Documented Code For testidx v1.0

Nicola L.C. Talbot

Dickimaw Books

http://www.dickimaw-books.com/

2016-10-17

Contents

1 Introduction

This is the documented code for the testidx package. See `testidx-manual.pdf` for the main user guide.

2 Main Package Code

3 Initialisation

```
1 \NeedsTeXFormat{LaTeX2e}
2 \ProvidesPackage{testidx}[2016/10/17 v1.0 (NLCT)]
```

To avoid as much conflict as possible, this package loads the bare minimum, so I'm not using useful packages like etoolbox or pgffor. Just load a few necessities:

```
3 \RequirePackage{color}
```

Need to know if we have UTF-8 support:

```
4 \RequirePackage{ifxetex}
5 \RequirePackage{ifluatex}
```

stidx@ifutfviii

```
6 \newcommand*{\@tstidx@ifutfviii}[2]{%
7   \ifxetex
8     #1%
9   \else
10    \ifluatex
11      #1%
12    \else
13      \@ifundefined{inputencodingname}{#2}%
14      {\ifx\inputencodingname\@tstidx@utfviii#1\else#2\fi}%
15    \fi
16  \fi
17 }
18 \newcommand*{\@tstidx@utfviii}{utf8}
```

rocessasciisort   The first argument is a control sequence in which to store the processed sort string.

```
19 \newcommand*{\tstidxprocessasciisort}{\tstidxprocessasciisortstrip}
```

idxStripAccents

```
20 \newcommand*{\testidxStripAccents}{%
21   \renewcommand*{\tstidxprocessasciisort}{\tstidxprocessasciisortstrip}%
22 }
```

xNoStripAccents

```
23 \newcommand*{\testidxNoStripAccents}{%
24   \renewcommand*{\tstidxprocessasciisort}{\tstidxprocessasciisortnostrip}%
25 }
```

Option to strip accents from sort key (non-UTF-8).

```
26 \DeclareOption{stripaccents}{\testidxStripAccents}
```

Leave the accent commands in the sort key (non-UTF-8).

```
27 \DeclareOption{nostripaccents}{\testidxNoStripAccents}
```

\tstidxquote   Quote character.

```
28 \newcommand{\tstidxquote}{\string"}
```

This is going to cause a problem for the umlauts if we're not using UTF-8, so provide a command to protect the double-quote:

\tstidxumlaut

```
29 \newcommand*{\tstidxumlaut}{%
30   \expandafter\@gobble\string\\\tstidxquote\string"}
```

stidxsortumlaut

```
31 \newcommand*{\tstidxsortumlaut}{%
32   \expandafter\@gobble\string\\\tstidxquote\string"}
```

sortumlautstrip

```
33 \newcommand*{\tstidxsortumlautstrip}{\@firstofone}
```

testidxGermanOn   Switch German option on.

```
34 \newcommand*{\testidxGermanOn}{%
35   \let\@tstidx@ifgerman\@firstoftwo
36   \renewcommand{\tstidxquote}{+}%
37   \renewcommand*{\tstidxumlaut}{\string"}%
38   \renewcommand*{\tstidxsortumlautstrip}{\string"}%
39   \renewcommand*{\tstidxsortumlaut}{\string"}%
40 }
```

estidxGermanOff   Switch German option off.

```
41 \newcommand*{\testidxGermanOff}{%
42   \let\@tstidx@ifgerman\@secondoftwo
43   \renewcommand{\tstidxquote}{\string"}%
44   \renewcommand*{\tstidxumlaut}{%
45   \expandafter\@gobble\string\\\tstidxquote\string"}%
46   \renewcommand*{\tstidxsortumlautstrip}{\@firstofone}%
47   \renewcommand*{\tstidxsortumlaut}{%
48     \expandafter\@gobble\string\\\tstidxquote\string"}%
49 }
```

tstidx@ifgerman

```
50 \newcommand*{\@tstidx@ifgerman}[2]{#2}
```

User may want to run makeindex with the -g switch, so provide german option that will accommodate this.

```
51 \DeclareOption{german}{\testidxGermanOn}
```

Also allow ngerman to do the same:

```
52 \DeclareOption{ngerman}{\testidxGermanOn}
```

Provide an option to counter-act this:

```
53 \DeclareOption{nogerman}{\testidxGermanOff}
```

stidxprocessutf How to deal with UTF-8 words.

```
54 \ifxetex
55   \newcommand*{\tstidxprocessutf}{%
56     \tstidxprocessutfnosanitize
57   }
58 \else
59   \ifluatex
60     \newcommand*{\tstidxprocessutf}{%
61       \tstidxprocessutfnosanitize
62     }
63   \else
64     \newcommand*{\tstidxprocessutf}{%
65       \tstidxprocessutfsanitize
66     }
67   \fi
68 \fi
```

tidx@ifsanitize

```
69 \newcommand*{\@tstidx@ifsanitize}[2]{#1}
```

stidxSanitizeOn Switch the sanitize option on.

```
70 \newcommand*{\testidxSanitizeOn}{%
71   \let\@tstidx@ifsanitize\@firstoftwo
72   \renewcommand*{\tstidxprocessutf}{%
73     \tstidxprocessutfsanitize
74   }%
75 }
```

tidxSanitizeOff Switch the sanitize option off.

```
76 \newcommand*{\testidxSanitizeOff}{%
77   \let\@tstidx@ifsanitize\@secondoftwo
78   \renewcommand*{\tstidxprocessutf}{%
79     \tstidxprocessutfnosanitize
80   }%
81 }
```

Option to switch on the UTF-8 sanitization (irrespective of engine):

```
82 \DeclareOption{sanitize}{\testidxSanitizeOn}
```

Option to switch off the UTF-8 sanitization (irrespective of engine):

```
83 \DeclareOption{nosanitize}{\testidxSanitizeOff}
```

Option to show the actual indexing argument.

ftestidxverbose

```
84 \newif\iftestidxverbose
85 \testidxverbosefalse
86 \DeclareOption{verbose}{\testidxverbosetrue}
87 \DeclareOption{noverbose}{\testidxverbosefalse}
```

4

Option to hide the markers.

```
88 \newif\iftestidxshowmarks
89 \testidxshowmarkstrue
90 \DeclareOption{showmarks}{\testidxshowmarkstrue}
91 \DeclareOption{noshowmarks}{\testidxshowmarksfalse}
92 \DeclareOption{hidemarks}{\testidxshowmarksfalse}
```

Option to skip the test encaps.

```
93 \newif\if@tstidx@use@encaps
94 \@tstidx@use@encapstrue
95 \DeclareOption{testencaps}{\@tstidx@use@encapstrue}
96 \DeclareOption{notestencaps}{\@tstidx@use@encapsfalse}
```

Process options:

```
97 \ProcessOptions
```

Find out if various packages have been loaded.

```
98 \AtBeginDocument{%
99   \@ifpackageloaded{amsmath}%
100   {\let\@tstidx@ifamsmath\@firstoftwo}%
101   {\let\@tstidx@ifamsmath\@secondoftwo}%
```

```
102   \@ifpackageloaded{inputenc}
103   {
104     \let\@tstidx@if@inputenc\@firstoftwo
105   }%
106   {%
107     \ifxetex
108       \let\@tstidx@if@inputenc\@firstoftwo
109     \else
110       \ifluatex
111         \let\@tstidx@if@inputenc\@firstoftwo
112       \else
113         \let\@tstidx@if@inputenc\@secondoftwo
114       \fi
115     \fi
116   }%
```

Some of the accent commands don't work with the default OT1 encoding, so provide a convenient test.

```
117   \ifxetex
118     \let\@tstidx@if@notOT@ne\@firstoftwo
119   \else
```

5

```
120    \ifluatex
121      \let\@tstidx@if@notOT@ne\@firstoftwo
122    \else
123      \newcommand*{\@tstidx@OT@ne}{OT1}%
124      \edef\@tstidx@enc{\encodingdefault}%
125      \ifx\@tstidx@OT@ne\@tstidx@enc
126        \let\@tstidx@if@notOT@ne\@secondoftwo
127      \else
128        \let\@tstidx@if@notOT@ne\@firstoftwo
129      \fi
130    \fi
131  \fi
132 }
```

4 Markup Commands

String is used in case any of these characters have been made active.

\tstidxactual   Actual character.

```
133 \newcommand{\tstidxactual}{\string @}
```

\tstidxlevel   Level character.

```
134 \newcommand{\tstidxlevel}{\string!}
```

\tstidxencap   Encap character.

```
135 \newcommand{\tstidxencap}{\string|}
```

\tstidxopenrange   Start range character.

```
136 \newcommand{\tstidxopenrange}{\string(}
```

\tstidxcloserange   End range character.

```
137 \newcommand{\tstidxcloserange}{\string)}
```

Some of the examples use words with extended Latin characters. Provide a way of simulating the user explicitly writing, for example, \index{\""Angelholm}.

\tstidxprocessascii   The first argument is a control sequence in which to store the processed string.

```
138 \newcommand*{\tstidxprocessascii}[2]{%
139    {%
140      \let\"\tstidxumlaut
141      \def\'{\string\'}%
142      \def\`{\string\`}%
143      \def\.{\string\.}%
144      \def\={\string\=}%
145      \def\^{\string\^}%
146      \def\~{\string\~}%
147      \def\c{\string\c}%
148      \def\r{\string\r}%
```

6

```
149    \def\b{\string\b}%
150    \def\d{\string\d}%
151    \def\H{\string\H}%
152    \def\k{\string\k}%
153    \def\u{\string\u}%
154    \def\v{\string\v}%
155    \def\O{\string\O\space}%
156    \def\o{\string\o\space}%
157    \def\l{\string\l\space}%
158    \def\L{\string\L\space}%
159    \def\i{\string\i\space}%
160    \def\AA{\string\AA\space}%
161    \def\aa{\string\aa\space}%
162    \def\ae{\string\ae\space}%
163    \def\AE{\string\AE\space}%
164    \def\oe{\string\oe\space}%
165    \def\OE{\string\OE\space}%
166    \def\ss{\string\ss\space}%
167    \def\SS{\string\SS\space}%
168    \def\th{\string\th\space}%
169    \def\TH{\string\TH\space}%
170    \def\dh{\string\dh\space}%
171    \def\DH{\string\DH\space}%
172    \def\dj{\string\dj\space}%
173    \def\DJ{\string\DJ\space}%
174    \def\ng{\string\ng\space}%
175    \def\NG{\string\NG\space}%
176    \protected@xdef#1{#2}%
177  }%
178 }
```

```
179 \newcommand*{\tstidxprocessasciisortnostrip}[2]{%
180   {%
181     \let\"\tstidxsortumlaut
182     \protected@xdef#1{#2}%
183   }%
184 }
```

```
185 \newcommand*{\tstidxprocessasciisortstrip}[2]{%
186   {%
187     \let\"\tstidxsortumlautstrip
188     \let\'\@firstofone
189     \let\`\@firstofone
190     \let\.\@firstofone
191     \let\=\@firstofone
192     \let\^\@firstofone
193     \let\~\@firstofone
```

7

```
194       \let\c\@firstofone
195       \let\r\@firstofone
196       \let\b\@firstofone
197       \let\d\@firstofone
198       \let\H\@firstofone
199       \let\k\@firstofone
200       \let\u\@firstofone
201       \let\v\@firstofone
202       \def\O{O}%
203       \def\o{o}%
204       \def\l{l}%
205       \def\L{L}%
206       \def\i{i}%
207       \def\AA{A}%
208       \def\aa{a}%
209       \def\ae{ae}%
210       \def\AE{AE}%
211       \def\oe{oe}%
212       \def\OE{OE}%
213       \def\ss{ss}%
214       \def\SS{SS}%
215       \def\th{th}%
216       \def\TH{TH}%
217       \def\dh{dh}%
218       \def\DH{DH}%
219       \def\dj{dj}%
220       \def\DJ{DJ}%
221       \def\ng{ng}%
222       \def\NG{NG}%
223       \protected@xdef#1{#2}%
224     }%
225 }
```

cessutfsanitize   Sanitize UTF-8 strings.

```
226 \newcommand*{\tstidxprocessutfsanitize}[2]{%
227   \def#1{#2}%
228   \@onelevel@sanitize#1%
229 }
```

ssutfnosanitize   Don't sanitize UTF-8 strings.

```
230 \newcommand*{\tstidxprocessutfnosanitize}[2]{%
231   \def#1{#2}%
232 }
```

tstidxencaptext   Wrap text in the command corresponding to the given encap.

```
233 \newcommand*{\tstidxencaptext}[2]{%
234   \@ifundefined{#1}%
235   {%
236     \PackageError{testidx}{Encap value '#1' doesn't correspond
```

8

```
237    to a known command}{}%
238  }%
239  {%
240    \csname#1\endcsname{#2}%
241  }%
242 }
```

\tstidxtext   Identify text next to the index command. This will also be wrapped around the encap value if
               supplied.

```
243 \newcommand*{\tstidxtext}[1]{\textcolor[gray]{0.3}{#1}}
```

Provide three different encap values for testing:

\tstidxencapi

```
244 \newcommand*{\tstidxencapi}[1]{\textcolor{blue}{#1}}
```

\tstidxencapii

```
245 \newcommand*{\tstidxencapii}[1]{\textcolor{cyan}{#1}}
```

\tstidxencapiii

```
246 \newcommand*{\tstidxencapiii}[1]{\textcolor{magenta}{#1}}
```

stidxensuretext   Ensure in text mode.

```
247 \newcommand*{\tstidxensuretext}[1]{%
248 \ifmmode
249   \@tstidx@ifamsmath{\text{#1}}{\mbox{#1}}%
250 \else
251   #1%
252 \fi
253 }
```

Markers to show where the \index commands are used. Preferable to have markers that
adjust to font size, and only use commands provided by LaTeX kernel to reduce package re-
quirements.

\tstidxmarker   No range or cross-reference. I initially used \textperiodcentered for the marker, but some
                 fonts make it a bit too spacey for this purpose.

```
254 \newcommand*{\tstidxmarker}{%
255 \tstidxensuretext{\raisebox{.65ex}{.}}%
256 }
```

tstidxsubmarker   Sub-entry.

```
257 \newcommand*{\tstidxsubmarker}{%
258 \tstidxensuretext{\strut\smash{\raisebox{-1.5ex}{\v{}}}}%
259 }
```

9

idxsubsubmarker   Sub-sub-entry.

260 \newcommand*{\tstidxsubsubmarker}{%
261 \tstidxensuretext{\strut\makebox[0pt][l]{\smash{\raisebox{-1ex}{\v{}}}}%
262 \smash{\raisebox{-1.5ex}{\v{}}}}%
263 }

stidxopenmarker   Start of a range.

264 \newcommand*{\tstidxopenmarker}{%
265   \tstidxensuretext
266   {%
267   \setlength{\unitlength}{1ex}%
268   \begin{picture}(.5,2)
269   \put(\@halfwidth\@gobble,0){\line(0,1){2}}
270   \put(0,2){\line(1,0){.5}}
271   \end{picture}%
272   \hspace{\@halfwidth}%
273   }%
274 }

tidxclosemarker   End of a range.

275 \newcommand*{\tstidxclosemarker}{%
276   \tstidxensuretext
277   {%
278   \setlength{\unitlength}{1ex}%
279   \begin{picture}(.5,2)
280   \put(\@halfwidth\@gobble,0){\line(1,0){.5}}
281   \put(.5,0){\line(0,1){2}}
282   \end{picture}%
283   \hspace{\@halfwidth}%
284   }%
285 }

dxopensubmarker   Start of a range for sub-entries.

286 \newcommand*{\tstidxopensubmarker}{%
287 \tstidxensuretext
288 {%
289   \setlength{\unitlength}{1ex}%
290   \begin{picture}(.4,1.6)
291   \put(\@halfwidth\@gobble,0){\line(0,1){1.6}}
292   \put(0,1.6){\line(1,0){.4}}
293   \end{picture}%
294   \hspace{\@halfwidth}%
295   }%
296 }

xclosesubmarker   End of a range for sub-entries.

