The **footnoterange** package

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Abstract

This package provides the environments `footnoterange` and `footnoterange*`. Multiple footnotes inside these environments are not referenced as e. g. "¹ ² ³" but as "¹⁻³", i. e. the range (from first to last referred footnote at that place) is given. Depending on loading of `hyperref` and use of its `hyperfootnotes`-option the references are hyperlinked. (References to footnotes in `footnoterange*` are never hyperlinked.) The example additionally demonstrates how other footnote-number-representations (`\Roman`, `\roman`, `\Alph`, `\alph`, `\fnsymbol`) are possible, especially for more footnotes than letters in the alphabet or symbols in `fnsymbol`. Creation of smaller link boxes for footnotes is explained in the documentation.

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Contents

1 Introduction

This LaTeX package provides the environments `footnoterange` and `footnoterange*`. Multiple footnotes inside these environments are not referenced as e.g. "¹ ² ³" but as "¹⁻³", i.e. the range (from first to last referred footnote at that place) is given. Depending on loading of `hyperref` and use of its `hyperfootnotes`-option the references are hyperlinked. References to footnotes in `footnoterange*` are never hyperlinked.

`\footnotemark\footnotetext` instead of `\footnote` is not supported inside `footnoterange` and `footnoterange*` environments.

The example additionally demonstrates how other footnote-number-representations (`\Roman`, `\roman`, `\Alph`, `\alph`, `\fnsymbol`) are possible, especially for more footnotes than letters in the alphabet or symbols in `fnsymbol`.

Creation of smaller link boxes for footnotes is explained in the following section Usage.

2 Usage

Just load the package placing

    \usepackage{footnoterange}

in the preamble of your LaTeX 2_ε source file. There are no options to be used. The package should be loaded after `hyperref` (if that package is used) and after any other package redefining footnotes. Usage of the `footnoterange` (or `footnoterange*`) environment is simple: Just encapsulate the footnotes, which shall be referred as range instead of referencing as single ones (see the example file).

About hyperlinks:

Footnote-references in a `footnoterange*` environment are never hyperlinked.

Footnote-references in a `footnoterange` environment may be hyperlinked:

- When the `hyperref` package is not loaded, they are not hyperlinked (naturally).

- When the `hyperref` package is loaded, it depends on the `hyperfootnotes` option of the `hyperref` package:

    - With `hyperfootnotes=true`, the references are hyperlinked.
    - With `hyperfootnotes=false`, the references are not hyperlinked.

`\footnote`s inside of the `footnoterange`/`footnoterange*` environment can use the optional parameter, i.e. `\footnote[42]{text}` even if this is the third footnote. When giving ranges as reference, this does not seem to be such a good idea, if this is not done consistently (i.e. footnotes `[42]`, `[43]`, `[44]` resulting in 42–44 is OK, but `[42]` (original 2), unchanged 3, unchanged 4 resulting in 42–4 is confusing). A warning about these changed footnotemarks is written into the `.log`-file.

When there is only a single footnote in a `footnoterange` environment, this does not produce some reference like "⁷⁻⁷", but only one footnotemark is used automatically. Because it is strange to use a `footnoterange` environment without a range of footnotes, an info is written into the `.log`-file about this.

The usage of other footnote-number-representations (e.g. `\Roman`, `\roman`, `\Alph`, `\alph`, `\fnsymbol`) is also possible, but two things must be taken into account: The number of footnote references is restricted (for example with `\Alph` only references A to Z are possible), which can be fixed e.g. with the https://ctan.org/pkg/alphalph package (see footnoterange-example), and references to footnote-symbol-ranges (`\fnsymbol`) might not be very clear.

The link boxes for the footnotes span the line-height. If smaller boxes are wanted, this can be accomplished by:

- making a copy of `footnoterange.sty`

- renaming the copy to `footnoterangesb.sty`

- in `\newcommand{\fnr@ifhyperfnrA}{...}` and `\newcommand{\fnr@ifhyperfnrN}{...}` removing the `\hyperref[fnr:\arabic\@mpfn]` and both `\hyperref[fnr:\fnr@first]` (while *not* removing their arguments!)

