \expandafter\@secondoftwo
6   \fi
7 }
8 \providecommand*\@extract@ref}[2]{%
9   \expandafter\expandafter\expandafter#1\csname
10 r@#2\endcsname\}\}\@nil
11 }
12
13 \providecommand*\@extract@ref}{%
14   \@extract@ref\@car
```

```

15 }
16
17 \providecommand*{\@extractpageref}{%
18   \@extract@ref\@secondcar
19 }
20
21 \long\def\@secondcar#1#2#3\@nil{#2}
22
23 \providecommand*{\setcounterfromref}[2]{%
24   \ifrefundefined{#2}{%
25     \protect\G@refundefinedtrue
26     \@latex@warning{Reference '#2' on page \thepage \space
27       undefined}%
28     \setcounter{#1}{0}%
29   }{%
30     \setcounter{#1}{\@extractref{#2}}%
31   }%
32 }
33 \providecommand*{\setcounterfrompageref}[2]{%
34   \ifrefundefined{#2}{%
35     \protect\G@refundefinedtrue
36     \@latex@warning{Reference '#2' on page \thepage \space
37       undefined}%
38     \setcounter{#1}{0}%
39   }{%
40     \setcounter{#1}{\@extractpageref{#2}}%
41   }%
42 }
43 \long\def\appendtomacro#1#2{%
44 \begingroup
45   \toks@\expandafter{#1#2}%
46   \xdef#1{\the\toks@}%
47 \endgroup}

```

6.2 Building Blocks

First, define some counters:

```

48 \newcounter{allendnotes}
49 \setcounter{allendnotes}{1}
50 \newcounter{notepageholder}

```

`\mymarks` A command to set the marks. This will be called by the page style.

```

51 \newtoks{\singlepageabbrev}
52 \singlepageabbrev={p.}
53 \newcommand{\changesinglepageabbrev}[1]{\singlepageabbrev={#1}}
54 \newtoks{\multiplepageabbrev}
55 \newcommand{\changemultiplepageabbrev}[1]{\multiplepageabbrev={#1}}
56 \multiplepageabbrev{pp.}
57 \@ifclassloaded{memoir}{\newcommand{\mymarks}{%

```

```

58 \ifthenelse{equal{\rightmark}{\leftmark}}{%
59     {\unskip ~\the\singlepageabbrev~\rightmark}% if equal
60     {\unskip ~\the\multiplepageabbrev~\rightmark--\leftmark}}%if not equal
61 }
62 {\newcommand{\mymarks}{%
63     \ifthenelse{equal{\firstmark}{\botmark}}{%
64         {\unskip ~\the\singlepageabbrev~\firstmark}% if equal
65         {\unskip ~\the\multiplepageabbrev~\firstmark--\botmark}}%if not equal
66 }

```

`\endnotepagestyle` A command to set the page style in fancyhdr. You might want to change some aspects of this, such as where to put the page number, to make it consistent with the rest of your document.

```

67
68 \newtoks{\endnotesname}
69 \endnotesname={Notes}
70 \newcommand{\changenotesname}[1]{\def\notesname{#1}}
71 \newtoks{\notesheadername}
72 \notesheadername={Notes to}
73 \newcommand{\changenotesheader}[1]{\notesheadername={#1}}
74 \newtoks{\notescontentsname}
75 \notescontentsname={Notes}
76 \newcommand{\changenotescontentsname}[1]{\notescontentsname={#1}}
77 \newtoks{\chapternoteslinename}
78 \chapternoteslinename={Chapter}
79 \newcommand{\changechapternotesline}[1]{\chapternoteslinename={#1}}
80 \ifclassloaded{memoir}{
81 \makepagestyle{endnotesstyle}
82 \makeevenhead{endnotesstyle}{{\small\texttrm{\thepage}}}{\small{\em \the\notesheadername~\mymarks}}
83 \makeoddhead{endnotesstyle}{{\small{\em \the\notesheadername~\mymarks}}}{\small\texttrm{\thepage}}
84 \makeevenfoot{endnotesstyle}{}{}
85 \makeoddfoot{endnotesstyle}{}{}
86 }{
87 \fancypagestyle{endnotesstyle}{%
88 \fancyhf{}
89 \fancyhead[CO]{{\small{\em \the\notesheadername~\mymarks}}}
90 \fancyhead[CE]{{\small{\em \the\notesheadername~\mymarks}}}
91 \renewcommand{\headrulewidth}{0pt}
92 \renewcommand{\footrulewidth}{0pt}
93 \fancyhead[RO,LE]{{\small\texttrm{\thepage}}}
94 }
95 }
96

```

`\checknoteheaders` This macro sets the counter notepageholder to the value given by the pageref of the note that is being output. All that strange business with `\string` is there because I want to use the `\immediate\write` mechanism to control what gets expanded and what doesn't get expanded on the external file for the endnotes, `\jobname.ent`. Everything except the actual number of the endnote is written to

the external file as unexpanded tokens. When, after you call `\theendnotes`, you read in the external file for the endnotes, `\jobname.ent`, all these tokens become a command to set the `\mark`.