297 \newcommand*{\tstidxclosesubmarker}{%
298 \tstidxensuretext
299 {%

10

```
300    \setlength{\unitlength}{1ex}%
301    \begin{picture}(.4,1.6)
302    \put(\@halfwidth\@gobble,0){\line(1,0){.4}}
303    \put(.4,0){\line(0,1){1.6}}
304    \end{picture}%
305    \hspace{\@halfwidth}%
306  }%
307 }
```

Start of a range for sub-sub-entries.

```
308 \newcommand*{\tstidxopensubsubmarker}{%
309  \tstidxensuretext
310  {%
311    \setlength{\unitlength}{1ex}%
312    \begin{picture}(.3,1.2)
313    \put(\@halfwidth\@gobble,0){\line(0,1){1.2}}
314    \put(0,1.2){\line(1,0){.3}}
315    \end{picture}%
316    \hspace{\@halfwidth}%
317  }%
318 }
```

End of a range for sub-sub-entries.

```
319 \newcommand*{\tstidxclosesubsubmarker}{%
320  \tstidxensuretext
321  {%
322    \setlength{\unitlength}{1ex}%
323    \begin{picture}(.3,1.2)
324    \put(\@halfwidth\@gobble,0){\line(1,0){.3}}
325    \put(.3,0){\line(0,1){1.2}}
326    \end{picture}%
327    \hspace{\@halfwidth}%
328  }%
329 }
```

Cross-reference.

```
330 \newcommand*{\tstidxseemarker}{\^{}}
```

\tstidxseeref Cross-references are identified with the marker and with a marginal note with the term being indexed and the argument of the "see" encap.

```
331 \newcommand*{\tstidxseeref}[3]{\tstidxseemarker
332  \marginpar{\strut\raggedright\footnotesize
333    \normalcolor\tstidxseemarker#1, \csname#2\endcsname{#3}{}}%
334 }
```

Cross-reference.

```
335 \newcommand*{\tstidxsubseemarker}{%
336  \tstidxensuretext{\makebox[0pt][l]{\tstidxsubmarker}%
```

```
337   \tstidxseemarker}%
338 }
```

tstidxsubseeref   Cross-references are identified with the marker and with a marginal note with the term being
                   indexed and the argument of the "see" encap.

```
339 \newcommand*{\tstidxsubseeref}[4]{\tstidxsubseemarker
340   \marginpar{\strut\raggedright\footnotesize
341     \normalcolor\tstidxsubseemarker#1\tstidxsubseesep#2, \csname#3\endcsname{#4}{}}%
342 }
```

tstidxsubseesep   Separator used in the above.

```
343 \newcommand*{\tstidxsubseesep}{\,$\triangleright$\,}
```

\tstindex   Allow user to change \index to something else. For example, add an optional argument if
             multiple indexes are present.

```
344 \newcommand*{\tstindex}{\index}
```

\@tstindex

```
345 \newcommand*{\@tstindex}[1]{%
346   \iftestidxverbose
347     \def\@tstindex@arg{#1}%
348     \@onelevel@sanitize\@tstindex@arg
349     \testidxverbosefmt{\@tstindex@arg}%
350   \fi
351   \tstindex{#1}%
352 }
```

stidxverbosefmt

```
353 \newcommand*{\testidxverbosefmt}[1]{%
354   \expandafter\def\expandafter\@tstidx@tmp\expandafter{\tstindex}%
355   \@onelevel@sanitize\@tstidx@tmp
356   \tstidxensuretext{%
357     \discretionary{}{}{}%
358     {\footnotesize\texttt{\@tstidx@tmp
359      \expandafter\@gobble\string\{#1\expandafter\@gobble\string\}}}%
360     \discretionary{}{}{}%
361   }%
362 }
```

\tstidxqt   Nothing to do with indexing, but just provides semantic markup for quotes.

```
363 \newcommand*{\tstidxqt}[1]{''#1''}
```

\tstidxdash

```
364 \newcommand*{\tstidxdash}{\,---\,}
```

\tstidxfootnote

```
365 \newcommand*{\tstidxfootnote}{\footnote}
```

5 Convenience Commands

These commands are provided for conveniently marking various aspects of the dummy text.

\tstidxfmtpost

> `\tstidxfmtpost{⟨text⟩}{⟨fmt cs⟩}{⟨encap⟩}`

Index an entry that needs a formatting command.

```
366 \newcommand*{\tstidxfmtpost}[3]{%
367   \tstindexpost[#1]{\protect#2{#1}}{#3}{#2{#1}}%
368 }
```

stidxfmtopenpost

> `\tstidxfmtopenpost{⟨text⟩}{⟨fmt cs⟩}{⟨encap⟩}`

Index an entry that needs a formatting command.

```
369 \newcommand*{\tstidxfmtopenpost}[3]{%
370   \tstindexopenpost[#1]{\protect#2{#1}}{#3}{#2{#1}}%
371 }
```

tidxfmtclosepost

> `\tstidxfmtclosepost{⟨text⟩}{⟨fmt cs⟩}{⟨encap⟩}`

Index an entry that needs a formatting command.

```
372 \newcommand*{\tstidxfmtclosepost}[3]{%
373   \tstindexclosepost[#1]{\protect#2{#1}}{#3}{#2{#1}}%
374 }
```

\tstidxfmtpre

> `\tstidxfmtpre{⟨text⟩}{⟨fmt cs⟩}{⟨encap⟩}`

Index an entry that needs a formatting command.

```
375 \newcommand*{\tstidxfmtpre}[3]{%
376   \tstindexpre[#1]{\protect#2{#1}}{#3}{#2{#1}}%
377 }
```

tstidxfmtopenpre

> `\tstidxfmtopenpre{⟨text⟩}{⟨fmt cs⟩}{⟨encap⟩}`

Index an entry that needs a formatting command.

```
378 \newcommand*{\tstidxfmtopenpre}[3]{%
379   \tstindexopenpre[#1]{\protect#2{#1}}{#3}{#2{#1}}%
380 }
```

stidxfmtclosepre

> `\tstidxfmtclosepre{⟨text⟩}{⟨fmt cs⟩}{⟨encap⟩}`

Index an entry that needs a formatting command.

```
381 \newcommand*{\tstidxfmtclosepre}[3]{%
382   \tstindexclosepre[#1]{\protect#2{#1}}{#3}{#2{#1}}%
383 }
```

`\tstidxutf{⟨display⟩}{⟨ascii⟩}{⟨utf8⟩}{⟨encap⟩}{⟨idx cs⟩}`

Index a word with UTF-8 characters.

```
384 \newcommand*{\tstidxutf}[5]{%
385   \def\@tstidx@text{#1}%
386   \@tstidx@ifutfviii
387   {%
388     \ifx\@tstidx@text\@empty
389       \def\@tstidx@text{#3}%
390     \fi
391     \tstidxprocessutf{\@tstidx@utf}{#3}%
392     \protected@edef\@tstidx@doidx{%
393       \noexpand#5{\unexpanded\expandafter{\@tstidx@utf}}{#4}%
394         {\@tstidx@text}%
395     }%
396   }%
397   {%
398     \ifx\@tstidx@text\@empty
399       \def\@tstidx@text{#2}%
400     \fi
401     \tstidxprocessascii{\@tstidx@ascii}{#2}%
402     \tstidxprocessasciisort{\@tstidx@asciisort}{#2}%
403     \protected@edef\@tstidx@doidx{%
404       \noexpand#5[\unexpanded\expandafter{\@tstidx@asciisort}]%
405         {\unexpanded\expandafter{\@tstidx@ascii}}{#4}%
406         {\@tstidx@text}%
407     }%
408   }%
409   \@tstidx@doidx
410 }
```

`\tstidxsubutf{⟨display⟩}{⟨ascii⟩}{⟨utf8⟩}{⟨sub-ascii⟩}{⟨sub-utf8⟩}`
`{⟨encap⟩}{⟨idx cs⟩}`

First level sub-entry.

```
411 \newcommand*{\tstidxsubutf}[7]{%
412   \def\@tstidx@text{#1}%
413   \@tstidx@ifutfviii
414   {%
415     \ifx\@tstidx@text\@empty
416       \def\@tstidx@text{#3}%
```

```
417      \fi
418      \tstidxprocessutf{\@tstidx@utf}{#3}%
419      \tstidxprocessutf{\@tstidx@subutf}{#5}%
420      \protected@edef\@tstidx@doidx{%
421        \noexpand#7{\unexpanded\expandafter{\@tstidx@utf}}%
422          {\unexpanded\expandafter{\@tstidx@subutf}}%
423          {#6}%
424          {\@tstidx@text}%
425      }%
426    }%
427    {%
428      \ifx\@tstidx@text\@empty
429        \def\@tstidx@text{#2}%
430      \fi
431      \tstidxprocessascii{\@tstidx@ascii}{#2}%
432      \tstidxprocessasciisort{\@tstidx@asciisort}{#2}%
433      \tstidxprocessascii{\@tstidx@subascii}{#4}%
434      \tstidxprocessasciisort{\@tstidx@subasciisort}{#4}%
435      \protected@edef\@tstidx@doidx{%
436        \noexpand#7[\unexpanded\expandafter{\@tstidx@asciisort}]%
437          {\unexpanded\expandafter{\@tstidx@ascii}}%
438          [\unexpanded\expandafter{\@tstidx@subasciisort}]%
439          {\unexpanded\expandafter{\@tstidx@subascii}}%
440          {#6}%
441          {\@tstidx@text}%
442      }%
443    }%
444    \@tstidx@doidx
445 }
```

\tstidxutfpost

┌───┐
│ \tstidxutfpost[⟨display⟩]{⟨ascii⟩}{⟨utf8⟩}{⟨encap⟩}   │
└───┘

Index a word with UTF-8 characters.

```
446 \newcommand*{\tstidxutfpost}[4][]{%
447   \tstidxutf{#1}{#2}{#3}{#4}{\tstindexpost}%
448 }
```

stidxutfopenpost

┌───┐
│ \tstidxutfopenpost[⟨display⟩]{⟨ascii⟩}{⟨utf8⟩}{⟨encap⟩}   │
└───┘

Index a word with UTF-8 characters.

```
449 \newcommand*{\tstidxutfopenpost}[4][]{%
450   \tstidxutf{#1}{#2}{#3}{#4}{\tstindexopenpost}%
451 }
```

tidxutfclosepost

┌───┐
│ \tstidxutfclosepost[⟨display⟩]{⟨ascii⟩}{⟨utf8⟩}{⟨encap⟩}   │
└───┘

Index a word with UTF-8 characters.

```
452 \newcommand*{\tstidxutfclosepost}[4][]{%
453   \tstidxutf{#1}{#2}{#3}{#4}\tstindexclosepost}%
454 }
```

\tstidxutfpre

```
\tstidxutfpre[⟨display⟩]{⟨ascii⟩}{⟨utf8⟩}{⟨encap⟩}
```

Index a word with UTF-8 characters.

```
455 \newcommand*{\tstidxutfpre}[4][]{%
456   \tstidxutf{#1}{#2}{#3}{#4}\tstindexpre}%
457 }
```

tstidxutfopenpre

```
\tstidxutfopenpre[⟨display⟩]{⟨ascii⟩}{⟨utf8⟩}{⟨encap⟩}
```

Index a word with UTF-8 characters.

```
458 \newcommand*{\tstidxutfopenpre}[4][]{%
459   \tstidxutf{#1}{#2}{#3}{#4}\tstindexopenpre}%
460 }
```

stidxutfclosepre

```
\tstidxutfclosepre[⟨display⟩]{⟨ascii⟩}{⟨utf8⟩}{⟨encap⟩}
```

Index a word with UTF-8 characters.

```
461 \newcommand*{\tstidxutfclosepre}[4][]{%
462   \tstidxutf{#1}{#2}{#3}{#4}\tstindexclosepre}%
463 }
```

tstidxutfsubpost

```
\tstidxutfsubpost[⟨display⟩]{⟨ascii⟩}{⟨utf8⟩}{⟨sub-ascii⟩}{⟨sub-utf8⟩}
{⟨encap⟩}
```

Sub-entry.

```
464 \newcommand*{\tstidxutfsubpost}[6][]{%
465   \tstidxsubutf{#1}{#2}{#3}{#4}{#5}{#6}\tstsubindexpost}%
466 }
```

dxutfsubopenpost

```
\tstidxutfsubopenpost[⟨display⟩]{⟨ascii⟩}{⟨utf8⟩}{⟨sub-ascii⟩}
{⟨sub-utf8⟩}{⟨encap⟩}
```

Sub-entry.

```
467 \newcommand*{\tstidxutfsubopenpost}[6][]{%
468   \tstidxsubutf{#1}{#2}{#3}{#4}{#5}{#6}\tstsubindexopenpost}%
469 }
```

xutfsubclosepost `\tstidxutfsubclosepost[⟨display⟩]{⟨ascii⟩}{⟨utf8⟩}{⟨sub-ascii⟩}`
`{⟨sub-utf8⟩}{⟨encap⟩}`

Sub-entry.
```
470 \newcommand*{\tstidxutfsubclosepost}[6][]{%
471   \tstidxsubutf{#1}{#2}{#3}{#4}{#5}{#6}{\tstsubindexclosepost}%
472 }
```

\tstidxutfsubpre `\tstidxutfsubpre[⟨display⟩]{⟨ascii⟩}{⟨utf8⟩}{⟨sub-ascii⟩}{⟨sub-utf8⟩}`
`{⟨encap⟩}`

Sub-entry.
```
473 \newcommand*{\tstidxutfsubpre}[6][]{%
474   \tstidxsubutf{#1}{#2}{#3}{#4}{#5}{#6}{\tstsubindexpre}%
475 }
```

idxutfsubopenpre `\tstidxutfsubopenpre[⟨display⟩]{⟨ascii⟩}{⟨utf8⟩}{⟨sub-ascii⟩}{⟨sub-utf8⟩}`
`{⟨encap⟩}`

Sub-entry.
```
476 \newcommand*{\tstidxutfsubopenpre}[6][]{%
477   \tstidxsubutf{#1}{#2}{#3}{#4}{#5}{#6}{\tstsubindexopenpre}%
478 }
```

dxutfsubclosepre `\tstidxutfsubclosepre[⟨display⟩]{⟨ascii⟩}{⟨utf8⟩}{⟨sub-ascii⟩}`
`{⟨sub-utf8⟩}{⟨encap⟩}`

Sub-entry.
```
479 \newcommand*{\tstidxutfsubclosepre}[6][]{%
480   \tstidxsubutf{#1}{#2}{#3}{#4}{#5}{#6}{\tstsubindexclosepre}%
481 }
```

\tstidxcsfmt Display a control sequence.
```
482 \newcommand*{\tstidxcsfmt}[1]{\texttt{\char'\\#1}}
```

\tstidxcs Display and index a control sequence. The optional argument is the encap
```
483 \if@tstidx@use@encaps
484 \newcommand*{\tstidxcs}[2][tstidxencapi]{%
485   \tstidxfmtpost{#2}{\tstidxcsfmt}{#1}%
486 }
487 \else
488 \newcommand*{\tstidxcs}[2][]{%
489   \tstidxfmtpost{#2}{\tstidxcsfmt}{#1}%
490 }
```

17

```
491 \fi
```

`\tstidxopencs` As above but starts a range.

```
492 \if@tstidx@use@encaps
493   \newcommand*{\tstidxopencs}[2][tstidxencapi]{%
494     \tstidxfmtopenpost{#2}{\tstidxcsfmt}{#1}%
495   }
496 \else
497   \newcommand*{\tstidxopencs}[2][]{%
498     \tstidxfmtopenpost{#2}{\tstidxcsfmt}{#1}%
499   }
500 \fi
```

`\tstidxclosecs` As above but ends a range.

```
501 \if@tstidx@use@encaps
502   \newcommand*{\tstidxclosecs}[2][tstidxencapi]{%
503     \tstidxfmtclosepost{#2}{\tstidxcsfmt}{#1}%
504   }
505 \else
506   \newcommand*{\tstidxclosecs}[2][]{%
507     \tstidxfmtclosepost{#2}{\tstidxcsfmt}{#1}%
508   }
509 \fi
```

`\tstidxencapcsn` Display and index a control sequence name (without the initial backslash). The optional argument is the encap

```
510 \if@tstidx@use@encaps
511   \newcommand*{\tstidxencapcsn}[2][tstidxencapi]{%
512     \tstindexpost[#2 (#2)]%
513     {\texttt{#2} (\protect\tstidxcsfmt{#2})}{#1}{\texttt{#2}}%
514     \tstsubindexpost{encap}[#2]{\texttt{#2}}{#1}{}%
515   }
516 \else
517   \newcommand*{\tstidxencapcsn}[2][]{%
518     \tstindexpost[#2 (#2)]%
519     {\texttt{#2} (\protect\tstidxcsfmt{#2})}{#1}{\texttt{#2}}%
520     \tstsubindexpost{encap}[#2]{\texttt{#2}}{#1}{}%
521   }
522 \fi
```

`\tstidxopencsn` As above but starts a range.

```
523 \if@tstidx@use@encaps
524   \newcommand*{\tstidxopencsn}[2][tstidxencapi]{%
525     \tstindexopenpost[#2 (#2)]%
526     {\texttt{#2} (\protect\tstidxcsfmt{#2})}{#1}{\texttt{#2}}%
527   }
528 \else
529   \newcommand*{\tstidxopencsn}[2][]{%
530     \tstindexopenpost[#2 (#2)]%
```

18

```
531     {\texttt{#2} (\protect\tstidxcsfmt{#2}))}{#1}{\texttt{#2}}%
532   }
533 \fi
```

\tstidxclosecsn   As above but ends a range.
```
534 \if@tstidx@use@encaps
535   \newcommand*{\tstidxclosecsn}[2][tstidxencapi]{%
536     \tstindexclosepost[#2 (#2)]%
537     {\texttt{#2} (\protect\tstidxcsfmt{#2}))}{#1}{\texttt{#2}}%
538   }
539 \else
540   \newcommand*{\tstidxclosecsn}[2][]{%
541     \tstindexclosepost[#2 (#2)]%
542     {\texttt{#2} (\protect\tstidxcsfmt{#2}))}{#1}{\texttt{#2}}%
543   }
544 \fi
```

\tstidxenvfmt   Display an environment name.
```
545 \newcommand*{\tstidxenvfmt}[1]{\texttt{#1}}
```

\tstidxenv   Display and index an environment name.
```
546 \if@tstidx@use@encaps
547   \newcommand*{\tstidxenv}[2][tstidxencapi]{%
548     \tstindexpost[#2 environment]%
549     {\protect\tstidxenvfmt{#2} environment}{#1}%
550     {\tstidxenvfmt{#2}}%
551   }
552 \else
553   \newcommand*{\tstidxenv}[2][]{%
554     \tstindexpost[#2 environment]%
555     {\protect\tstidxenvfmt{#2} environment}{#1}%
556     {\tstidxenvfmt{#2}}%
557   }
558 \fi
```