- replacing the first `\ref*` in `\newcommand{\fnr@ifhyperfnrA}{...}` and the first and second `\ref*` in `\newcommand{\fnr@ifhyperfnrN}{...}` by `\ref` (and saving the `.sty` file)

- moving the `footnoterangesb.sty` into your private `texmf-local` tree

- refreshing the file file name databases, for example, TeX Live users run `texhash` or `mktexlsr`.

- using `\usepackage{footnoterangesb}` instead of `\usepackage{footnoterange}` in your document.

- Regular footnote(links) are *not* changed by this!

Options

The footnoterange package takes no options.

3   Alternatives

The fnpct (https://ctan.org/pkg/fnpct), 2021-01-21, v1.0, and newer *supports ranges for multiple footnotes natively.* For older versions the setting of multiple footnotes (`\multfootnote`), suppressing of footnotemarks (`*`), and customizing the multi-footnote-separator (`\setfnpct{mult-fn-sep={ something }}`) can be combined with stepping of the footnote-counter to give a footnoterange:

```
\documentclass{article}
\usepackage{hyperref}
\usepackage{fnpct}
\begin{document}
The three little pigs built their houses
out of straw\footnote{not to be confused with hay},
sticks\footnote{or lumber according to some sources}
and bricks%
\makeatletter%
\setfnpct{mult-fn-sep={--}}%
\multfootnote{probably fired clay bricks\addtocounter\@mpfn{+1};%
*or something else;%
what do I know}. %
\makeatother%
\end{document}
```

If you programmed or found another alternative, which is available at https://www.CTAN.org/, please send an e-mail to me with the name, location at CTAN, and a short notice, and I will probably list it here.