```

97 \@ifclassloaded{memoir}{\newcommand{\checknoteheaders}{%
98 \string\setcounterfrompageref\string{notepageholder\string}%
99 \string{notl\theallendnotes\string}%
100 \string\markboth\string{\string\thenotepageholder\string}\string{\string\thenotepageholder\string}
101 }
102 }{\newcommand{\checknoteheaders}{%
103 \string\setcounterfrompageref\string{notepageholder\string}%
104 \string{notl\theallendnotes\string}%
105 \string\mark\string{\string\thenotepageholder\string}%
106 }
107 }
108

```

6.3 User Code

`\notesincontents`

```

109 \newif\ifnotesincontentson \notesincontentsonfalse
110 \newcommand{\notesincontents}{\notesincontentsontrue}

```

`\setupendnoteheaders` `\setupendnoteheaders` turns on processing of running headers, and adds two lines to the definition of `\endnote`

```

111 \newif\ifendnoteheaderson \endnoteheadersonfalse
112 \newcommand{\setupendnoteheaders}{%
113 \endnoteheadersontrue
114 \if@enotesopen \else \@openenotes \fi
115 \immediate\write\@enotes{%
116 \string\thispagestyle\string{empty\string}
117 \string\pagestyle\string{endnotesstyle\string}}
118 \immediate\write\@enotes{\string\ifnotesincontentson}%
119 \immediate\write\@enotes{\string\addcontentsline\string{toc\string}
120 \string{chapter\string}\string{\string\the\string\notescontentsname\string}}%
121 %\immediate\write\@enotes{\string{\string\notescontentsname\string}}%
122 %\string{\string\protect\string\numberline
123 %\string{\string} \string\notescontentsname \string}
124 \immediate\write\@enotes{\string\fi}
125 \def\endnote{\@ifnextchar[\@xendnote{\stepcounter{endnote}}%
126 % my addition begins
127 \stepcounter{allendnotes}\label{notl\theallendnotes}%
128 \immediate\write\@enotes{\checknoteheaders}%
129 % my addition ends
130 \protected@xdef\@theenmark{\theendnote}%
131 \@endnotemark\@endnotetext}}
132 \let\oldtheendnotes=\theendnotes
133 \renewcommand{\theendnotes}{%
134 \immediate\write\@enotes{\string\thispagestyle\string{endnotesstyle\string}}
135 \oldtheendnotes}

```

136 }

`\resetendnotes` Tells the `\chapter` macro to reset the note counter and to put a line with the chapter number in the endnotes.

```
137 \def\strip#1>{}
138 \newcommand{\literalendnote}[1]{\if@enotesopen \else
139 \@openenotes\setupendnoteheaders \fi
140     \begingroup
141     \def\next{#1}%
142     \newlinechar='40
143     \immediate\write\@enotes{\expandafter\strip\meaning\next}%
144     \endgroup%
145 }
146 \newif\iftitleinnotes \titleinnotestru
147 \newcommand{\styleforchapternotebegin}{%
148 }
149 \newcommand{\styleforchapternoteend}{%
150 }
151 \newcommand{\setstyleforchapternotebegin}[1]{%
152 \renewcommand{\styleforchapternotebegin}{#1}}
153 \newcommand{\setstyleforchapternoteend}[1]{%
154 \renewcommand{\styleforchapternoteend}{#1}}%
155 \setstyleforchapternotebegin{\begin{center}}
156 \setstyleforchapternoteend{\end{center}}
157 \newcommand{\resetendnotes}{%
158 \label{chapter\thechapter}%
159 \setcounter{endnote}{0}%
160 \if@enotesopen \else \@openenotes \fi
161 \immediate\write\@enotes{\string\begingroup}
162 \immediate\write\@enotes{\string\goodbreak}
163 \immediate\write\@enotes{\string\Needspace\string{5\string\baselineskip\string}}
164 \immediate\write\@enotes{\string\styleforchapternotebegin}
165 % \immediate\write\@enotes{\string\begin\string{center\string}}
166 %\immediate\write\@enotes{\string{}
167 \immediate\write\@enotes{\the\chapternoteslinename\string\ \thechapter\string~}
168 \iftitleinnotes
169 \immediate\write\@enotes{\string\titleref\string{chapter\thechapter\string}}
170 \fi
171 %\immediate\write\@enotes{\string}}
172 \immediate\write\@enotes{\string\styleforchapternoteend}
173 % \immediate\write\@enotes{\string\end\string{center\string}}
174 \immediate\write\@enotes{\string\nopagebreak}
175 \immediate\write\@enotes{\string\endgroup}
176 }
```

`\notesbychapter`

```
177 % \newcommand{\notesbychapter}{%
178 % \appendtomacro{chapter}{%
179 % \relax
180 % \resetendnotes}}%
```



```

181 % }
182 \newif\ifnotesbychapteron \notesbychapteronfalse
183 \@ifclassloaded{memoir}{\newcommand{\notesbychapter}{\notesbychapterontrue}
184 \addtoargdef{\chapter}{-}{ \iftitleinnotes%
185 % \label{chapter\thechapter}%
186 \fi%
187 \ifnotesbychapteron%
188 \relax%
189 \resetendnotes%
190 \fi}}
191 }{\newcommand{\notesbychapter}{\notesbychapterontrue}
192 \def\@chapter[#1]#2{\ifnum \c@secnumdepth >\m@ne
193 \if@mainmatter
194 \refstepcounter{chapter}%
195 \typeout{\@chapapp\space\thechapter.}%
196 \addcontentsline{toc}{chapter}%
197 {\protect\numberline{\thechapter}#1}%
198 \else
199 \addcontentsline{toc}{chapter}{#1}%
200 \fi
201 \else
202 \addcontentsline{toc}{chapter}{#1}%
203 \fi
204 \chaptermark{#1}%
205 \addtocontents{lof}{\protect\addvspace{10\p@}}%
206 \addtocontents{lot}{\protect\addvspace{10\p@}}%
207 \if@twocolumn
208 \topnewpage[\@makechapterhead{#2}]%
209 \else
210 \@makechapterhead{#2}%
211 \@afterheading
212 \fi
213 \iftitleinnotes%
214 % \label{chapter\thechapter}%
215 \fi%
216 \ifnotesbychapteron%
217 \relax%
218 \resetendnotes%
219 \fi}
220 }
221

```