\tstidxopenenv   As above but starts a range.
```
559 \if@tstidx@use@encaps
560   \newcommand*{\tstidxopenenv}[2][tstidxencapi]{%
561     \tstindexopenpost[#2 environment]%
562     {\protect\tstidxenvfmt{#2} environment}{#1}%
563     {\tstidxenvfmt{#2}}%
564   }
565 \else
566   \newcommand*{\tstidxopenenv}[2][]{%
567     \tstindexopenpost[#2 environment]%
568     {\protect\tstidxenvfmt{#2} environment}{#1}%
569     {\tstidxenvfmt{#2}}%
570   }
571 \fi
```

`\tstidxcloseenv`   As above but ends a range.

```
572 \if@tstidx@use@encaps
573   \newcommand*{\tstidxcloseenv}[2][tstidxencapi]{%
574     \tstindexclosepost[#2 environment]%
575     {\protect\tstidxenvfmt{#2} environment}{#1}%
576     {\tstidxenvfmt{#2}}%
577   }
578 \else
579   \newcommand*{\tstidxcloseenv}[2][]{%
580     \tstindexclosepost[#2 environment]%
581     {\protect\tstidxenvfmt{#2} environment}{#1}%
582     {\tstidxenvfmt{#2}}%
583   }
584 \fi
```

`\tstidxappfmt`   Display an application name.

```
585 \newcommand*{\tstidxappfmt}[1]{\textttt{#1}}
```

`\tstidxapp`   Display and index an application name.

```
586 \if@tstidx@use@encaps
587   \newcommand*{\tstidxapp}[2][tstidxencapi]{%
588     \tstidxfmtpost{#2}{\tstidxappfmt}{#1}%
589     \tstsubindexpost{applications}[#2]{\protect\tstidxappfmt{#2}}{#1}{}%
590   }
591 \else
592   \newcommand*{\tstidxapp}[2][]{%
593     \tstidxfmtpost{#2}{\tstidxappfmt}{#1}%
594     \tstsubindexpost{applications}[#2]{\protect\tstidxappfmt{#2}}{#1}{}%
595   }
596 \fi
```

`\tstidxopenapp`   As above but starts a range.

```
597 \if@tstidx@use@encaps
598   \newcommand*{\tstidxopenapp}[2][tstidxencapi]{%
599     \tstidxfmtopenpost{#2}{\tstidxappfmt}{#1}%
600     \tstsubindexopenpost{applications}[#2]{\protect\tstidxappfmt{#2}}{#1}{}%
601   }
602 \else
603   \newcommand*{\tstidxopenapp}[2][]{%
604     \tstidxfmtopenpost{#2}{\tstidxappfmt}{#1}%
605     \tstsubindexopenpost{applications}[#2]{\protect\tstidxappfmt{#2}}{#1}{}%
606   }
607 \fi
```

`\tstidxcloseapp`   As above but ends a range.

```
608 \if@tstidx@use@encaps
609   \newcommand*{\tstidxcloseapp}[2][tstidxencapi]{%
610     \tstidxfmtclosepost{#2}{\tstidxappfmt}{#1}%
611     \tstsubindexclosepost{applications}[#2]{\protect\tstidxappfmt{#2}}{#1}{}%
```

```
612   }
613 \else
614   \newcommand*{\tstidxcloseapp}[2][]{%
615     \tstidxfmtclosepost{#2}{\tstidxappfmt}{#1}%
616     \tstsubindexclosepost{applications}[#2]{\protect\tstidxappfmt{#2}}{#1}{}%
617   }
618 \fi
```

tstidxappoptfmt   Display an application option.

```
619 \newcommand*{\tstidxappoptfmt}[1]{\texttt{#1}}
```

\tstidxappopt   Display and index an application option.

```
620 \if@tstidx@use@encaps
621   \newcommand*{\tstidxappopt}[3][tstidxencapiii]{%
622     \tstsubindexpost[#2]{\protect\tstidxappfmt{#2}}%
623       [#3]{\protect\tstidxappoptfmt{#3}}{#1}{\tstidxappoptfmt{#3}}%
624     \tstsubsubindexpost{applications}[#2]{\protect\tstidxappfmt{#2}}%
625       [#3]{\protect\tstidxappoptfmt{#3}}{#1}{}%
626   }
627 \else
628   \newcommand*{\tstidxappopt}[3][]{%
629     \tstsubindexpost[#2]{\protect\tstidxappfmt{#2}}%
630       [#3]{\protect\tstidxappoptfmt{#3}}{#1}{\tstidxappoptfmt{#3}}%
631     \tstsubsubindexpost{applications}[#2]{\protect\tstidxappfmt{#2}}%
632       [#3]{\protect\tstidxappoptfmt{#3}}{#1}{}%
633   }
634 \fi
```

stidxopenappopt   As above but start a range.

```
635 \if@tstidx@use@encaps
636   \newcommand*{\tstidxopenappopt}[3][tstidxencapiii]{%
637     \tstsubindexopenpost[#2]{\protect\tstidxappfmt{#2}}%
638       [#3]{\protect\tstidxappoptfmt{#3}}{#1}{\tstidxappoptfmt{#3}}%
639     \tstsubsubindexopenpost{applications}[#2]%
640       {\protect\tstidxappfmt{#2}}%
641       [#3]{\protect\tstidxappoptfmt{#3}}{#1}{}%
642   }
643 \else
644   \newcommand*{\tstidxopenappopt}[3][]{%
645     \tstsubindexopenpost[#2]{\protect\tstidxappfmt{#2}}%
646       [#3]{\protect\tstidxappoptfmt{#3}}{#1}{\tstidxappoptfmt{#3}}%
647     \tstsubsubindexopenpost{applications}[#2]%
648       {\protect\tstidxappfmt{#2}}%
649       [#3]{\protect\tstidxappoptfmt{#3}}{#1}{}%
650   }
651 \fi
```

tidxcloseappopt   As above but end a range.

```
652 \if@tstidx@use@encaps
```

```
653  \newcommand*{\tstidxcloseappopt}[3][tstidxencapiii]{%
654    \tstsubindexclosepost[#2]{\protect\tstidxappfmt{#2}}%
655      [#3]{\protect\tstidxappoptfmt{#3}}{#1}{\tstidxappoptfmt{#3}}%
656    \tstsubsubindexclosepost{applications}[#2]%
657      {\protect\tstidxappfmt{#2}}%
658      [#3]{\protect\tstidxappoptfmt{#3}}{#1}{}%
659  }
660 \else
661    \newcommand*{\tstidxcloseappopt}[3][]{%
662    \tstsubindexclosepost[#2]{\protect\tstidxappfmt{#2}}%
663      [#3]{\protect\tstidxappoptfmt{#3}}{#1}{\tstidxappoptfmt{#3}}%
664    \tstsubsubindexclosepost{applications}[#2]%
665      {\protect\tstidxappfmt{#2}}%
666      [#3]{\protect\tstidxappoptfmt{#3}}{#1}{}%
667  }
668 \fi
```

`\tstidxstyfmt`   Display a package name.

```
669 \newcommand*{\tstidxstyfmt}[1]{\texttt{#1}}
```

`\tstidxsty`   Display and index a package name.

```
670 \if@tstidx@use@encaps
671    \newcommand*{\tstidxsty}[2][tstidxencapiii]{%
672    \tstindexpost[#2 package]%
673      {\protect\tstidxstyfmt{#2} package}{#1}{\tstidxstyfmt{#2}}%
674    \tstsubindexpost{packages}[#2 package]%
675      {\protect\tstidxstyfmt{#2} package}{#1}{}%
676  }
677 \else
678    \newcommand*{\tstidxsty}[2][]{%
679    \tstindexpost[#2 package]%
680      {\protect\tstidxstyfmt{#2} package}{#1}{\tstidxstyfmt{#2}}%
681    \tstsubindexpost{packages}[#2 package]%
682      {\protect\tstidxstyfmt{#2} package}{#1}{}%
683  }
684 \fi
```

`\tstidxopensty`   As above but starts a range.

```
685 \if@tstidx@use@encaps
686    \newcommand*{\tstidxopensty}[2][tstidxencapiii]{%
687    \tstindexopenpost[#2 package]{\protect\tstidxstyfmt{#2} package}{#1}%
688      {\tstidxstyfmt{#2}}%
689    \tstsubindexopenpost{packages}[#2 package]%
690      {\protect\tstidxstyfmt{#2} package}{#1}{}%
691  }
692 \else
693    \newcommand*{\tstidxopensty}[2][]{%
694    \tstindexopenpost[#2 package]{\protect\tstidxstyfmt{#2} package}{#1}%
695      {\tstidxstyfmt{#2}}%
```

22

```
696      \tstsubindexopenpost{packages}[#2 package]%
697        {\protect\tstidxstyfmt{#2} package}{#1}{}%
698    }
699 \fi
```

\tstidxclosesty   As above but ends a range.

```
700 \if@tstidx@use@encaps
701   \newcommand*{\tstidxclosesty}[2][tstidxencapiii]{%
702     \tstindexclosepost[#2 package]{\protect\tstidxstyfmt{#2} package}{#1}%
703       {\tstidxstyfmt{#2}}%
704     \tstsubindexclosepost{packages}[#2 package]%
705       {\protect\tstidxstyfmt{#2} package}{#1}{}%
706   }
707 \else
708   \newcommand*{\tstidxclosesty}[2][]{%
709     \tstindexclosepost[#2 package]{\protect\tstidxstyfmt{#2} package}{#1}%
710       {\tstidxstyfmt{#2}}%
711     \tstsubindexclosepost{packages}[#2 package]%
712       {\protect\tstidxstyfmt{#2} package}{#1}{}%
713   }
714 \fi
```

\tstidxstyoptfmt   Display a package option.

```
715 \newcommand*{\tstidxstyoptfmt}[1]{\texttt{#1}}
```

\tstidxstyopt   Display and index a package option.

```
716 \if@tstidx@use@encaps
717   \newcommand*{\tstidxstyopt}[3][tstidxencapiii]{%
718     \tstsubindexpost[#2 package]{\protect\tstidxstyfmt{#2} package}%
719       [#3]{\protect\tstidxstyoptfmt{#3}}{#1}{\tstidxstyoptfmt{#3}}%
720     \tstsubsubindexpost{packages}[#2 package]%
721       {\protect\tstidxstyfmt{#2} package}%
722       [#3]{\protect\tstidxstyoptfmt{#3}}{#1}{}%
723   }
724 \else
725   \newcommand*{\tstidxstyopt}[3][]{%
726     \tstsubindexpost[#2 package]{\protect\tstidxstyfmt{#2} package}%
727       [#3]{\protect\tstidxstyoptfmt{#3}}{#1}{\tstidxstyoptfmt{#3}}%
728     \tstsubsubindexpost{packages}[#2 package]%
729       {\protect\tstidxstyfmt{#2} package}%
730       [#3]{\protect\tstidxstyoptfmt{#3}}{#1}{}%
731   }
732 \fi
```

\tstidxopenstyopt   As above but start a range.

```
733 \if@tstidx@use@encaps
734   \newcommand*{\tstidxopenstyopt}[3][tstidxencapiii]{%
735     \tstsubindexopenpost[#2 package]{\protect\tstidxstyfmt{#2} package}%
736       [#3]{\protect\tstidxstyoptfmt{#3}}{#1}{\tstidxstyoptfmt{#3}}%
```

```
737      \tstsubsubindexopenpost{packages}[#2 package]%
738         {\protect\tstidxstyfmt{#2} package}%
739         [#3]{\protect\tstidxstyoptfmt{#3}}{#1}{}%
740    }
741 \else
742    \newcommand*{\tstidxopenstyopt}[3][]{%
743      \tstsubindexopenpost[#2 package]{\protect\tstidxstyfmt{#2} package}%
744         [#3]{\protect\tstidxstyoptfmt{#3}}{#1}{\tstidxstyoptfmt{#3}}%
745      \tstsubsubindexopenpost{packages}[#2 package]%
746         {\protect\tstidxstyfmt{#2} package}%
747         [#3]{\protect\tstidxstyoptfmt{#3}}{#1}{}%
748    }
749 \fi
```

`tidxclosestyopt`   As above but end a range.

```
750 \if@tstidx@use@encaps
751    \newcommand*{\tstidxclosestyopt}[3][tstidxencapiii]{%
752      \tstsubindexclosepost[#2 package]{\protect\tstidxstyfmt{#2} package}%
753         [#3]{\protect\tstidxstyoptfmt{#3}}{#1}{\tstidxstyoptfmt{#3}}%
754      \tstsubsubindexclosepost{packages}[#2 package]%
755         {\protect\tstidxstyfmt{#2} package}%
756         [#3]{\protect\tstidxstyoptfmt{#3}}{#1}{}%
757    }
758 \else
759    \newcommand*{\tstidxclosestyopt}[3][]{%
760      \tstsubindexclosepost[#2 package]{\protect\tstidxstyfmt{#2} package}%
761         [#3]{\protect\tstidxstyoptfmt{#3}}{#1}{\tstidxstyoptfmt{#3}}%
762      \tstsubsubindexclosepost{packages}[#2 package]%
763         {\protect\tstidxstyfmt{#2} package}%
764         [#3]{\protect\tstidxstyoptfmt{#3}}{#1}{}%
765    }
766 \fi
```

`\tstidxword`   Display and index a word.

```
767 \newcommand*{\tstidxword}[2][]{%
768    \tstindexpost{#2}{#1}{#2}%
769 }
```

`\tstidxopenword`   As above but starts a range.

```
770 \newcommand*{\tstidxopenword}[2][]{%
771    \tstindexopenpost{#2}{#1}{#2}%
772 }
```

`tstidxcloseword`   As above but ends a range.

```
773 \newcommand*{\tstidxcloseword}[2][]{%
774    \tstindexclosepost{#2}{#1}{#2}%
775 }
```

24

\tstidxsubword | `\tstidxsubword[⟨encap⟩]{⟨main-entry⟩}{⟨word⟩}`

Display and index a word as a sub-entry.

```
776 \newcommand*{\tstidxsubword}[3][]{%
777   \tstsubindexpost{#2}{#3}{#1}{#3}%
778 }
```

\tstidxnumber   Display and index a word.

```
779 \if@tstidx@use@encaps
780   \newcommand*{\tstidxnumber}[2][tstidxencapiii]{%
781     \tstindexpost{#2}{#1}{#2}%
782   }
783 \else
784   \newcommand*{\tstidxnumber}[2][]{%
785     \tstindexpost{#2}{#1}{#2}%
786   }
787 \fi
```

\tstidxphrase   Display and index a phrase.

```
788 \newcommand*{\tstidxphrase}[2][]{%
789   \tstindexpre{#2}{#1}{#2}%
790 }
```

stidxopenphrase   As above but starts a range.

```
791 \newcommand*{\tstidxopenphrase}[2][]{%
792   \tstindexopenpre{#2}{#1}{#2}%
793 }
```

tidxclosephrase   As above but ends a range.

```
794 \newcommand*{\tstidxclosephrase}[2][]{%
795   \tstindexclosepre{#2}{#1}{#2}%
796 }
```

\tstidxartphrase | `\tstidxartphrase[⟨encap⟩]{⟨article⟩}{⟨remainder⟩}`

Display and index a phrase that starts with (in)definite article.

```
797 \newcommand*{\tstidxartphrase}[3][]{%
798   \tstindexpost{#3, #2}{#1}{#2 #3}%
799 }
```

dxopenartphrase   As above but starts a range.

```
800 \newcommand*{\tstidxopenartphrase}[3][]{%
801   \tstindexopenpost{#3, #2}{#1}{#2 #3}%
802 }
```

xcloseartphrase   As above but ends a range.

```
803 \newcommand*{\tstidxcloseartphrase}[3][]{%
804   \tstindexclosepost{#3, #2}{#1}{#2 #3}%
805 }
```

\tstidxperson   Display and index a person's name.

```
806 \newcommand*{\tstidxperson}[3][]{%
807   \tstidxutfperson[#1]{#2}{#3}{#2}{#3}%
808 }
```

stidxopenperson   As above but starts a range.

```
809 \newcommand*{\tstidxopenperson}[3][]{%
810   \tstidxutfopenperson[#1]{#2}{#3}{#2}{#3}%
811 }
```

tidxcloseperson   As above but ends a range.

```
812 \newcommand*{\tstidxcloseperson}[3][]{%
813   \tstidxutfcloseperson[#1]{#2}{#3}{#2}{#3}%
814 }
```

\tstidxutfperson   \tstidxutfperson[⟨encap⟩]{⟨ascii forename⟩}{⟨ascii surname⟩}{⟨utf8 forname⟩}utf8 surname

Display and index a person's name with UTF-8 characters.

```
815 \newcommand*{\tstidxutfperson}[5][]{%
816   \@tstidx@ifutfviii
817   {%
818     \tstidxutfpost[#4 #5]{#3, #2}{#5, #4}{#1}%
819   }%
820   {%
821     \tstidxutfpost[#2 #3]{#3, #2}{#5, #4}{#1}%
822   }%
823   \tstidxutfsubpost[\relax]{people}{people}{#3, #2}{#5, #4}{#1}%
824 }
```

dxopenutfperson   As above but starts a range.

```
825 \newcommand*{\tstidxutfopenperson}[5][]{%
826   \@tstidx@ifutfviii
827   {%
828     \tstidxutfopenpost[#4 #5]{#3, #2}{#5, #4}{#1}%
829   }%
830   {%
831     \tstidxutfopenpost[#2 #3]{#3, #2}{#5, #4}{#1}%
832   }%
833 }
```