4 Example

```
1 ⟨∗example⟩
2 \NeedsTeXFormat{LaTeX2e}[2024-11-01]
3 \documentclass[british]{article}[2024/06/29]% v1.4n Standard LaTeX document class
4 \usepackage[extension=pdf,%
5 plainpages=false,%
6 pdfpagelabels=true,%
7 hyperindex=false,%
8 pdflang={en},%
9 pdftitle={footnoterange package example},%
10 pdfauthor={H.-Martin Muench},%
11 pdfsubject={Example for the footnoterange package},%
12 pdfkeywords={LaTeX, footnoterange},%
13 pdfview=FitH,%
14 pdfstartview=FitH,%
15 pdfpagelayout=OneColumn,%
16 hyperfootnotes=true%
17 ]{hyperref}[2024-11-05]% v7.01l Hypertext links for LaTeX
18
19 \usepackage{footnoterange}[2025-01-27]% v1.1b References to ranges of footnotes (HMM)
20
21 % For footnotes labelled after Z, z, and ¶ (Pilcrow character):
22 \usepackage{alphalph}[2019/12/09]% v2.6 Convert numbers to letters (HO)
23 \makeatletter
24 \NewCommandCopy{\fnrfnsymbol}{\@fnsymbol}
25 \makeatother
26 \newalphalph{\fnsymbolfnr}[mult]{\fnrfnsymbol}{5}
27
28 \listfiles
29 \begin{document}
30 \pagenumbering{arabic}
31 \section*{Example for footnoterange}
32
33 This example demonstrates the use of package\newline
34 \textsf{footnoterange}, v1.1b as of 2025-01-27,
35 references to ranges of footnotes (HMM).\newline
36 The package does not use options.\newline
37 \verb|footnoterange-example.pdf| can be created by\newline
38 \verb|pdflatex footnoterange-example.tex|,\newline
39 and \verb|footnoterange-example.tex| can be created by\newline
40 \verb|tex footnoterange.dtx|.\newline
41 \verb|footnoterange.dtx| is at
42 \url{https://ctan.org/pkg/footnoterange}.\newline
43
44 \noindent For more details please see the documentation!
45
46 This\footnote{Lorem} text bears a multiplicity of footnotes.
47 Because the \verb|hyperref| package is used with option
48 \verb|hyperfootnotes=true|, the footnotes
49 \begin{footnoterange}
50 \footnote{ipsum}%
51 \footnote{dolor}%
52 \footnote{sit}%
53 \footnote{amet,}%
54 \footnote{consectetur}%
55 \footnote{adipisicing}%
56 \footnote{elit,}%
57 \footnote{sed}%
58 \end{footnoterange}
59 are hyperlinked.\footnote{do eiusmod tempor incididunt %
60 ut labore et dolore magna aliqua.} Using
61 \verb|hyperfootnotes=false| or not using \verb|hyperref|
```

```
62 will remove the hyperlinks to the footnotes.\medskip
63
64 This text also bears a multiplicity of footnotes,
65 but due to the use of the starred
66 \begin{footnoterange*}
67 \footnote{Ut enim}%
68 \footnote{ad minim veniam,}%
69 \footnote{quis}%
70 \footnote{nostrud}%
71 \footnote{exercitation}%
72 \footnote{ullamco}%
73 \footnote{laboris}%
74 \footnote{nisi}%
75 \end{footnoterange*}
76 form of the environment they are not
77 hyperlinked.\footnote{ut aliquip ex ea commodo consequat.}
78 \medskip
79
80 The use of the optional parameter for footnotes%
81 \begin{footnoterange}%
82 \footnote[101]{Duis}%
83 \footnote[102]{aute}%
84 \footnote[103]{irure}%
85 \footnote[104]{dolor}%
86 \footnote[105]{in reprehenderit}%
87 \end{footnoterange}%
88 {} is also possible, but should be used consistently.
89 \pagebreak
90
91 When there is only one footnote
92 \begin{footnoterange}
93 \footnote{a single footnote}
94 \end{footnoterange}
95 in the \verb|footnoterange| environment, only one
96 footnotemark is used and an info is written into the
97 \verb|log|-file.
98
99 \bigskip
100
101 The usage of other footnote-number-representations
102 (e.\,g.~\verb|\Roman|%
103 \renewcommand{\thefootnote}{\Roman{footnote}}%
104 \begin{footnoterange}%
105 \footnote{Nam arcu libero,}%
106 \footnote{nonummy eget,}%
107 \footnote{consectetuer id,}%
108 \footnote{vulputate a,}%
109 \footnote{magna.}%
110 \end{footnoterange}%
111 , \verb|\roman|%
112 \renewcommand{\thefootnote}{\roman{footnote}}%
113 \begin{footnoterange}%
114 \footnote{in voluptate}%
115 \footnote{velit}%
116 \footnote{esse}%
117 \footnote{cillum}%
118 \footnote{dolore}%
119 \end{footnoterange}%
```

```
120  , \verb|\Alph|%
121 \renewcommand*{\thefootnote}{\AlphAlph{\value{footnote}}}%
122 \begin{footnoterange}%
123 \footnote{eu fugiat}%
124 \footnote{nulla}%
125 \footnote{pariatur.}%
126 \footnote{Excepteur}%
127 \footnote{sint}%
128 \end{footnoterange}%
129  , \verb|\alph|%
130 \renewcommand{\thefootnote}{\alphalph{\value{footnote}}}%
131 \begin{footnoterange}%
132 \footnote{occaecat}%
133 \footnote{cupidatat}%
134 \footnote{non proident,}%
135 \footnote{sunt}%
136 \footnote{in culpa}%
137 \end{footnoterange}%
138  , \verb|\fnsymbol|%
139 \renewcommand{\thefootnote}{\protect\fnsymbolfnr{\arabic{footnote}}}%
140 \begin{footnoterange}%
141 \footnote{qui officia}%
142 \footnote{deserunt}%
143 \footnote{mollit}%
144 \footnote{anim}%
145 \footnote{id est laborum.}%
146 \end{footnoterange}%
147 ) is also possible, but two things must be taken into account:
148
149 \begin{enumerate}
150   \item By default the number of footnote references is restricted
151     (for example with \verb|\Alph| only references A to Z are possible),
152     which needs to be fixed. In this example the
153     \href{https://ctan.org/pkg/alphalph}{\texttt{alphalph} package}
154     is used for this purpose.
155   \item References to footnote-symbol-ranges (\verb|\fnsymbol|)
156     might not be very clear. For example, if the symbols %
157     \newcounter{fnrxcnt}%
158     \setcounter{fnrxcnt}{1}%
159     \fnsymbolfnr{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 1
160     \fnsymbolfnr{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 2
161     \fnsymbolfnr{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 3
162     \fnsymbolfnr{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 4
163     \fnsymbolfnr{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 5
164     \fnsymbolfnr{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 6
165     \fnsymbolfnr{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 7
166     {} are used, %
167     \setcounter{fnrxcnt}{2}\fnsymbolfnr{\value{fnrxcnt}}--%
168     \setcounter{fnrxcnt}{7}\fnsymbolfnr{\value{fnrxcnt}} %
169     means second to seventh footnote.\par%
170     But if %
171     \newalphalph{\fnsymbolfnri}[mult]{\fnrfnsymbol}{6}%
172     \setcounter{fnrxcnt}{1}%
173     \fnsymbolfnri{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 1
174     \fnsymbolfnri{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 2
175     \fnsymbolfnri{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 3
176     \fnsymbolfnri{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 4
177     \fnsymbolfnri{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 5
178     \fnsymbolfnri{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 6
179     \fnsymbolfnri{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 7
180     \fnsymbolfnri{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 8
181     {} are used, %
```

```
182    \setcounter{fnrxcnt}{2}\fnsymbolfnri{\value{fnrxcnt}}--%
183    \setcounter{fnrxcnt}{8}\fnsymbolfnri{\value{fnrxcnt}} %
184    means second to eighth footnote.\par%
185    And if %
186    \newalphalph{\fnsymbolfnrx}[mult]{\fnrfnsymbol}{3}%
187    \setcounter{fnrxcnt}{1}%
188    \fnsymbolfnrx{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 1
189    \fnsymbolfnrx{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 2
190    \fnsymbolfnrx{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 3
191    \fnsymbolfnrx{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 4
192    \fnsymbolfnrx{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 5
193    \fnsymbolfnrx{\value{fnrxcnt}}\stepcounter{fnrxcnt}% 6
194    {} are used, %
195    \setcounter{fnrxcnt}{2}\fnsymbolfnrx{\value{fnrxcnt}}--%
196    \setcounter{fnrxcnt}{5}\fnsymbolfnrx{\value{fnrxcnt}} %
197    means second to fifth footnote.%
198 \end{enumerate}
199
200 \newpage
201
202 The \texttt{Lorem ipsum} text for the footnotes was taken from
203 \url{https://www.lipsum.com/}, where as original source
204 sections~1.10.32 and 1.10.33 of
205 \textquotedblleft de Finibus Bonorum et Malorum\textquotedblright{}
206 by Cicero, written in 45~BCE, is given.
207
208 \end{document}
209 ⟨/example⟩
```

5   The implementation

We start off by checking that we are loading into LaTeX 2_ε and announcing the name and version of this package.

```
210 ⟨∗package⟩

211 \NeedsTeXFormat{LaTeX2e}[2022-11-01]
212 \ProvidesPackage{footnoterange}[2025-01-27 v1.1b %
213   References to ranges of footnotes (HMM)]
214 %% Provides the footnoterange and footnoterange* environments
215 %% to refer to ranges of footnotes.
216
217 \@ifl@t@r\fmtversion{2024/11/01}{% would have understood
218 % \IfFormatAtLeastTF{2024-11-01}{<true code>}{<false code>}
219 }{\PackageError{footnoterange}{%
220     Newer LaTeX format needed or older footnoterange package%
221   }{Needed LaTeX format version: 2024-11-01 or newer.\MessageBreak%
222     Found\space\space LaTeX format version: \fmtversion.\MessageBreak%
223     Please update your TeX distribution.%
224   }
225 }
226
```

We use \ifHy@hyperfootnotes ... \else ... \fi, but when the hyperref package has not been loaded, \ifHy@hyperfootnotes is not defined, and LaTeXrelates the \else and/or \fi (wrongly) to other \ifs or groups. Therefore the \ifHy@hyperfootnotes are placed in their own commands, which are not looked at when the hyperref package has not been loaded.