26

As above but ends a range.

```
834 \newcommand*{\tstidxutfcloseperson}[7][]{%
835   \@tstidx@ifutfviii
836   {%
837     \tstidxutfclosepost[#4 #5]{#3, #2}{#5, #4}{#1}%
838   }%
839   {%
840     \tstidxutfclosepost[#2 #3]{#3, #2}{#5, #4}{#1}%
841   }%
842 }
```

\tstidxsym | `\tstidxsym[⟨encap⟩]{⟨sort⟩}{⟨indexed symbol⟩}`

Display and index a symbol.

```
843 \newcommand*{\tstidxsym}[3][]{%
844   \tstindexpost[#2]{\protect#3}{#1}{#3}%
845 }
```

\tstidxopensym | `\tstidxopensym[⟨encap⟩]{⟨sort⟩}{⟨indexed symbol⟩}`

As above but starts a range.

```
846 \newcommand*{\tstidxopensym}[3][]{%
847   \tstindexopenpost[#2]{\protect#3}{#1}{#3}%
848 }
```

\tstidxclosesym | `\tstidxclosesym[⟨encap⟩]{⟨sort⟩}{⟨indexed symbol⟩}`

As above but ends a range.

```
849 \newcommand*{\tstidxclosesym}[3][]{%
850   \tstindexopenpost[#2]{\protect#3}{#1}{#3}%
851 }
```

```
852 \newcommand{\tstidxindexmarker}[1]{%
853 \tstidxsym{\tstidxindexmarkerprefix#1}{\csname#1\endcsname
854   \protect\space (\protect\tstidxcsfmt{#1})}%
855 }
```

```
856 \newcommand*{\tstidxindexmarkerprefix}{<}
```

\tstidxmath | `\tstidxmath[⟨encap⟩]{⟨sort⟩}{⟨entry⟩}`

Display and index something in maths-mode.

```
857 \if@tstidx@use@encaps
858   \newcommand*{\tstidxmath}[3][tstidxencapii]{%
859     \tstindexpre[#2]{$#3$}{#1}{#3}%
860   }
861 \else
862   \newcommand*{\tstidxmath}[3][]{%
863     \tstindexpre[#2]{$#3$}{#1}{#3}%
864   }
865 \fi
```

\tstidxmathsym

    \tstidxmathsym[⟨encap⟩]{⟨sort⟩}{⟨entry⟩}

Inserts a prefix before ⟨sort⟩.

```
866 \if@tstidx@use@encaps
867   \newcommand*{\tstidxmathsym}[3][tstidxencapii]{%
868     \tstidxmath[#1]{\tstidxmathsymprefix#2}{#3}%
869   }
870 \else
871   \newcommand*{\tstidxmathsym}[3][]{%
872     \tstidxmath[#1]{\tstidxmathsymprefix#2}{#3}%
873   }
874 \fi
```

dxmathsymprefix

```
875 \newcommand*{\tstidxmathsymprefix}{>}
```

\tstidxutfword

    \tstidxutfword[⟨encap⟩]{⟨ascii⟩}{⟨utf8⟩}

Display and index a word with UTF-8 characters.

```
876 \newcommand*{\tstidxutfword}[3][]{%
877   \tstidxutfpost{#2}{#3}{#1}%
878 }
```

\tstidxopenutf

    \tstidxopenutf[⟨encap⟩]{⟨sort⟩}{⟨ascii⟩}{⟨utf8⟩}

As above but starts a range.

```
879 \newcommand*{\tstidxopenutf}[4][]{%
880   \tstidxutfopenpost{#2}{#3}{#1}%
881 }
```

\tstidxcloseutf

    \tstidxcloseutf[⟨encap⟩]{⟨sort⟩}{⟨ascii⟩}{⟨utf8⟩}

As above but ends a range.

```
882 \newcommand*{\tstidxcloseutf}[4][]{%
883   \tstidxutfclosepost{#2}{#3}{#1}%
884 }
```

\tstidxutfphrase

> \tstidxutfphrase[⟨encap⟩]{⟨ascii⟩}{⟨utf8⟩}

Display and index a phrase with UTF-8 characters.

```
885 \newcommand*{\tstidxutfphrase}[3][]{%
886   \tstidxutfpre{#2}{#3}{#1}%
887 }
```

idxopenutfphrase

> \tstidxopenutfphrase[⟨encap⟩]{⟨ascii⟩}{⟨utf8⟩}

As above but starts a range.

```
888 \newcommand*{\tstidxopenutfphrase}[3][]{%
889   \tstidxutfopenpre{#2}{#3}{#1}%
890 }
```

dxcloseutfphrase

> \tstidxcloseutf[⟨encap⟩]{⟨ascii⟩}{⟨utf8⟩}

As above but ends a range.

```
891 \newcommand*{\tstidxcloseutfphrase}[3][]{%
892   \tstidxutfclosepre{#2}{#3}{#1}%
893 }
```

\tstidxplace   Display and index a place name.

```
894 \newcommand*{\tstidxplace}[2][]{%
895   \tstidxutfplace[#1]{#2}{#2}%
896 }
```

\tstidxutfplace

> \tstidxutfplace[⟨encap⟩]{⟨ascii⟩}{⟨utf8⟩}

Display and index a word with UTF-8 characters.

```
897 \newcommand*{\tstidxutfplace}[3][]{%
898   \tstidxutfpost{#2}{#3}{#1}%
899   \tstidxutfsubpost[\relax]{places}{places}{#2}{#3}{#1}%
900 }
```

\tstidxartplace   Display and index a place name that starts with an article.

```
901 \newcommand*{\tstidxartplace}[3][]{%
902   \tstindexpost{#3, #2}{#1}{#2 #3}%
903   \tstidxutfsubpost[\relax]{places}{places}{#3, #2}{#3, #2}{#1}%
904 }
```

`\tstidxbookfmt`   Display an book title.

```
905 \newcommand*{\tstidxbookfmt}[1]{\emph{#1}}
```

`\tstidxbook`   Display and index a book title.

```
906 \if@tstidx@use@encaps
907  \newcommand*{\tstidxbook}[2][tstidxencapii]{%
908    \tstindexpost[#2]{\protect\tstidxbookfmt{#2}}{#1}{\tstidxbookfmt{#2}}%
909    \tstsubindexpost{books}[#2]{\protect\tstidxbookfmt{#2}}{#1}{}%
910  }
911 \else
912  \newcommand*{\tstidxbook}[2][]{%
913    \tstindexpost[#2]{\protect\tstidxbookfmt{#2}}{#1}{\tstidxbookfmt{#2}}%
914    \tstsubindexpost{books}[#2]{\protect\tstidxbookfmt{#2}}{#1}{}%
915  }
916 \fi
```

`\tstidxopenbook`   As above but starts a range.

```
917 \if@tstidx@use@encaps
918  \newcommand*{\tstidxopenbook}[2][tstidxencapii]{%
919    \tstindexopenpost[#2]{\protect\tstidxbookfmt{#2}}{#1}{\tstidxbookfmt{#2}}%
920    \tstsubindexopenpost{books}[#2]{\protect\tstidxbookfmt{#2}}{#1}{}%
921  }
922 \else
923  \newcommand*{\tstidxopenbook}[2][]{%
924    \tstindexopenpost[#2]{\protect\tstidxbookfmt{#2}}{#1}{\tstidxbookfmt{#2}}%
925    \tstsubindexopenpost{books}[#2]{\protect\tstidxbookfmt{#2}}{#1}{}%
926  }
927 \fi
```

`tstidxclosebook`   As above but ends a range.

```
928 \if@tstidx@use@encaps
929  \newcommand*{\tstidxclosebook}[2][tstidxencapii]{%
930    \tstindexclosepost[#2]{\protect\tstidxbookfmt{#2}}{#1}{\tstidxbookfmt{#2}}%
931    \tstsubindexclosepost{books}[#2]{\protect\tstidxbookfmt{#2}}{#1}{}%
932  }
933 \else
934  \newcommand*{\tstidxclosebook}[2][]{%
935    \tstindexclosepost[#2]{\protect\tstidxbookfmt{#2}}{#1}{\tstidxbookfmt{#2}}%
936    \tstsubindexclosepost{books}[#2]{\protect\tstidxbookfmt{#2}}{#1}{}%
937  }
938 \fi
```

`\tstidxartbook`   `\tstidxartbook[⟨encap⟩]{⟨article⟩}{⟨remainder⟩}`

Display and index a book title that starts with (in)definite article.

```
939 \if@tstidx@use@encaps
940  \newcommand*{\tstidxartbook}[3][tstidxencapii]{%
```

```
941    \tstindexpost[#3, #2]{\protect\tstidxbookfmt{#3, #2}}{#1}{\tstidxbookfmt{#2 #3}}%
942    \tstsubindexpost{books}[#3, #2]{\protect\tstidxbookfmt{#3, #2}}{#1}{}%
943  }
944 \else
945   \newcommand*{\tstidxartbook}[3][]{%
946    \tstindexpost[#3, #2]{\protect\tstidxbookfmt{#3, #2}}{#1}{\tstidxbookfmt{#2 #3}}%
947    \tstsubindexpost{books}[#3, #2]{\protect\tstidxbookfmt{#3, #2}}{#1}{}%
948  }
949 \fi
```

tidxopenartbook   As above but starts a range.

```
950 \if@tstidx@use@encaps
951   \newcommand*{\tstidxopenartbook}[3][tstidxencapii]{%
952    \tstindexopenpost[#3, #2]{\protect\tstidxbookfmt{#3, #2}}{#1}%
953      {\tstidxbookfmt{#2 #3}}%
954    \tstsubindexopenpost{books}[#3, #2]{\protect\tstidxbookfmt{#3, #2}}{#1}{}%
955  }
956 \else
957   \newcommand*{\tstidxopenartbook}[3][]{%
958    \tstindexopenpost[#3, #2]{\protect\tstidxbookfmt{#3, #2}}{#1}%
959      {\tstidxbookfmt{#2 #3}}%
960    \tstsubindexopenpost{books}[#3, #2]{\protect\tstidxbookfmt{#3, #2}}{#1}{}%
961  }
962 \fi
```

idxcloseartbook   As above but ends a range.

```
963 \if@tstidx@use@encaps
964   \newcommand*{\tstidxcloseartbook}[3][tstidxencapii]{%
965    \tstindexclosepost[#3, #2]{\protect\tstidxbookfmt{#3, #2}}{#1}%
966      {\tstidxbookfmt{#2 #3}}%
967    \tstsubindexclosepost{books}[#3, #2]{\protect\tstidxbookfmt{#3, #2}}{#1}{}%
968  }
969 \else
970   \newcommand*{\tstidxcloseartbook}[3][]{%
971    \tstindexclosepost[#3, #2]{\protect\tstidxbookfmt{#3, #2}}{#1}%
972      {\tstidxbookfmt{#2 #3}}%
973    \tstsubindexclosepost{books}[#3, #2]{\protect\tstidxbookfmt{#3, #2}}{#1}{}%
974  }
975 \fi
```

\tstidxfilmfmt   Display an film title.

```
976 \newcommand*{\tstidxfilmfmt}[1]{\emph{#1}}
```

\tstidxfilm   Display and index a film title.

```
977 \if@tstidx@use@encaps
978   \newcommand*{\tstidxfilm}[2][tstidxencapii]{%
979    \tstindexpost[#2]{\protect\tstidxfilmfmt{#2}}{#1}{\tstidxfilmfmt{#2}}%
980    \tstsubindexpost{films}[#2]{\protect\tstidxfilmfmt{#2}}{#1}{}%
981  }
```

```
982 \else
983   \newcommand*{\tstidxfilm}[2][]{%
984     \tstindexpost[#2]{\protect\tstidxfilmfmt{#2}}{#1}{\tstidxfilmfmt{#2}}%
985     \tstsubindexpost{films}[#2]{\protect\tstidxfilmfmt{#2}}{#1}{}%
986   }
987 \fi
```

\tstidxopenfilm   As above but starts a range.

```
988 \if@tstidx@use@encaps
989   \newcommand*{\tstidxopenfilm}[2][tstidxencapii]{%
990     \tstindexopenpost[#2]{\protect\tstidxfilmfmt{#2}}{#1}{\tstidxfilmfmt{#2}}%
991     \tstsubindexopenpost{films}[#2]{\protect\tstidxfilmfmt{#2}}{#1}{}%
992   }
993 \else
994   \newcommand*{\tstidxopenfilm}[2][]{%
995     \tstindexopenpost[#2]{\protect\tstidxfilmfmt{#2}}{#1}{\tstidxfilmfmt{#2}}%
996     \tstsubindexopenpost{films}[#2]{\protect\tstidxfilmfmt{#2}}{#1}{}%
997   }
998 \fi
```

tstidxclosefilm   As above but ends a range.

```
999 \if@tstidx@use@encaps
1000   \newcommand*{\tstidxclosefilm}[2][tstidxencapii]{%
1001     \tstindexclosepost[#2]{\protect\tstidxfilmfmt{#2}}{#1}{\tstidxfilmfmt{#2}}%
1002     \tstsubindexclosepost{films}[#2]{\protect\tstidxfilmfmt{#2}}{#1}{}%
1003   }
1004 \else
1005   \newcommand*{\tstidxclosefilm}[2][]{%
1006     \tstindexclosepost[#2]{\protect\tstidxfilmfmt{#2}}{#1}{\tstidxfilmfmt{#2}}%
1007     \tstsubindexclosepost{films}[#2]{\protect\tstidxfilmfmt{#2}}{#1}{}%
1008   }
1009 \fi
```

\tstidxartfilm   As above but the title starts with an article.

```
1010 \if@tstidx@use@encaps
1011   \newcommand*{\tstidxartfilm}[3][tstidxencapii]{%
1012     \tstindexpost[#3, #2]{\protect\tstidxfilmfmt{#3, #2}}{#1}%
1013       {\tstidxfilmfmt{#2 #3}}%
1014     \tstsubindexpost{films}[#3, #2]{\protect\tstidxfilmfmt{#3, #2}}{#1}{}%
1015   }
1016 \else
1017   \newcommand*{\tstidxartfilm}[3][]{%
1018     \tstindexpost[#3, #2]{\protect\tstidxfilmfmt{#3, #2}}{#1}%
1019       {\tstidxfilmfmt{#2 #3}}%
1020     \tstsubindexpost{films}[#3, #2]{\protect\tstidxfilmfmt{#3, #2}}{#1}{}%
1021   }
1022 \fi
```

6 Generic Indexing Test Commands

6.1 Top-Level Entries

The \expandafter stuff here is done to help simulate the user directly using \index.

\tstindexpost   The first argument is the sort, the second argument is the term being indexed and the third argument is the encap. The final argument is text to be displayed before the term is indexed.

```
1023 \newcommand*{\tstindexpost}[4][]{%
1024   \def\@tstidx@sort{#1}%
1025   \def\@tstidx@encap{#3}%
1026   \ifx\@tstidx@sort\@empty
1027     \def\@tstidx@entry{#2}%
1028   \else
1029     \toks@{#1}%
1030     \edef\@tstidx@entry{\the\toks@\tstidxactual}%
1031     \expandafter\def\expandafter\@tstidx@entry\expandafter{\@tstidx@entry#2}%
1032   \fi
1033   \ifx\@tstidx@encap\@empty
1034     \iftestidxshowmarks
1035       \tstidxtext{#4\tstidxmarker}%
1036     \else
1037       #4%
1038     \fi
1039   \else
1040     \iftestidxshowmarks
1041       \tstidxtext{\tstidxencaptext{#3}{#4\tstidxmarker}}%
1042     \else
1043       #4%
1044     \fi
1045     \expandafter\toks@\expandafter{\@tstidx@entry}%
1046     \edef\@tstidx@entry{\the\toks@\tstidxencap#3}%
1047   \fi
1048   \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1049 }
```

stindexopenpost   As previous but starts a range.

```
1050 \newcommand*{\tstindexopenpost}[4][]{%
1051   \def\@tstidx@sort{#1}%
1052   \def\@tstidx@encap{#3}%
1053   \ifx\@tstidx@sort\@empty
1054     \def\@tstidx@entry{#2}%
1055   \else
1056     \toks@{#1}%
1057     \edef\@tstidx@entry{\the\toks@\tstidxactual}%
1058     \expandafter\def\expandafter\@tstidx@entry\expandafter{\@tstidx@entry#2}%
1059   \fi
1060   \ifx\@tstidx@encap\@empty
1061     \iftestidxshowmarks
```

```
1062        \tstidxtext{#4\tstidxopenmarker}%
1063      \else
1064        #4%
1065      \fi
1066      \expandafter\toks@\expandafter{\@tstidx@entry}%
1067      \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxopenrange}%
1068    \else
1069      \iftestidxshowmarks
1070        \tstidxtext{\tstidxencaptext{#3}{#4\tstidxopenmarker}}%
1071      \else
1072        #4%
1073      \fi
1074      \expandafter\toks@\expandafter{\@tstidx@entry}%
1075      \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxopenrange#3}%
1076    \fi
1077    \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1078 }
```

tindexclosepost   As previous but ends a range.

```
1079 \newcommand*{\tstindexclosepost}[4][]{%
1080    \def\@tstidx@sort{#1}%
1081    \def\@tstidx@encap{#3}%
1082    \ifx\@tstidx@sort\@empty
1083      \def\@tstidx@entry{#2}%
1084    \else
1085      \toks@{#1}%
1086      \edef\@tstidx@entry{\the\toks@\tstidxactual}%
1087      \expandafter\def\expandafter\@tstidx@entry\expandafter{\@tstidx@entry#2}%
1088    \fi
1089    \ifx\@tstidx@encap\@empty
1090      \iftestidxshowmarks
1091        \tstidxtext{#4\tstidxclosemarker}%
1092      \else
1093        #4%
1094      \fi
1095      \expandafter\toks@\expandafter{\@tstidx@entry}%
1096      \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxcloserange}%
1097    \else
1098      \iftestidxshowmarks
1099        \tstidxtext{\tstidxencaptext{#3}{#4\tstidxclosemarker}}%
1100      \else
1101        #4%
1102      \fi
1103      \expandafter\toks@\expandafter{\@tstidx@entry}%
1104      \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxcloserange#3}%
1105    \fi
1106    \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1107 }
```