\fnr@ifhyperrfn

```
227 \newcommand{\fnr@ifhyperrfn}{%
228   \ifHy@hyperfootnotes% option hyperfootnotes=true
229     \addtocounter{Hfootnote}{+1}%
230     % Code from the hyperref package
231       \global\let\Hy@saved@currentHref\@currentHref%
232       \hyper@makecurrent{Hfootnote}%
233       \global\let\Hy@footnote@currentHref\@currentHref%
234       \global\let\@currentHref\Hy@saved@currentHref%
235     % End of code from the hyperref package
236   \fi%
237 }
238
```

\fnr@rangefootnote The \fnr@rangefootnote is the internal replacement for the original
\footnote command inside of a footnoterange environment.

```
239 \newcommand{\fnr@rangefootnote}[2][\empty]{%
```

#1 contains the optional argument, which is predefined as \empty.

```
240   \nolinebreak%
241   % no \footnotemark here
242   \addtocounter\@mpfn{+1}%
243   \IfPackageLoadedT{hyperref}{\fnr@ifhyperrfn}%
```

See the explanation before the declaration of the \fnr@ifhyperrfn command!

```
244   \xdef\fnr@opt{#1}% contains the optional argument
245   \xdef\fnr@arabic{\arabic\@mpfn}%
246   \protected@edef\fnr@formatted{\thefootnote}%
```

The \footnotemark is not set (yet), but the \footnotetext, and it gets a
label.

```
247   \ifx\fnr@opt\empty\relax%
248     \footnotetext{\label{fnr:\fnr@arabic}#2}%
249   \else%
250     \PackageWarning{footnoterange}{%
251       Custom footnote-numbers used in a footnoterange\MessageBreak%
252       environment: Footnote with natural number\MessageBreak%
253       \ifx\fnr@formatted\fnr@arabic%
254         \fnr@arabic%
255       \else%
256         \space\fnr@arabic\space (\fnr@formatted )%
257       \fi%
258       \MessageBreak%
259       was renumbered to \fnr@opt\MessageBreak%
260     }%
261     \IfPackageLoadedTF{hyperref}{%
262       \footnotetext[#1]{\phantomsection\label{fnr:\fnr@arabic}#2}%
263     }{\footnotetext[#1]{\label{fnr:\fnr@arabic}#2}%
264     }%
265   \fi%
266 }
267
```

\fnr@ifhyperfnrA \ifHy@hyperfootnotes "encapsulation" again:

```
268 \newcommand{\fnr@ifhyperfnrA}{%
269   \ifHy@hyperfootnotes% option hyperfootnotes=true
270     \hbox{\hyperref[fnr:\fnr@first]{%
271         \@textsuperscript{\normalfont \ref*{fnr:\fnr@first}}}}%
272   \else% option hyperfootnotes=false
273     \hbox{\@textsuperscript{\normalfont \ref*{fnr:\fnr@first}}}%
274   \fi%
275 }
276
```

\fnr@ifhyperfnrN

```
277 \newcommand{\fnr@ifhyperfnrN}{%
278   \ifHy@hyperfootnotes% option hyperfootnotes=true
279     \hbox{\hyperref[fnr:\fnr@first]{%
280         \@textsuperscript{\normalfont \ref*{fnr:\fnr@first}}}%
281       \@textsuperscript{\normalfont --}%
282       \hyperref[fnr:\arabic\@mpfn]{%
283         \@textsuperscript{\normalfont \ref*{fnr:\arabic\@mpfn}}}}%
284   \else% option hyperfootnotes=false
285     \hbox{\@textsuperscript{\normalfont \ref*{fnr:\fnr@first}%
286                                   --\ref*{fnr:\arabic\@mpfn}}}%
287   \fi%
288 }
289
```

footnoterange *(env.)* The `footnoterange` environment remembers the next footnote number as `\fnr@first` and the current `\footnote` definition as `\fnr@origfn` and uses `\fnr@rangefootnote` instead.

Because we cannot `\RenewCommandCopy` a command which does not exist, we need to once define `\fnr@origfnmark`.

```
290 \AddToHook{begindocument}{\NewCommandCopy{\fnr@origfnmark}{\footnotemark}}
291
292 \newenvironment{footnoterange}{%
293   % at begin of the footnoterange environment
294   \ifhmode \unskip \fi% FMi
295   \addtocounter\@mpfn{+1}%
296   \xdef\fnr@first{\arabic\@mpfn}%
297   \addtocounter\@mpfn{-1}%
298   \let\fnr@origfn\footnote%
299   \let\footnote\fnr@rangefootnote%
300   \RenewCommandCopy{\fnr@origfnmark}{\footnotemark}%
301   \RenewCommandCopy{\footnotemark}{\fnr@rangefootnotemark}%
302   \ignorespaces% FMi
```

End of the environment:

```
303 }{% at end of the footnoterange environment
304   \ifhmode% FMi
305     \unskip% FMi
```

Remember the spacefactor for restoring after the environment has ended (only in hmode!). % FMi

```
306     \xdef\fnr@aftergroup{\spacefactor\the\spacefactor\relax}% FMi
307   \else% FMi
```

Otherwise do something harmless. % FMi

```
308     \xdef\fnr@aftergroup{\relax}%
309   \fi% FMi
```

At the end of the environment the previous definition of `\footnote` is restored

```
310   \let\footnote\fnr@origfn%
311   \RenewCommandCopy{\footnotemark}{\fnr@origfnmark}%
```

and the references are placed:

```
312   \ifx\fnr@first\fnr@arabic\relax% There is only one reference in the environment.
313     \PackageInfo{footnoterange}{%
314       Environment footnoterange used,\MessageBreak%
315       but only one footnote (number \fnr@first ) is contained\MessageBreak}%
316     \IfPackageLoadedTF{hyperref}{\fnr@ifhyperfnrA%
317     }{\hbox{\@textsuperscript{\normalfont \ref{fnr:\fnr@first}}}%
318     }%
319   \else%
```

9

```
320    \IfPackageLoadedTF{hyperref}{\fnr@ifhyperfnrN%
321      }{\hbox{\@textsuperscript{\normalfont \ref{fnr:\fnr@first}%
322                                        --\ref{fnr:\arabic\@mpfn}}}%
323        }%
324    \fi%
```

Restore the space-factor after the environment has ended. % FMi

```
325    \aftergroup\fnr@aftergroup% FMi
326 }
327
```

footnoterange* *(env.)* The `footnoterange*` environment does the same as the `footnoterange` environment but suppresses all hyperlinks to footnotes inside.

```
328 \newenvironment{footnoterange*}{%
329    % at begin of the footnoterange* environment
330    \ifhmode \unskip \fi% FMi
331    \addtocounter\@mpfn{+1}%
332    \xdef\fnr@first{\arabic\@mpfn}%
333    \addtocounter\@mpfn{-1}%
334    \let\fnr@origfn\footnote%
335    \let\footnote\fnr@rangefootnote%
336    \RenewCommandCopy{\fnr@origfnmark}{\footnotemark}%
337    \RenewCommandCopy{\footnotemark}{\fnr@rangefootnotemark}%
338    \ignorespaces% FMi
339 }{% at end of the footnoterange* environment
340    \ifhmode% FMi
341      \unskip% FMi
342      \xdef\fnr@aftergroup{\spacefactor\the\spacefactor\relax}% FMi
343    \else% FMi
344      \xdef\fnr@aftergroup{\relax}%
345    \fi% FMi
346    \let\footnote\fnr@origfn%
347    \RenewCommandCopy{\footnotemark}{\fnr@origfnmark}%
348    \ifx\fnr@first\fnr@arabic\relax% There is only one reference in the environment.
349      \PackageInfo{footnoterange}{%
350        Environment footnoterange used,\MessageBreak%
351        but only one footnote (number \fnr@first ) is contained\MessageBreak}%
352      \IfPackageLoadedTF{hyperref}{%
353        \hbox{\@textsuperscript{\normalfont \ref*{fnr:\fnr@first}}}%
354        }{\hbox{\@textsuperscript{\normalfont \ref{fnr:\fnr@first}}}%
355        }%
356    \else%
357      \IfPackageLoadedTF{hyperref}{%
358        \hbox{\@textsuperscript{\normalfont \ref*{fnr:\fnr@first}%
359                                        --\ref*{fnr:\arabic\@mpfn}}}%
360        }{\hbox{\@textsuperscript{\normalfont \ref{fnr:\fnr@first}%
361                                        --\ref{fnr:\arabic\@mpfn}}}%
362        }%
363    \fi%
364    \aftergroup\fnr@aftergroup% FMi
365 }
366
```