\tstindexpre   The first argument is the sort, the second argument is the term being indexed and the third

argument is the encap. The final argument is text to be displayed after the term is indexed.

```
1108 \newcommand*{\tstindexpre}[4][]{%
1109   \def\@tstidx@sort{#1}%
1110   \def\@tstidx@encap{#3}%
1111   \ifx\@tstidx@sort\@empty
1112   \def\@tstidx@entry{#2}%
1113   \else
1114   \toks@{#1}%
1115   \edef\@tstidx@entry{\the\toks@\tstidxactual}%
1116   \expandafter\def\expandafter\@tstidx@entry\expandafter{\@tstidx@entry#2}%
1117   \fi
1118   \ifx\@tstidx@encap\@empty
1119   \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1120   \iftestidxshowmarks
1121     \tstidxtext{\tstidxmarker#4}%
1122   \else
1123     #4%
1124   \fi
1125   \else
1126   \expandafter\toks@\expandafter{\@tstidx@entry}%
1127   \edef\@tstidx@entry{\the\toks@\tstidxencap#3}%
1128   \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1129   \iftestidxshowmarks
1130     \tstidxtext{\tstidxencaptext{#3}{\tstidxmarker#4}}%
1131   \else
1132     #4%
1133   \fi
1134   \fi
1135 }
```

tstindexopenpre As previous but starts a range.

```
1136 \newcommand*{\tstindexopenpre}[4][]{%
1137   \def\@tstidx@sort{#1}%
1138   \def\@tstidx@encap{#3}%
1139   \ifx\@tstidx@sort\@empty
1140   \def\@tstidx@entry{#2}%
1141   \else
1142   \toks@{#1}%
1143   \edef\@tstidx@entry{\the\toks@\tstidxactual}%
1144   \expandafter\def\expandafter\@tstidx@entry\expandafter{\@tstidx@entry#2}%
1145   \fi
1146   \ifx\@tstidx@encap\@empty
1147   \expandafter\toks@\expandafter{\@tstidx@entry}%
1148   \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxopenrange}%
1149   \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1150   \iftestidxshowmarks
1151     \tstidxtext{\tstidxopenmarker#4}%
1152   \else
1153     #4%
```

```
1154    \fi
1155  \else
1156  \expandafter\toks@\expandafter{\@tstidx@entry}%
1157  \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxopenrange#3}%
1158  \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1159  \iftestidxshowmarks
1160    \tstidxtext{\tstidxencaptext{#3}{\tstidxopenmarker#4}}%
1161  \else
1162    #4%
1163  \fi
1164  \fi
1165 }
```

stindexclosepre   As previous but ends a range.

```
1166 \newcommand*{\tstindexclosepre}[4][]{%
1167  \def\@tstidx@sort{#1}%
1168  \def\@tstidx@encap{#3}%
1169  \ifx\@tstidx@sort\@empty
1170   \def\@tstidx@entry{#2}%
1171  \else
1172   \toks@{#1}%
1173   \edef\@tstidx@entry{\the\toks@\tstidxactual}%
1174   \expandafter\def\expandafter\@tstidx@entry\expandafter{\@tstidx@entry#2}%
1175  \fi
1176  \ifx\@tstidx@encap\@empty
1177   \expandafter\toks@\expandafter{\@tstidx@entry}%
1178   \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxcloserange}%
1179   \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1180   \iftestidxshowmarks
1181    \tstidxtext{\tstidxclosemarker#4}%
1182   \else
1183    #4%
1184   \fi
1185  \else
1186   \expandafter\toks@\expandafter{\@tstidx@entry}%
1187   \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxcloserange#3}%
1188   \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1189   \iftestidxshowmarks
1190    \tstidxtext{\tstidxencaptext{#3}{\tstidxclosemarker#4}}%
1191   \else
1192    #4%
1193   \fi
1194  \fi
1195 }
```

\tstindexsee   The first argument is the sort, the second argument is the term being indexed, the third argument is the cross-referencing control sequence name ("see" or "seealso") and the final argument is the cross-referenced text (the first argument of \see or \seealso).

```
1196 \newcommand*{\tstindexsee}[4][]{%
```

```
1197    \def\@tstidx@sort{#1}%
1198    \ifx\@tstidx@sort\@empty
1199     \def\@tstidx@entry{#2}%
1200    \else
1201     \toks@{#1}%
1202     \edef\@tstidx@entry{\the\toks@\tstidxactual}%
1203     \expandafter\def\expandafter\@tstidx@entry\expandafter{\@tstidx@entry#2}%
1204    \fi
1205    \expandafter\toks@\expandafter{\@tstidx@entry}%
1206    \edef\@tstidx@entry{\the\toks@\tstidxencap#3{#4}}%
1207    \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1208    \iftestidxshowmarks
1209     \tstidxseeref{#2}{#3}{#4}%
1210    \fi
1211 }
```

6.2 Sub-Entries

One sub-level.

<table>
<tr><td>\tstsubindexpost</td><td>\tstsubindexpost[⟨<i>main sort</i>⟩]{⟨<i>main term</i>⟩}[⟨<i>sub sort</i>⟩]{⟨<i>sub term</i>⟩}
{⟨<i>encap</i>⟩}{⟨<i>text</i>⟩}</td></tr>
</table>

```
1212 \newcommand*{\tstsubindexpost}[2][]{%
1213    \def\@tstidx@sort{#1}%
1214    \def\@tstidx@term{#2}%
1215    \@tst@subindexpost
1216 }
1217 \newcommand*{\@tst@subindexpost}[4][]{%
1218    \def\@tstidx@subsort{#1}%
1219    \def\@tstidx@subterm{#2}%
1220    \def\@tstidx@encap{#3}%
1221    \ifx\@tstidx@sort\@empty
1222      \let\@tstidx@entry\@tstidx@term
1223    \else
1224      \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@sort}\tstidxactual
1225        \unexpanded\expandafter{\@tstidx@term}}%
1226    \fi
1227    \ifx\@tstidx@subsort\@empty
1228      \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1229        \unexpanded\expandafter{\@tstidx@subterm}}%
1230    \else
1231      \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1232        \unexpanded\expandafter{\@tstidx@subsort}\tstidxactual
1233          \unexpanded\expandafter{\@tstidx@subterm}}%
1234    \fi
1235    \ifx\@tstidx@encap\@empty
1236      \iftestidxshowmarks
```

```
1237      \tstidxtext{#4\tstidxsubmarker}%
1238    \else
1239      #4%
1240    \fi
1241    \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1242  \else
1243    \iftestidxshowmarks
1244      \tstidxtext{\tstidxencaptext{#3}{#4\tstidxsubmarker}}%
1245    \else
1246      #4%
1247    \fi
1248    \expandafter\toks@\expandafter{\@tstidx@entry}%
1249    \edef\@tstidx@entry{\the\toks@\tstidxencap#3}%
1250    \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1251  \fi
1252 }
```

$\quad$ `\tstsubindexopenpost[⟨main sort⟩]{⟨main term⟩}[⟨sub sort⟩]{⟨sub term⟩}`
`{⟨encap⟩}{⟨text⟩}`

```
1253 \newcommand*{\tstsubindexopenpost}[2][]{%
1254  \def\@tstidx@sort{#1}%
1255  \def\@tstidx@term{#2}%
1256  \@tst@subindexopenpost
1257 }
1258 \newcommand*{\@tst@subindexopenpost}[4][]{%
1259  \def\@tstidx@subsort{#1}%
1260  \def\@tstidx@subterm{#2}%
1261  \def\@tstidx@encap{#3}%
1262  \ifx\@tstidx@sort\@empty
1263    \let\@tstidx@entry\@tstidx@term
1264  \else
1265    \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@sort}\tstidxactual
1266      \unexpanded\expandafter{\@tstidx@term}}%
1267  \fi
1268  \ifx\@tstidx@subsort\@empty
1269    \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1270      \unexpanded\expandafter{\@tstidx@subterm}}%
1271  \else
1272    \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1273      \unexpanded\expandafter{\@tstidx@subsort}\tstidxactual
1274        \unexpanded\expandafter{\@tstidx@subterm}}%
1275  \fi
1276  \ifx\@tstidx@encap\@empty
1277    \iftestidxshowmarks
1278      \tstidxtext{#4\tstidxopensubmarker}%
1279    \else
1280      #4%
```

```
1281    \fi
1282    \expandafter\toks@\expandafter{\@tstidx@entry}%
1283    \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxopenrange}%
1284    \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1285  \else
1286    \iftestidxshowmarks
1287      \tstidxtext{\tstidxencaptext{#3}{#4\tstidxopensubmarker}}%
1288    \else
1289      #4%
1290    \fi
1291    \expandafter\toks@\expandafter{\@tstidx@entry}%
1292    \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxopenrange#3}%
1293    \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1294  \fi
1295 }
```

ubindexclosepost	\tstsubindexclosepost[⟨*main sort*⟩]{⟨*main term*⟩}[⟨*sub sort*⟩]{⟨*sub term*⟩} {⟨*encap*⟩}{⟨*text*⟩}

```
1296 \newcommand*{\tstsubindexclosepost}[2][]{%
1297    \def\@tstidx@sort{#1}%
1298    \def\@tstidx@term{#2}%
1299    \@tst@subindexclosepost
1300 }
1301 \newcommand*{\@tst@subindexclosepost}[4][]{%
1302    \def\@tstidx@subsort{#1}%
1303    \def\@tstidx@subterm{#2}%
1304    \def\@tstidx@encap{#3}%
1305    \ifx\@tstidx@sort\@empty
1306      \let\@tstidx@entry\@tstidx@term
1307    \else
1308      \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@sort}\tstidxactual
1309        \unexpanded\expandafter{\@tstidx@term}}%
1310    \fi
1311    \ifx\@tstidx@subsort\@empty
1312      \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1313        \unexpanded\expandafter{\@tstidx@subterm}}%
1314    \else
1315      \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1316        \unexpanded\expandafter{\@tstidx@subsort}\tstidxactual
1317          \unexpanded\expandafter{\@tstidx@subterm}}%
1318    \fi
1319    \ifx\@tstidx@encap\@empty
1320      \iftestidxshowmarks
1321        \tstidxtext{#4\tstidxclosesubmarker}%
1322      \else
1323        #4%
1324      \fi
```

```
1325      \expandafter\toks@\expandafter{\@tstidx@entry}%
1326      \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxcloserange}%
1327      \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1328    \else
1329      \iftestidxshowmarks
1330        \tstidxtext{\tstidxencaptext{#3}{#4\tstidxclosesubmarker}}%
1331      \else
1332        #4%
1333      \fi
1334      \expandafter\toks@\expandafter{\@tstidx@entry}%
1335      \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxcloserange#3}%
1336      \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1337    \fi
1338 }
```

\tstsubindexpre

> \tstsubindexpre[⟨*main sort*⟩]{⟨*main term*⟩}[⟨*sub sort*⟩]{⟨*sub term*⟩}
> {⟨*encap*⟩}{⟨*text*⟩}

```
1339 \newcommand*{\tstsubindexpre}[2][]{%
1340    \def\@tstidx@sort{#1}%
1341    \def\@tstidx@term{#2}%
1342    \@tst@subindexpre
1343 }
1344 \newcommand*{\@tst@subindexpre}[4][]{%
1345    \def\@tstidx@subsort{#1}%
1346    \def\@tstidx@subterm{#2}%
1347    \def\@tstidx@encap{#3}%
1348    \ifx\@tstidx@sort\@empty
1349      \let\@tstidx@entry\@tstidx@term
1350    \else
1351      \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@sort}\tstidxactual
1352        \unexpanded\expandafter{\@tstidx@term}}%
1353    \fi
1354    \ifx\@tstidx@subsort\@empty
1355      \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1356        \unexpanded\expandafter{\@tstidx@subterm}}%
1357    \else
1358      \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1359        \unexpanded\expandafter{\@tstidx@subsort}\tstidxactual
1360          \unexpanded\expandafter{\@tstidx@subterm}}%
1361    \fi
1362    \ifx\@tstidx@encap\@empty
1363      \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1364      \iftestidxshowmarks
1365        \tstidxtext{#4\tstidxsubmarker}%
1366      \else
1367        #4%
1368      \fi
```

```
1369    \else
1370      \expandafter\toks@\expandafter{\@tstidx@entry}%
1371      \edef\@tstidx@entry{\the\toks@\tstidxencap#3}%
1372      \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1373      \iftestidxshowmarks
1374        \tstidxtext{\tstidxencaptext{#3}{#4\tstidxsubmarker}}%
1375      \else
1376        #4%
1377      \fi
1378    \fi
1379 }
```

```
\tstsubindexopenpre[⟨main sort⟩]{⟨main term⟩}[⟨sub sort⟩]{⟨sub term⟩}
{⟨encap⟩}{⟨text⟩}
```

```
1380 \newcommand*{\tstsubindexopenpre}[2][]{%
1381    \def\@tstidx@sort{#1}%
1382    \def\@tstidx@term{#2}%
1383    \@tst@subindexopenpre
1384 }
1385 \newcommand*{\@tst@subindexopenpre}[4][]{%
1386    \def\@tstidx@subsort{#1}%
1387    \def\@tstidx@subterm{#2}%
1388    \def\@tstidx@encap{#3}%
1389    \ifx\@tstidx@sort\@empty
1390      \let\@tstidx@entry\@tstidx@term
1391    \else
1392      \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@sort}\tstidxactual
1393        \unexpanded\expandafter{\@tstidx@term}}%
1394    \fi
1395    \ifx\@tstidx@subsort\@empty
1396      \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1397        \unexpanded\expandafter{\@tstidx@subterm}}%
1398    \else
1399      \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1400        \unexpanded\expandafter{\@tstidx@subsort}\tstidxactual
1401          \unexpanded\expandafter{\@tstidx@subterm}}%
1402    \fi
1403    \ifx\@tstidx@encap\@empty
1404      \expandafter\toks@\expandafter{\@tstidx@entry}%
1405      \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxopenrange}%
1406      \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1407      \iftestidxshowmarks
1408        \tstidxtext{#4\tstidxopensubmarker}%
1409      \else
1410        #4%
1411      \fi
1412    \else
```

41

```
1413     \expandafter\toks@\expandafter{\@tstidx@entry}%
1414     \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxopenrange#3}%
1415     \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1416     \iftestidxshowmarks
1417       \tstidxtext{\tstidxencaptext{#3}{#4\tstidxopensubmarker}}%
1418     \else
1419       #4%
1420     \fi
1421   \fi
1422 }
```

\tstsubindexclosepre[⟨*main sort*⟩]{⟨*main term*⟩}[⟨*sub sort*⟩]{⟨*sub term*⟩}
{⟨*encap*⟩}{⟨*text*⟩}

```
1423 \newcommand*{\tstsubindexclosepre}[2][]{%
1424   \def\@tstidx@sort{#1}%
1425   \def\@tstidx@term{#2}%
1426   \@tst@subindexclosepre
1427 }
1428 \newcommand*{\@tst@subindexclosepre}[4][]{%
1429   \def\@tstidx@subsort{#1}%
1430   \def\@tstidx@subterm{#2}%
1431   \def\@tstidx@encap{#3}%
1432   \ifx\@tstidx@sort\@empty
1433     \let\@tstidx@entry\@tstidx@term
1434   \else
1435     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@sort}\tstidxactual
1436       \unexpanded\expandafter{\@tstidx@term}}%
1437   \fi
1438   \ifx\@tstidx@subsort\@empty
1439     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1440       \unexpanded\expandafter{\@tstidx@subterm}}%
1441   \else
1442     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1443       \unexpanded\expandafter{\@tstidx@subsort}\tstidxactual
1444         \unexpanded\expandafter{\@tstidx@subterm}}%
1445   \fi
1446   \ifx\@tstidx@encap\@empty
1447     \expandafter\toks@\expandafter{\@tstidx@entry}%
1448     \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxcloserange}%
1449     \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1450     \iftestidxshowmarks
1451       \tstidxtext{#4\tstidxclosesubmarker}%
1452     \else
1453       #4%
1454     \fi
1455   \else
1456     \expandafter\toks@\expandafter{\@tstidx@entry}%
```

```
1457     \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxcloserange#3}%
1458     \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1459     \iftestidxshowmarks
1460       \tstidxtext{\tstidxencaptext{#3}{#4\tstidxclosesubmarker}}%
1461     \else
1462       #4%
1463     \fi
1464   \fi
1465 }
```

\tstindexsubsee

<div style="border:1px solid #000; background:#FFFFCC; padding:8px;">

\tstindexsubsee[⟨*main sort*⟩]{⟨*main term*⟩}[⟨*sub sort*⟩] {⟨*sub term*⟩}{⟨*cs name*⟩}{⟨*text*⟩}

</div>

```
1466 \newcommand*{\tstindexsubsee}[2][]{%
1467   \def\@tstidx@sort{#1}%
1468   \def\@tstidx@term{#2}%
1469   \ifx\@tstidx@sort\@empty
1470     \def\@tstidx@entry{#2}%
1471   \else
1472     \toks@{#1}%
1473     \edef\@tstidx@entry{\the\toks@\tstidxactual}%
1474     \expandafter\def\expandafter\@tstidx@entry\expandafter{\@tstidx@entry#2}%
1475   \fi
1476   \@tstindexsubsee
1477 }
```

@tstindexsubsee

```
1478 \newcommand*{\@tstindexsubsee}[4][]{%
1479   \def\@tstidx@subsort{#1}%
1480   \ifx\@tstidx@subsort\@empty
1481     \toks@{#2}%
1482     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}%
1483       \tstidxlevel\the\toks@}%
1484   \else
1485     \toks@{#1}%
1486     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}%
1487       \tstidxlevel\the\toks@\tstidxactual}%
1488     \expandafter\def\expandafter\@tstidx@entry\expandafter{\@tstidx@entry#2}%
1489   \fi
1490   \expandafter\toks@\expandafter{\@tstidx@entry}%
1491   \edef\@tstidx@entry{\the\toks@\tstidxencap#3{#4}}%
1492   \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1493   \iftestidxshowmarks
1494     \tstidxsubseeref{\@tstidx@term}{#2}{#3}{#4}%
1495   \fi
1496 }
```

Two sub-levels.