\fnr@rangefootnotemark The `footnoterange` package does not handle `\footnotemark`s, but at least the user is made aware of this:

```
367 \newcommand{\fnr@rangefootnotemark}[1][\empty]{%
368    \PackageError{footnoterange}{%
369      \string\footnotemark\space not supported in footnoterange(*) environment%
370      }{The footnoterange package does not handle a \string\footnotemark.\MessageBreak%
371      Either use \string\footnote\string{...\string}\space instead of%
372      \string\footnotemark\space and \string\footnotetext\string{...\string}\MessageBreak%
373      in footnoterange and footnoterange* environments,\MessageBreak%
```

```
374      or do not use those environments around a \string\footnotemark\MessageBreak%
375      (or \string\renewcommand\string{\string\fnr@rangefootnotemark\string}\MessageBreak%
376      with your own fixing code).%
377    }%
378  \xdef\fnr@mopt{#1}%
379  \ifx\fnr@mopt\empty\relax%
380    \fnr@origfnmark%
381  \else%
382    \fnr@origfnmark[#1]%
383  \fi%
384 }
385
386 ⟨/package⟩
```

6   Installation

6.1   Downloads

Everything is available on CTAN, https://www.CTAN.org/, but may need additional packages themselves.

footnoterange.dtx   For unpacking the footnoterange.dtx file and constructing the documentation it is required:

- TEXFormat LATEX 2ε 2024-11-01 or newer: https://www.CTAN.org

- document class ltxdoc, 2024/02/08, v2.1j, https://www.ctan.org/pkg/ltxdoc

- package holtxdoc, 2019/12/09, v0.30, https://www.ctan.org/pkg/holtxdoc

footnoterange.sty   The footnoterange.sty for LATEX 2ε (i.e. each document using the footnoterange package) requires:

- TEXFormat LATEX 2ε 2024-11-01 or newer: https://www.CTAN.org

footnoterange-example.tex   The footnoterange-example.tex requires the same files as all documents using the footnoterange package and additionally:

- class article, 2024/06/29, v1.4n, from classes:
    https://www.ctan.org/pkg/classes

- package footnoterange, 2025-01-27, v1.1b,
    https://ctan.org/pkg/footnoterange
    (Well, it is the example file for this package, and because you are reading the documentation for the footnoterange package, it can be assumed that you already have some version of it – is it the current one?)

- package hyperref, 2024-11-05, v7.01l,
    https://ctan.org/pkg/hyperref

- package alphalph, 2019/12/09, v2.6,
    https://ctan.org/pkg/alphalph

Oberdiek   All packages of the 'oberdiek' bundle (especially alphalph) are also available in
holtxdoc   a TDS compliant ZIP archive:
alphalph   https://mirror.ctan.org/install/macros/latex/contrib/oberdiek.tds.zip.
It is probably best to download and use this, because the packages in there are quite probably both recent and compatible among themselves.

hyperref   hyperref is not included in that bundle and needs to be downloaded separately,
https://mirror.ctan.org/install/macros/latex/contrib/hyperref.tds.zip.

Münch   A hyperlinked list of my (other) packages can be found at https://ctan.org/author/muench-hm.