> \tstsubsubindexpost[⟨*main sort*⟩]{⟨*main term*⟩}[⟨*sub sort*⟩]{⟨*sub term*⟩}
> [⟨*sub-sub sort*⟩]{⟨*sub-sub term*⟩}{⟨*encap*⟩}{⟨*text*⟩}

```
1497 \newcommand*{\tstsubsubindexpost}[2][]{%
1498   \def\@tstidx@sort{#1}%
1499   \def\@tstidx@term{#2}%
1500   \@tst@subsubindexpost
1501 }
1502 \newcommand*{\@tst@subsubindexpost}[2][]{%
1503   \def\@tstidx@subsort{#1}%
1504   \def\@tstidx@subterm{#2}%
1505   \@@tst@subsubindexpost
1506 }
1507 \newcommand*{\@@tst@subsubindexpost}[4][]{%
1508   \def\@tstidx@subsubsort{#1}%
1509   \def\@tstidx@subsubterm{#2}%
1510   \def\@tstidx@encap{#3}%
1511   \ifx\@tstidx@sort\@empty
1512     \let\@tstidx@entry\@tstidx@term
1513   \else
1514     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@sort}\tstidxactual
1515       \unexpanded\expandafter{\@tstidx@term}}%
1516   \fi
1517   \ifx\@tstidx@subsort\@empty
1518     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1519       \unexpanded\expandafter{\@tstidx@subterm}}%
1520   \else
1521     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1522       \unexpanded\expandafter{\@tstidx@subsort}\tstidxactual
1523         \unexpanded\expandafter{\@tstidx@subterm}}%
1524   \fi
1525   \ifx\@tstidx@subsubsort\@empty
1526     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1527       \unexpanded\expandafter{\@tstidx@subsubterm}}%
1528   \else
1529     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1530       \unexpanded\expandafter{\@tstidx@subsubsort}\tstidxactual
1531         \unexpanded\expandafter{\@tstidx@subsubterm}}%
1532   \fi
1533   \ifx\@tstidx@encap\@empty
1534     \iftestidxshowmarks
1535       \tstidxtext{#4\tstidxsubsubmarker}%
1536     \else
1537       #4%
1538     \fi
1539     \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1540   \else
1541     \iftestidxshowmarks
```

44

```
1542        \tstidxtext{\tstidxencaptext{#3}{#4\tstidxsubsubmarker}}%
1543      \else
1544        #4%
1545      \fi
1546      \expandafter\toks@\expandafter{\@tstidx@entry}%
1547      \edef\@tstidx@entry{\the\toks@\tstidxencap#3}%
1548      \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1549    \fi
1550 }
```

\tstsubsubindexopenpost[⟨*main sort*⟩]{⟨*main term*⟩}[⟨*sub sort*⟩]{⟨*sub term*⟩}
[⟨*sub-sub sort*⟩]{⟨*sub-sub term*⟩}{⟨*encap*⟩}{⟨*text*⟩}

```
1551 \newcommand*{\tstsubsubindexopenpost}[2][]{%
1552   \def\@tstidx@sort{#1}%
1553   \def\@tstidx@term{#2}%
1554   \@tst@subsubindexopenpost
1555 }
1556 \newcommand*{\@tst@subsubindexopenpost}[2][]{%
1557   \def\@tstidx@subsort{#1}%
1558   \def\@tstidx@subterm{#2}%
1559   \@@tst@subsubindexopenpost
1560 }
1561 \newcommand*{\@@tst@subsubindexopenpost}[4][]{%
1562   \def\@tstidx@subsubsort{#1}%
1563   \def\@tstidx@subsubterm{#2}%
1564   \def\@tstidx@encap{#3}%
1565   \ifx\@tstidx@sort\@empty
1566     \let\@tstidx@entry\@tstidx@term
1567   \else
1568     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@sort}\tstidxactual
1569       \unexpanded\expandafter{\@tstidx@term}}%
1570   \fi
1571   \ifx\@tstidx@subsort\@empty
1572     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1573       \unexpanded\expandafter{\@tstidx@subterm}}%
1574   \else
1575     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1576       \unexpanded\expandafter{\@tstidx@subsort}\tstidxactual
1577         \unexpanded\expandafter{\@tstidx@subterm}}%
1578   \fi
1579   \ifx\@tstidx@subsubsort\@empty
1580     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1581       \unexpanded\expandafter{\@tstidx@subsubterm}}%
1582   \else
1583     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1584       \unexpanded\expandafter{\@tstidx@subsubsort}\tstidxactual
1585         \unexpanded\expandafter{\@tstidx@subsubterm}}%
```

45

```
1586   \fi
1587   \ifx\@tstidx@encap\@empty
1588     \iftestidxshowmarks
1589       \tstidxtext{#4\tstidxopensubmarker}%
1590     \else
1591       #4%
1592     \fi
1593     \expandafter\toks@\expandafter{\@tstidx@entry}%
1594     \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxopenrange}%
1595     \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1596   \else
1597     \iftestidxshowmarks
1598       \tstidxtext{\tstidxencaptext{#3}{#4\tstidxopensubmarker}}%
1599     \else
1600       #4%
1601     \fi
1602     \expandafter\toks@\expandafter{\@tstidx@entry}%
1603     \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxopenrange#3}%
1604     \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1605   \fi
1606 }
```

ubindexclosepost

> \tstsubsubindexclosepost[⟨*main sort*⟩]{⟨*main term*⟩}[⟨*sub sort*⟩]{⟨*sub
> term*⟩}[⟨*sub-sub sort*⟩]{⟨*sub-sub term*⟩}{⟨*encap*⟩}{⟨*text*⟩}

```
1607 \newcommand*{\tstsubsubindexclosepost}[2][]{%
1608   \def\@tstidx@sort{#1}%
1609   \def\@tstidx@term{#2}%
1610   \@tst@subsubindexclosepost
1611 }
1612 \newcommand*{\@tst@subsubindexclosepost}[2][]{%
1613   \def\@tstidx@subsort{#1}%
1614   \def\@tstidx@subterm{#2}%
1615   \@@tst@subsubindexclosepost
1616 }
1617 \newcommand*{\@@tst@subsubindexclosepost}[4][]{%
1618   \def\@tstidx@subsubsort{#1}%
1619   \def\@tstidx@subsubterm{#2}%
1620   \def\@tstidx@encap{#3}%
1621   \ifx\@tstidx@sort\@empty
1622     \let\@tstidx@entry\@tstidx@term
1623   \else
1624     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@sort}\tstidxactual
1625       \unexpanded\expandafter{\@tstidx@term}}%
1626   \fi
1627   \ifx\@tstidx@subsort\@empty
1628     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1629       \unexpanded\expandafter{\@tstidx@subterm}}%
```

46

```
1630   \else
1631     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1632       \unexpanded\expandafter{\@tstidx@subsort}\tstidxactual
1633         \unexpanded\expandafter{\@tstidx@subterm}}%
1634   \fi
1635   \ifx\@tstidx@subsubsort\@empty
1636     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1637       \unexpanded\expandafter{\@tstidx@subsubterm}}%
1638   \else
1639     \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1640       \unexpanded\expandafter{\@tstidx@subsubsort}\tstidxactual
1641         \unexpanded\expandafter{\@tstidx@subsubterm}}%
1642   \fi
1643   \ifx\@tstidx@encap\@empty
1644     \iftestidxshowmarks
1645       \tstidxtext{#4\tstidxclosesubmarker}%
1646     \else
1647       #4%
1648     \fi
1649     \expandafter\toks@\expandafter{\@tstidx@entry}%
1650     \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxcloserange}%
1651     \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1652   \else
1653     \iftestidxshowmarks
1654       \tstidxtext{\tstidxencaptext{#3}{#4\tstidxclosesubmarker}}%
1655     \else
1656       #4%
1657     \fi
1658     \expandafter\toks@\expandafter{\@tstidx@entry}%
1659     \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxcloserange#3}%
1660     \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1661   \fi
1662 }
```

<div style="border: 1px solid; background: #ffffcc;">

tstsubsubindexpre   \tstsubsubindexpre[⟨*main sort*⟩]{⟨*main term*⟩}[⟨*sub sort*⟩]{⟨*sub term*⟩}
[⟨*sub-sub sort*⟩]{⟨*sub-sub term*⟩}{⟨*encap*⟩}{⟨*text*⟩}

</div>

```
1663 \newcommand*{\tstsubsubindexpre}[2][]{%
1664   \def\@tstidx@sort{#1}%
1665   \def\@tstidx@term{#2}%
1666   \@tst@subsubindexpre
1667 }
1668 \newcommand*{\@tst@subsubindexpre}[2][]{%
1669   \def\@tstidx@subsort{#1}%
1670   \def\@tstidx@subterm{#2}%
1671   \@@tst@subsubindexpre
1672 }
1673 \newcommand*{\@@tst@subsubindexpre}[4][]{%
```

```
1674  \def\@tstidx@subsubsort{#1}%
1675  \def\@tstidx@subsubterm{#2}%
1676  \def\@tstidx@encap{#3}%
1677  \ifx\@tstidx@sort\@empty
1678    \let\@tstidx@entry\@tstidx@term
1679  \else
1680    \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@sort}\tstidxactual
1681      \unexpanded\expandafter{\@tstidx@term}}%
1682  \fi
1683  \ifx\@tstidx@subsort\@empty
1684    \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1685      \unexpanded\expandafter{\@tstidx@subterm}}%
1686  \else
1687    \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1688      \unexpanded\expandafter{\@tstidx@subsort}\tstidxactual
1689        \unexpanded\expandafter{\@tstidx@subterm}}%
1690  \fi
1691  \ifx\@tstidx@subsubsort\@empty
1692    \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1693      \unexpanded\expandafter{\@tstidx@subsubterm}}%
1694  \else
1695    \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1696      \unexpanded\expandafter{\@tstidx@subsubsort}\tstidxactual
1697        \unexpanded\expandafter{\@tstidx@subsubterm}}%
1698  \fi
1699  \ifx\@tstidx@encap\@empty
1700    \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1701    \iftestidxshowmarks
1702      \tstidxtext{#4\tstidxsubsubmarker}%
1703    \else
1704      #4%
1705    \fi
1706  \else
1707    \expandafter\toks@\expandafter{\@tstidx@entry}%
1708    \edef\@tstidx@entry{\the\toks@\tstidxencap#3}%
1709    \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1710    \iftestidxshowmarks
1711      \tstidxtext{\tstidxencaptext{#3}{#4\tstidxsubsubmarker}}%
1712    \else
1713      #4%
1714    \fi
1715  \fi
1716 }
```

bsubindexopenpre

> \tstsubsubindexopenpre[⟨*main sort*⟩]{⟨*main term*⟩}[⟨*sub sort*⟩]{⟨*sub term*⟩}
> [⟨*sub-sub sort*⟩]{⟨*sub-sub term*⟩}{⟨*encap*⟩}{⟨*text*⟩}

```
1717 \newcommand*{\tstsubsubindexopenpre}[2][]{%
```

```
1718    \def\@tstidx@sort{#1}%
1719    \def\@tstidx@term{#2}%
1720    \@tst@subsubindexopenpre
1721 }
1722 \newcommand*{\@tst@subsubindexopenpre}[2][]{%
1723    \def\@tstidx@subsort{#1}%
1724    \def\@tstidx@subterm{#2}%
1725    \@@tst@subsubindexopenpre
1726 }
1727 \newcommand*{\@@tst@subsubindexopenpre}[4][]{%
1728    \def\@tstidx@subsubsort{#1}%
1729    \def\@tstidx@subsubterm{#2}%
1730    \def\@tstidx@encap{#3}%
1731    \ifx\@tstidx@sort\@empty
1732      \let\@tstidx@entry\@tstidx@term
1733    \else
1734      \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@sort}\tstidxactual
1735        \unexpanded\expandafter{\@tstidx@term}}%
1736    \fi
1737    \ifx\@tstidx@subsort\@empty
1738      \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1739        \unexpanded\expandafter{\@tstidx@subterm}}%
1740    \else
1741      \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1742        \unexpanded\expandafter{\@tstidx@subsort}\tstidxactual
1743          \unexpanded\expandafter{\@tstidx@subterm}}%
1744    \fi
1745    \ifx\@tstidx@subsubsort\@empty
1746      \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1747        \unexpanded\expandafter{\@tstidx@subsubterm}}%
1748    \else
1749      \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1750        \unexpanded\expandafter{\@tstidx@subsubsort}\tstidxactual
1751          \unexpanded\expandafter{\@tstidx@subsubterm}}%
1752    \fi
1753    \ifx\@tstidx@encap\@empty
1754      \expandafter\toks@\expandafter{\@tstidx@entry}%
1755      \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxopenrange}%
1756      \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1757      \iftestidxshowmarks
1758        \tstidxtext{#4\tstidxopensubmarker}%
1759      \else
1760        #4%
1761      \fi
1762    \else
1763      \expandafter\toks@\expandafter{\@tstidx@entry}%
1764      \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxopenrange#3}%
1765      \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1766      \iftestidxshowmarks
```

```
1767      \tstidxtext{\tstidxencaptext{#3}{#4\tstidxopensubmarker}}%
1768    \else
1769      #4%
1770    \fi
1771  \fi
1772 }
```

> \tstsubsubindexclosepre[⟨*main sort*⟩]{⟨*main term*⟩}[⟨*sub sort*⟩]{⟨*sub term*⟩}
> [⟨*sub-sub sort*⟩]{⟨*sub-sub term*⟩}{⟨*encap*⟩}{⟨*text*⟩}

```
1773 \newcommand*{\tstsubsubindexclosepre}[2][]{%
1774  \def\@tstidx@sort{#1}%
1775  \def\@tstidx@term{#2}%
1776  \@tst@subsubindexclosepre
1777 }
1778 \newcommand*{\@tst@subsubindexclosepre}[2][]{%
1779  \def\@tstidx@subsort{#1}%
1780  \def\@tstidx@subterm{#2}%
1781  \@@tst@subsubindexclosepre
1782 }
1783 \newcommand*{\@@tst@subsubindexclosepre}[4][]{%
1784  \def\@tstidx@subsubsort{#1}%
1785  \def\@tstidx@subsubterm{#2}%
1786  \def\@tstidx@encap{#3}%
1787  \ifx\@tstidx@sort\@empty
1788    \let\@tstidx@entry\@tstidx@term
1789  \else
1790    \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@sort}\tstidxactual
1791      \unexpanded\expandafter{\@tstidx@term}}%
1792  \fi
1793  \ifx\@tstidx@subsort\@empty
1794    \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1795      \unexpanded\expandafter{\@tstidx@subterm}}%
1796  \else
1797    \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1798      \unexpanded\expandafter{\@tstidx@subsort}\tstidxactual
1799        \unexpanded\expandafter{\@tstidx@subterm}}%
1800  \fi
1801  \ifx\@tstidx@subsubsort\@empty
1802    \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1803      \unexpanded\expandafter{\@tstidx@subsubterm}}%
1804  \else
1805    \edef\@tstidx@entry{\unexpanded\expandafter{\@tstidx@entry}\tstidxlevel
1806      \unexpanded\expandafter{\@tstidx@subsubsort}\tstidxactual
1807        \unexpanded\expandafter{\@tstidx@subsubterm}}%
1808  \fi
1809  \ifx\@tstidx@encap\@empty
1810    \expandafter\toks@\expandafter{\@tstidx@entry}%
```

```
1811     \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxcloserange}%
1812     \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1813     \iftestidxshowmarks
1814       \tstidxtext{#4\tstidxclosesubmarker}%
1815     \else
1816       #4%
1817     \fi
1818   \else
1819     \expandafter\toks@\expandafter{\@tstidx@entry}%
1820     \edef\@tstidx@entry{\the\toks@\tstidxencap\tstidxcloserange#3}%
1821     \expandafter\@tstindex\expandafter{\@tstidx@entry}%
1822     \iftestidxshowmarks
1823       \tstidxtext{\tstidxencaptext{#3}{#4\tstidxclosesubmarker}}%
1824     \else
1825       #4%
1826     \fi
1827   \fi
1828 }
```