6.2   Package, unpacking TDS

Package.   This package is available on https://www.CTAN.org.

https://mirror.ctan.org/macros/latex/contrib/footnoterange/footnoterange.dtx
    The source file.

https://mirror.ctan.org/macros/latex/contrib/footnoterange/footnoterange.pdf
    The documentation.

https://mirror.ctan.org/macros/latex/contrib/footnoterange/footnoterange-example.pdf
    The compiled example file, as it should look like.

http://mirror.ctan.org/macros/latex/contrib/footnoterange/README
    The README file.

There is also a footnoterange.tds.zip available:

https://mirror.ctan.org/install/macros/latex/contrib/footnoterange.tds.zip
    Everything in TDS compliant, compiled format.

which additionally contains
footnoterange.ins   The installation file.
footnoterange.drv   The driver to generate the documentation.
footnoterange.sty   The `.style` file.

For required other packages, please see the preceding subsection.

Unpacking.   The `.dtx` file is a self-extracting `docstrip` archive.   The files are extracted by running the `.dtx` through plain TeX:

    tex footnoterange.dtx

  About generating the documentation see paragraph 6.4 below.

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

```
footnoterange.sty          → tex/latex/footnoterange/footnoterange.sty
footnoterange.pdf          → doc/latex/footnoterange/footnoterange.pdf
footnoterange-example.tex  → doc/latex/footnoterange/footnoterange-example.tex
footnoterange-example.pdf  → doc/latex/footnoterange/footnoterange-example.pdf
footnoterange.dtx          → source/latex/footnoterange/footnoterange.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`.

6.3   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`.

6.4   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{footnoterange.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 a configuration file `ltxdoc.cfg`. For instance, put the following 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 footnoterange.dtx
makeindex -s gind.ist footnoterange.idx
pdflatex footnoterange.dtx
makeindex -s gind.ist footnoterange.idx
pdflatex footnoterange.dtx
```

6.5   Compiling the example

The example file, footnoterange-example.tex, can be compiled via
    (pdf)latex footnoterange-example.tex
but will need probably at least two compiler runs to get everything right.
`footnoterange-example.tex` can be created by
    `tex footnoterange.dtx`.
`footnoterange.dtx` is at https://www.ctan.org/pkg/footnoterange.

7   Acknowledgements

I (H.-Martin Münch) would like to thank HEIKO OBERDIEK for providing a lot of useful packages (from which I also got everything I know about creating a file in `.dtx` format, OK, say it: copying), FRANK MITTELBACH for several bug reports, for code for improving the package, and for pointing me to the fnpct package as alternative, and WILLIE WONG for reporting a bug and its fix. This package was created as response to question "Compressing consecutive footnote marks" by user001 (https://tex.stackexchange.com/users/10127/user001) on https://tex.stackexchange.com/q/44165.

8   History

[2011/02/11 v0.1ff.]

- Some versions at https://tex.stackexchange.com/q/44165/6865.

[2012/02/17 v1.0a]

- Package created and uploaded to CTAN.

[2018/10/15 v1.0b]

- Fixed/updated minor details.
- Bug fix: Did not work without hyperref, wrong spacefactor.
- Listing the fnpct package as alternative.

[2019/11/24 v1.0c]

- Bug fix: Issue with footnote symbols.

[2023-02-25 v1.1a]

- Converted to UTF-8.

- Updated to [then] current LaTeX format 2022-11-01.

- Example now also demonstrates the usage of footnote-number-representations other than `arabic`: `\Roman`, `\roman`, `\Alph`, `\alph`, `\fnsymbol` (!), especially for more footnotes then A–Z, a–z, ∗–¶.

- Creation of smaller link-boxes explained in the documentation.

- Documentation and README updates.

[2025-01-27 v1.1b]

- Renamed `\fnr@formated` to `\fnr@formatted`.

- Documentation updates.

When you find a mistake or have a suggestion for an improvement of this package, please send an e-mail to the maintainer, thanks! (Please see BUG REPORTS in the README.)

9 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.