7 Filler Text Generator

\testidx   Provide a command similar to \lipsum from the lipsum package. May take a comma-separated list or a range of paragraph indices. The starred form suppresses paragraph breaks.

```
1829 \newcommand*{\testidx}{%
1830   \@ifstar
1831   {%
1832     \def\@testidx@block@sep{\space}%
1833     \@testidx
1834   }%
1835   {%
1836     \def\@testidx@block@sep{\tstidxdefblocksep}%
1837     \@testidx
1838   }%
1839 }
```

\@testidx

```
1840 \newcommand*{\@testidx}[1][1-\tstidxmaxblocks]{%
1841   \@for\@tidx@block@range:=#1\do{%
1842     \ifx\@tidx@block@range\@empty
1843     \else
1844       \expandafter\@test@idx\@tidx@block@range-\@nil-\@nil\@end@test@idx
1845     \fi
1846   }%
1847 }
```

tidxdefblocksep   The default separator between blocks is \par.

```
1848 \newcommand{\tstidxdefblocksep}{\par}
```

tstidxprefixblock   Prefix for each paragraph. Argument is the paragraph number.

```
1849 \newcommand*{\tstidxprefixblock}[1]{{\scriptsize\number#1.}\ }
```

\@tidx@parctr

```
1850 \newcount\@tidx@parctr
```

\@test@idx

```
1851 \def\@test@idx#1-#2-#3\@end@test@idx{%
1852   \def\@tst@idx@arg{#1}%
1853   \ifx\@tst@idx@arg\@nnil
1854     \PackageError{testidx}{Invalid range '\@tidx@block@range'}{}%
1855   \else
1856     \def\@tst@idx@arg{#2}%
1857     \ifx\@tst@idx@arg\@empty
1858       \PackageError{testidx}{Invalid range '\@tidx@block@range'}{}%
1859     \else
1860       \ifx\@tst@idx@arg\@nnil
1861         \@@test@idx{#1}%
1862       \else
1863         \ifnum#2<#1\relax
1864           \@tidx@parctr=\numexpr#1+1\relax
1865           \loop
1866             \advance\@tidx@parctr by -\@ne
1867             \@@test@idx\@tidx@parctr
1868           \ifnum\@tidx@parctr>#2
1869           \repeat
1870         \else
1871           \@tidx@parctr=\numexpr#1-1\relax
1872           \loop
1873             \advance\@tidx@parctr by \@ne
1874             \@@test@idx\@tidx@parctr
1875           \ifnum\@tidx@parctr<#2
1876           \repeat
1877         \fi
1878       \fi
1879     \fi
1880   \fi
1881 }
```

\@@test@idx   Do paragraph identified by argument.

```
1882 \newcommand*{\@@test@idx}[1]{%
1883   \@ifundefined{@tidx@par@\romannumeral#1}%
1884   {%
1885     \PackageError{testidx}{No such test block '\number#1'}%
1886     {Blocks are numbered from 1 to \number\tstidxmaxblocks}%
1887   }%
1888   {%
1889     \tstidxprefixblock{#1}%
1890     \csname @tidx@par@\romannumeral#1\endcsname
```

```
1891        \@testidx@block@sep
1892 }%
1893 }
```

```
1894 \newcount\tstidxmaxblocks
```

7.1 Adding Test Paragraphs

```
1895 \newcommand*{\tstidxnewblock}{
1896    \@ifstar\s@tstidxnewblock\@tstidxnewblock
1897 }
```

\tstidxnewblock*{⟨*cs*⟩}{⟨*block text*⟩}

(Starred form.) Define a new block and assign the block's number to the control sequence ⟨*cs*⟩ for reference in another block. (Can't use the normal \ref/\label as the reference is more useful to the user if the referred block is missing. The undefined ?? indicator isn't much use in this context.)

```
1898 \newcommand{\s@tstidxnewblock}[2]{%
1899    \@tstidxnewblock{#2}%
1900    \edef#1{\number\tstidxmaxblocks}%
1901 }
```

\tstidxnewblock{⟨*block text*⟩}

(Unstarred form.) Define a new block.

```
1902 \newcommand{\@tstidxnewblock}[1]{%
1903    \advance\tstidxmaxblocks by \@ne
1904    \expandafter
1905       \newcommand\csname @tidx@par@\romannumeral\tstidxmaxblocks\endcsname{#1}%
1906 }
```

7.2 Test Paragraphs

These are all the predefined test paragraphs.

```
1907 \tstidxnewblock
1908 {%
1909 This is a~sample block of text designed to test
1910 \tstidxcs{index}, the
1911 \if@tstidx@use@encaps
1912    \tstidxword[tstidxencapii]{layout}
1913 \else
1914    \tstidxword{layout}
```

```
1915 \fi
1916  of the
1917 \if@tstidx@use@encaps
1918  \tstidxword[tstidxencapii]{index}
1919 \else
1920  \tstidxword{index}
1921 \fi
1922 (\tstidxenv{theindex} environment) and any
1923 \if@tstidx@use@encaps
1924   \tstidxphrase[tstidxencapii]{indexing application},
1925 \else
1926   \tstidxphrase{indexing application},
1927 \fi
1928 such as
1929 \tstidxapp{makeindex} or
1930 \tstidxapp{xindy}. This text is just
1931 \tstidxword{filler} (produced using \tstidxcs{testidx} provided
1932 by the \tstidxopensty{testidx} package) to
1933 pad\tstindexsee{padding}{seealso}{filler} out
1934 the document with instances of \tstidxcs{index} interspersed
1935 throughout. You can use it, for \tstidxword{example}, to test an indexing
1936 package, such as \tstidxsty{makeidx} or \tstidxsty{imakeidx}, or to
1937 test a \tstidxapp{makeindex} style file or \tstidxapp{xindy} module.
1938 You can find out more
1939 information from the \tstidxsty{testidx} user manual, which
1940 can be accessed using the \tstidxapp{texdoc} application.
1941 This block starts a range that is closed in block~\@tidx@close@testidxsty.%
1942 }

1943 \tstidxnewblock
1944 {%
1945 The \tstidxsty{testidx} package doesn't make any
1946 modifications to \tstidxcs{index} or \tstidxenv{theindex}. All
1947 \tstidxphrase{visual effects} in this \tstidxphrase{dummy text} are produced
1948 using markup commands provided solely for this \tstidxword{purpose} that
1949 internally use \tstidxcs{index} or, more specifically, internally use
1950 \tstidxcs{tstindex}, which is defined to use \tstidxcs{index} (so you can
1951 redefine \tstidxcs{tstindex} if you have multiple indexes). This package
1952 doesn't attempt to \tstidxword{parse} or otherwise \tstidxword{interpret} the
1953 \tstidxword{argument} of \tstidxcs{index}, nor does it attempt to
1954 produce a well-designed index. Its purpose is to help you
1955 \tstidxword{test} your chosen \tstidxword{design}, which is easier to do with a
1956 relatively small test \tstidxword{document}, than with a large
1957 \tstidxword{book}. The \tstidxphrase{dummy text} is intended to produce an
1958 \tstidxword{index} that is at least three pages long to allow you
1959 to test the page headers and footers in a two-sided document.
1960 You can hide the visual effects with the
1961 \tstidxstyopt{testidx}{hidemarks} package option.
1962 \iftestidxshowmarks
1963 \else
```

```
1964   (It seems you already have this option set.
1965   Remove it or use \tstidxstyopt{testidx}{showmarks} to show them
1966   again.)%
1967 \fi
1968 }

1969 \tstidxnewblock
1970 {%
1971 The actual place where the \tstidxcs{index} command occurs in this
1972 \if@tstidx@use@encaps
1973   \tstidxphrase[tstidxencapiii]{dummy text}
1974 \else
1975   \tstidxphrase{dummy text}
1976 \fi
1977 is marked with the symbol
1978 \tstidxindexmarker{tstidxmarker} if there is no \tstidxword{range} or
1979 \tstidxphrase{cross-reference}. The
1980 \if@tstidx@use@encaps
1981   \tstidxword[tstidxencapi]{word}
1982 \else
1983   \tstidxword{word}
1984 \fi
1985 or
1986 \if@tstidx@use@encaps
1987   \tstidxword[tstidxencapii]{phrase}
1988 \else
1989   \tstidxword{phrase}
1990 \fi
1991 adjacent to this \tstidxword{marker} is
1992 the text being indexed.\tstidxfootnote{The \tstidxcs{index} command may
1993 occur before or after the \tstidxword{word} or \tstidxword{phrase} being
1994 indexed in this
1995 \if@tstidx@use@encaps
1996   \tstidxphrase[tstidxencapiii]{dummy text},
1997 \else
1998   \tstidxphrase{dummy text},
1999 \fi
2000 but there's no
2001 space between the \tstidxword{marker} and the term being indexed. Always
2002 remember not to surround your \tstidxcs{index} usage with spaces. Keep it
2003 flush against the term being indexed and only have a space on one
2004 side. Incidentally, this \tstidxword{footnote} text was produced
2005 using the command \tstidxcs{tstidxfootnote}, which you can
2006 redefined as required. (It defaults to just \tstidxcs{footnote}.)}
2007 A sub-entry is indicated with the symbol
2008 \tstidxindexmarker{tstidxsubmarker} and a sub-sub-entry is
2009 indicated with the symbol \tstidxindexmarker{tstidxsubsubmarker}.
2010 If an \tstidxword{encap} value is provided, both the
2011 \if@tstidx@use@encaps
2012  \tstidxword[tstidxencapiii]{text}
```

```
2013 \else
2014   \tstidxword{text}
2015 \fi
2016 and the
2017 \if@tstidx@use@encaps
2018   \tstidxword[tstidxencapii]{marker}
2019 \else
2020   \tstidxword{marker}
2021 \fi
2022 are typeset in the \tstidxword{argument} of the corresponding command.
2023 (The text occurring in the document is also typeset within the argument of
2024 \tstidxcs{tstidxtext}. The default value is to use a dark grey, but since the
2025 default values for the \tstidxword{predefined} encaps used in this text all
2026 change the colour, the dark grey will only apply where the encap hasn't
2027 been set.) There are three \tstidxword{encap} values used throughout this
2028 \tstidxphrase{dummy text} (unless you've used the
2029 \tstidxstyopt{testidx}{notestencaps} package option):
2030 \if@tstidx@use@encaps
2031   \tstidxencapcsn[tstidxencapi]{tstidxencapi},
2032 \else
2033   \tstidxencapcsn{tstidxencapi},
2034 \fi
2035 \if@tstidx@use@encaps
2036   \tstidxencapcsn[tstidxencapii]{tstidxencapii}
2037 \else
2038   \tstidxencapcsn{tstidxencapii}
2039 \fi
2040 and
2041 \if@tstidx@use@encaps
2042   \tstidxencapcsn[tstidxencapiii]{tstidxencapiii}.
2043 \else
2044   \tstidxencapcsn{tstidxencapiii}.
2045 \fi
2046 (The default values use \tstidxcs{textcolor}, so you might want to use the
2047 \tstidxstyopt{hyperref}{hidelinks} option
2048 if you want to use the \tstidxsty{hyperref} package.) A cross-referenced
2049 entry (using \tstidxencapcsn{see} or \tstidxencapcsn{seealso}) is identified
2050 using the \tstidxword{marker}  \tstidxindexmarker{tstidxseemarker}
2051 and the cross-referenced information is displayed as
2052 a \tstidxphrase{marginal note} by default, with the term being indexed
2053 followed by the \tstidxword{cross-reference}. A sub-level
2054 \tstidxword{cross-reference} is identified with the \tstidxword{marker}
2055 \tstidxindexmarker{tstidxsubseemarker} and the marginal note
2056 displays the main term followed by the sub-term (separated by the
2057 symbol \tstidxsubseesep).  The \tstidxword{marker} used for the start of
2058 a range is \tstidxindexmarker{tstidxopenmarker} and the
2059 \tstidxword{marker} used for the end of
2060 a range is \tstidxindexmarker{tstidxclosemarker}
2061 unless the entry is a sub-level, in which case the
```

```
2062 \tstidxword{marker} for the start of the range is
2063 \tstidxindexmarker{tstidxopensubmarker}
2064 and the \tstidxword{marker} used for the end of a range is
2065 \tstidxindexmarker{tstidxclosesubmarker}, or for a sub-sub-level
2066 \tstidxindexmarker{tstidxopensubsubmarker} and
2067 \tstidxindexmarker{tstidxclosesubsubmarker}. There are no tests for
2068 any further sub-levels. Although \tstidxapp{xindy} allows more than
2069 three levels (\tstidxapp{makeindex} doesn't), it's somewhat
2070 \tstidxword{excessive} to go below a sub-sub-level.
2071 You'll have to add your own tests for anything deeper.%
2072 }
2073 \tstidxnewblock*{\@tidx@openrangepar}
2074 {%
2075 Here's an \tstidxword{example} of the start of a \tstidxopenword{range} but
2076 remember that a range must also have an end, so make sure that
2077 \tstidxword{block}~\@tidx@closerangepar\ has been included in this
2078 \if@tstidx@use@encaps
2079   \tstidxphrase[tstidxencapiii]{dummy text},
2080 \else
2081   \tstidxphrase{dummy text},
2082 \fi
2083  which closes this
2084 \tstidxword{example}.
2085 \iftestidxverbose
2086   I see you've used the \tstidxstyopt{testidx}{verbose} package option which
2087   shows the \tstidxword{argument} being passed to \tstidxcs{tstindex}.
2088   I expect it's caused some \tstidxphrase{overfull lines}.%
2089 \else
2090   If you want more detail, you can use the \tstidxstyopt{testidx}{verbose}
2091   package option which will show the \tstidxword{argument} being passed to
2092   \tstidxcs{tstindex} but be warned that it will
2093   cause \tstidxphrase{overfull lines}.%
2094 \fi
2095 }
2096 \tstidxnewblock
2097 {%
2098 Now that the preliminaries have been dispensed with in the previous
2099 \tstidxword{paragraph}s, we can get on
2100 to some serious
2101 \if@tstidx@use@encaps
2102   \tstidxword[tstidxencapii]{waffle}
2103 \else
2104   \tstidxword{waffle}
2105 \fi
2106 to act as
2107 \if@tstidx@use@encaps
2108   \tstidxword[tstidxencapi]{filler}
2109 \else
2110   \tstidxword{filler}
```

```
2111 \fi
2112 text because this really needs
2113 some \tstidxword{padding} in order to get a decent sized
2114 \tstidxword{index} with lots of locations. I did consider using just
2115 plain old \tstidxphrase{lorem ipsum} (like the \tstidxsty{lipsum}
2116 package), but it gets a bit boring after a while, and it's easier to
2117 check the indexing has been performed successfully if you can understand
2118 the text. Of course, this doesn't help those who don't know any English, but at
2119 least they're no worse off than they would have been with random
2120 \tstidxword{gibberish}\tstindexsee{gobbledegook}{see}{gibberish},
2121 at least, I hope not.  In other words, if I could just \tstidxword{clarify}
2122 what I'm trying to say here, in a \tstidxword{confidential} and not too
2123 \tstidxword{roundabout} \tstidxword{fashion}\tstidxdash
2124 \tstidxphrase{between you, me and the gatepost}\tstidxdash is please don't
2125 consider this to be an
2126 \tstidxword{illustration}\tstindexsee{illustration}{seealso}{example} of
2127 my stunning \tstidxword{wit}, \tstidxword{eloquence} and
2128 \tstidxphrase{way with words} because I'm shamelessly contravening the
2129 \tstidxphrase{creative writing}
2130 \tstidxword{adage} (or possibly \tstidxword{motto}) of
2131 \tstidxphrase{cut to the chase}, remove excessive
2132 \tstidxword{verbiage} and \tstidxphrase{get to the point}. I shall
2133 take care to hide this \tstidxword{drivel} from my
2134 \if@tstidx@use@encaps
2135   \tstidxphrase[tstidxencapiii]{creative writing}
2136 \else
2137   \tstidxphrase{creative writing}
2138 \fi
2139 \tstidxword{tutor} and
2140 fellow writers, so
2141 \tstidxphrase{keep mum}\tstindexsee{keep mum}{seealso}{confidential}
2142 and don't \tstidxword{grass} on me because that just won't be fair,
2143 and it might \tstidxword{distress} them to a certain extent.
2144 Where was I? Oh, yes, \tstidxword{padding}. I'm trying to make this
2145 \tstidxword{paragraph} quite long, not because I have any pretensions of being
2146 the next \tstidxperson{James}{Joyce} and competing with
2147 \tstidxbook{Ulysses}, but because one of the things
2148 we need to check for is what happens with paragraphs that span a
2149 \tstidxphrase{page break}. (If you're feeling particularly daring,
2150 try out the starred version of \tstidxcs{testidx}, although
2151 some of the blocks, such as \tstidxword{block}~\@tidx@xdypar, have some
2152 sneaky \tstidxword{paragraph} breaks that won't
2153 be suppressed.) \tstidxsym{TeX}{\TeX}'s asynchronous
2154 \if@tstidx@use@encaps
2155   \tstidxphrase[tstidxencapii]{output routine}
2156 \else
2157   \tstidxphrase{output routine}
2158 \fi
2159 can cause things to go a bit
```

```
2160 \if@tstidx@use@encaps
2161   \tstidxphrase[tstidxencapiii]{out of whack},
2162 \else
2163   \tstidxphrase{out of whack},
2164 \fi
2165 so lengthy paragraphs in this
2166 \if@tstidx@use@encaps
2167   \tstidxword[tstidxencapii]{example}
2168 \else
2169   \tstidxword{example}
2170 \fi
2171 document increase the chances of testing for these occurrences.
2172 Whether or not this particular \tstidxword{paragraph}
2173 actually spans a \tstidxphrase{page break} does, of course, depend on
2174 various things including your document \tstidxsubword{document}{properties},
2175 such as the \tstidxphrase{page dimensions}, \tstidxphrase{font family} and
2176 \tstidxphrase{font size}. If it turns out that this
2177 \if@tstidx@use@encaps
2178   \tstidxword[tstidxencapi]{paragraph}
2179 \else
2180   \tstidxword{paragraph}
2181 \fi
2182 has spanned a \tstidxphrase{page break}, you might want to check the terms
2183 indexed here to make sure they have the correct page numbers listed.
2184 Something else that you might want to check, while you're at it, is
2185 what's happened to the \tstidxword{location list} for the word
2186 \if@tstidx@use@encaps
2187   \tstidxqt{\tstidxword[tstidxencapii]{paragraph}},
2188 \else
2189   \tstidxqt{\tstidxword{paragraph}},
2190 \fi
2191 as I've used different
2192 \tstidxword{encap} values for it in various places in this
2193 \tstidxword{example}
2194 \if@tstidx@use@encaps
2195   \tstidxword[tstidxencapiii]{paragraph}.
2196 \else
2197   \tstidxword{paragraph}.
2198 \fi
2199 If you are using
2200 \tstidxapp{makeindex}, you might notice some warnings about
2201 \tstidxphrase{multiple encaps}, and the \tstidxphrase{page number}
2202 may be duplicated in the location list. If you are using
2203 \tstidxapp{xindy}, then it will discard duplicate page numbers and
2204 give preference to the first defined attribute in whatever
2205 \tstidxapp{xindy} module you're using. However, be careful if a
2206 \if@tstidx@use@encaps
2207   \tstidxword[tstidxencapi]{range}
2208 \else
```

```
2209    \tstidxword{range}
2210 \fi
2211 overlaps a different \tstidxword{encap}.
2212 Remember that there's a difference between an \tstidxword{index} and a
2213 \tstidxword{concordance}. If you just index pertinent places, there's less
2214 likelihood of conflicting encaps. This is the end of a
2215 \if@tstidx@use@encaps
2216    \tstidxword[tstidxencapiii]{paragraph}
2217 \else
2218    \tstidxword{paragraph}
2219 \fi
2220 that was written to deliberately upset \tstidxapp{makeindex}.
2221 Mean, aren't I?%
2222 }

2223 \tstidxnewblock*{\@tidx@xdypar}
2224 {%
2225 On the subject of \tstidxapp{xindy}, if you want to use it with
2226 this \tstidxword{example} document, you'll need to add the
2227 \tstidxword{encap} values used in this \tstidxphrase{dummy text}
2228 as allowed attributes. For example, you may want to create a file
2229 called, say, \texttt{\jobname.xdy} that contains the following:
```

Can't use verbatim so fudge it.

```
2230 \begin{flushleft}\ttfamily\obeylines
2231 ; list of allowed attributes
2232 \par\medskip\par
2233 (define-attributes ((
2234   \string"tstidxencapi\string"
2235   \string"tstidxencapii\string"
2236   \string"tstidxencapiii\string"
2237 )))
2238 \par\medskip\par
2239 ; define format to use for locations
2240 \par\medskip\par
2241 (markup-locref :open \string"\string\tstidxencapi\expandafter\@gobble\string\{\string"
2242 :close \string"\expandafter\@gobble\string\}\string"
2243 :attr \string"tstidxencapi\string")
2244
2245 (markup-locref :open \string"\string\tstidxencapii\expandafter\@gobble\string\{\string"
2246 :close \string"\expandafter\@gobble\string\}\string"
2247 :attr \string"tstidxencapii\string")
2248
2249 (markup-locref :open
2250 \string"\string\tstidxencapiii\expandafter\@gobble\string\{\string"
2251 :close \string"\expandafter\@gobble\string\}\string"
2252 :attr \string"tstidxencapiii\string")
2253 \end{flushleft}
2254 This sets up allowed encap values and how they should be formatted.
2255 The ordering of the allowed \tstidxword{attributes} here gives the
```

```
2256 \tstidxencapcsn{tstidxencapi} encap precedence in the
2257 event of a \tstidxphrase{multiple encaps} clash, since it's the
2258 first one in the list. You can then
2259 run \tstidxapp{xindy} using:
2260 \begin{flushleft}\ttfamily
2261 xindy -L english -C utf8 -M \jobname.xdy -M texindy -t \jobname.ilg
2262 \jobname.idx
2263 \end{flushleft}
2264 You might also want to set the location list
2265 \tstidxsubword{location list}{page separator}
2266 and the \tstidxsubword{location list}{range separator}%
2267 \tstindexsee{range separator}{see}{location list}
2268 in your \texttt{.xdy} file.  For example:
2269 \begin{flushleft}\ttfamily
2270 (markup-locref-list :sep \string",\string")\par
2271 (markup-range :sep \string"\string-\string-\string")
2272 \end{flushleft}
2273 Check out the difference between using \tstidxapp{xindy} and
2274 \tstidxapp{makeindex} on this document.%
2275 }

2276 \tstidxnewblock
2277 {%
2278 We, the \tstidxutfword{\'elite}{élite} who discovered the
2279 \tstidxutfword{\ae sthetic}{æsthetic}
2280 delights of \tstidxsym{TeX}{\TeX}, must not become
2281 \tstidxutfword{blas\'e}{blasé} about being the
2282 \tstidxutfword{prot\'eg\'e}{protégé}
2283 of the great \tstidxperson{Donald}{Knuth}.
2284 It may stagger the
2285 \tstidxutfword{client\`ele}{clientèle} of
2286 \if@tstidx@use@encaps
2287   \tstidxartphrase[tstidxencapii]{the}{commercial world}
2288 \else
2289   \tstidxartphrase{the}{commercial world}
2290 \fi
2291 to discover our
2292 \tstidxutfword{r\'esum\'e}{résumé}
2293 (after foraging for it in our natty
2294 \tstidxutfphrase{attach\'e case}{attaché case})
2295 while we sample a \tstidxword{vol-au-vent} or \tstidxword{two}
2296 at the \tstidxutfword{soir\'ee}{soirée}
2297 in the \tstidxutfphrase{pied-\`a-terre}{pied-à-terre}
2298 with the delightful \tstidxutfword{ph\oe nix}{phœnix}-%
2299 themed \tstidxutfword{d\'ecor}{décor} and
2300 \tstidxutfword{f\ae rie}{færie}
2301 \tstidxutfword{fa\c{c}ade}{façade}
2302 that has stunned
2303 many an \tstidxutfword{\ae thereal}{æthereal}
2304 \tstidxutfword{d\'ebutante}{débutante}
```

```
2305 sporting a \tstidxutfphrase{berg\'ere hat}{bergère hat},
2306 but it would be \tstidxutfword{na\"ive}{naïve}
2307 to fall for such a \tstidxutfword{f\oe tid}{fœtid}
2308 \tstidxutfword{clich\'e}{cliché}.
2309 This \tstidxword{paragraph} is in a state of
2310 \tstidxutfword{d\'eshabill\'e}{déshabillé}.
2311 Like a \tstidxword{sculpture} of \tstidxword{Venus} in a
2312 \tstidxutfword{n\'eglig\'ee}{négligée}, it's transparently
2313 obvious that this \tstidxword{paragraph} is provided for the sole purpose of
2314 \tstidxword{ogling}\tstindexsee{gawping}{see}{ogling}
2315 \tstidxphrase{extended Latin characters} and testing
2316 how \tstidxapp{xindy} and \tstidxapp{makeindex} compare.
2317 Time for a quick trip to the \tstidxutfword{caf\'e}{café}
2318 for an \tstidxutfword{an\ae mic}{anæmic}
2319 \tstidxphrase{cup of tea} with
2320 \tstidxutfperson{Anders Jonas}{\AA ngstr\"om}%
2321 {Anders Jonas}{Ångström} and then off to find a \tstidxword{zoo}
2322 in \tstidxutfplace{\"Osterg\"otland}{Östergötland},
2323 so we can get to the end of the \tstidxword{alphabet}. Perhaps
2324 then we should go over to
2325 \tstidxutfplace{\"Angelholm}{Ängelholm}
2326 and head off across the
2327 \tstidxutfplace{\O resund}{Øresund} bridge and
2328 \tstidxword{resume} our search for some more examples.
2329 We'll go on a \tstidxphrase{whistle-stop tour} around
2330 \tstidxutfplace{T\r{a}rnby}{Tårnby},
2331 \tstidxutfplace{R\o dovre}{Rødovre},
2332 \tstidxutfplace{N\ae stved}{Næstved} and
2333 \tstidxutfplace{\O lstykke-Stenl\o se}{Ølstykke-Stenløse}.
2334 Afterwards, we'll \tstidxword{fly} to
2335 \tstidxplace{Poland} (possibly in an \tstidxword{aeroplane}\tstidxdash
2336 if passengers would like to look out of their \tstidxword{window}, they'll
2337 see we're passing over
2338 \tstidxutfplace{A\ss lar}{Aßlar} and
2339 \tstidxutfplace{Bad Gottleuba-Berggie\ss h\"ubel}{Bad Gottleuba-Berggießhübel})
2340 and then we'll visit \tstidxutfplace{\L\'od\'z}{Łódź},
2341 \@tstidx@if@notOT@ne
2342 {%
2343   \tstidxutfplace{\'Swi\k{e}tokrzyskie}{Świętokrzyskie}%
2344   \ifxetex
2345   \else
2346     \ifluatex
2347     \else
2348       \space(that one will cause a problem for certain font encodings
2349       because of the \tstidxword{ogonek} and
2350       will be omitted if you use the default
2351       \tstidxsubword{font encoding}{OT1}
2352       encoding, but not if you use the \tstidxsty{fontenc} package with,
2353       for example, the \tstidxstyopt{fontenc}{T1} option)%
```

```
2354       \fi
2355    \fi,
2356 }%
2357 {%
2358    [a place with an \tstidxword{ogonek} has been omitted because this document
2359     is using the default \tstidxsubword{font encoding}{OT1} font
2360    encoding\tstidxdash try loading \tstidxsty{fontenc} with the
2361    \tstidxstyopt{fontenc}{T1} option],
2362 }%
2363 \tstidxutfplace{\.Zory}{Żory},
2364 \tstidxutfplace{\.Zelech\'ow}{Żelechów},
2365 \tstidxutfplace{\L obez}{Łobez},
2366 \tstidxutfplace{G\l og\'ow}{Głogów}
2367 (not to be confused with \tstidxplace{Glasgow}),
2368 \tstidxutfplace{\'Cmiel\'ow}{Ćmielów},
2369 \tstidxutfplace{\'Scinawa}{Ścinawa}
2370 and
2371 \tstidxutfplace{\'Swidnica}{Świdnica}.
2372 Then let's \tstidxword{sail} to \tstidxplace{Iceland} (possibly in
2373 a \tstidxword{ship}) and visit the lakes of
2374 \tstidxplace{Iceland}, such as
2375 \tstidxutfplace{\"Olvesvatn}{Ölvesvatn},
2376 \tstidxutfplace{\'Ulfsvatn}{Úlfsvatn},
2377 \tstidxutfplace{\'Anavatn}{Ánavatn},
2378 \tstidxutfplace{M\'asvatn}{Másvatn},
2379 \@tstidx@if@notOT@ne
2380 {%
2381    \tstidxutfplace{\th r\'hyrningsvatn}{Þríhyrningsvatn}
2382    (that one starts with a \tstidxutfword{thorn (\th)}{thorn (Þ)}),
2383    \tstidxutfplace{Sigr\'i\dh arsta\dh avatn}{Sigríðarstaðavatn}
2384    (that one has an \tstidxutfword{eth \dh}{eth ð}%
2385    \ifxetex
2386     )%
2387    \else
2388      \ifluatex
2389       )%
2390      \else
2391        \tstidxdash those last two will also be omitted if you use the default
2392        \tstidxword{OT1} \tstidxword{font encoding})%
2393      \fi
2394    \fi,
2395 }%
2396 {%
2397    [a couple of lakes with a \tstidxword{thorn} and an
2398    \tstidxword{eth} have been omitted because this document is using the
2399    default \tstidxword{OT1} \tstidxword{font encoding}\tstidxdash try loading
2400    \tstidxsty{fontenc} with the \tstidxstyopt{fontenc}{T1} option],
2401 }%
2402 \tstidxutfplace{Gr\ae navatn}{Grænavatn},
```

```
2403  \tstidxutfplace{\'Arnesl\'on}{Árneslón}
2404  and
2405  \tstidxutfplace{\'Ish\'olsvatn}{Íshólsvatn}.
2406  If you are using this with \tstidxapp{xindy} and
2407  \tstidxword{UTF-8}, try this out with a different language option,
2408  for example \tstidxappopt{xindy}{-L swedish} or
2409  \tstidxappopt{xindy}{-L danish} or \tstidxappopt{xindy}{-L german-duden} or
2410  \tstidxappopt{xindy}{-L german-din5007} or \tstidxappopt{xindy}{-L polish} or
2411  \tstidxappopt{xindy}{-L icelandic}.
2412  \@tstidx@ifgerman
2413  {I notice you've use the \tstidxstyopt{testidx}{german} or
2414   \tstidxstyopt{testidx}{ngerman} package option. This means that if you want
2415   to use \tstidxapp{makeindex} instead of \tstidxapp{xindy}, you can
2416   use \tstidxapp{makeindex}'s \tstidxappopt{makeindex}{-g} option.%
2417  }%
2418  {%
2419   If you want to use \tstidxapp{makeindex} instead of
2420   \tstidxapp{xindy}, then the package option \tstidxstyopt{testidx}{german} or
2421   \tstidxstyopt{testidx}{ngerman} will allow you to use
2422   \tstidxapp{makeindex}'s \tstidxappopt{makeindex}{-g} option.%
2423  }%
2424  \@tstidx@ifutfviii
2425  {%
2426    \ifxetex
2427    \else
2428      \ifluatex
2429      \else
2430        \space You currently have the
2431        \@tstidx@ifsanitize
2432      {\tstidxstyopt{testidx}{sanitize} option on.
2433        This means that the words containing \tstidxword{UTF-8} characters will
2434        first be sanitized before being passed to \tstidxcs{tstindex}, which
2435        will allow you to test how well the \tstidxphrase{indexing application}
2436        sorts \tstidxword{UTF-8} characters. If you'd rather test how
2437        \tstidxcs{index} writes these characters to the file read by the
2438        indexing application, use the \tstidxstyopt{testidx}{nosanitize}
2439        option instead. This may cause the \tstidxword{UTF-8} characters to be
2440        written in terms of \tstidxcs{IeC}.%
2441      }%
2442      {\tstidxstyopt{testidx}{nosanitize} option on.
2443        This means that the words containing \tstidxword{UTF-8} characters
2444        may be written to the file processed by the
2445        \tstidxphrase{indexing application} in terms of
2446        \tstidxcs{IeC}. This allows you to test how \tstidxcs{index} behaves.
2447        If you'd rather test how the indexing application sorts
2448        \tstidxword{UTF-8} characters, use the \tstidxstyopt{testidx}{sanitize}
2449        option instead, which will sanitize the \tstidxword{UTF-8} characters
2450        before passing them to \tstidxcs{tstindex}.%
2451        }
```

```
2452     \fi
2453   \fi
2454 }%
2455 {}%
2456 }

2457 \tstidxnewblock
2458 {%
2459   Don't forget there's also a \tstidxphrase{number group}, so let's
2460   have some numbers.
2461   \tstidxartbook{The}{Hitchhiker's Guide to the Galaxy} has
2462   of course propelled the number \tstidxnumber{42} to stardom, as the
2463   answer to \tstidxword{life}, the \tstidxword{universe} and
2464   everything. We usually deal in base~\tstidxnumber{10}, but sometimes
2465   base~\tstidxnumber{16} is useful to programmers, and computers
2466   prefer base~\tstidxnumber{2} (and \tstidxnumber{2} is the only
2467   \tstidxword{even} \tstidxword{prime number}). A \tstidxword{century} in
2468   \tstidxword{cricket} means \tstidxnumber{100} runs, and in the
2469   \tstidxword{calendar} \tstidxnumber{100} years.
2470   If you're using \tstidxapp{xindy}, you can provide a numbers group
2471   by adding the following to your \texttt{.xdy} module:
2472 \begin{flushleft}\ttfamily
2473 (define-letter-group \string"Numbers\string"\par
2474   \string:prefixes (\string"0\string" \string"1\string" \string"2\string"
2475 \string"3\string" \string"4\string" \string"5\string"
2476 \string"6\string" \string"7\string" \string"8\string"
2477 \string"9\string")\par
2478   \string:before \string"A\string")
2479 \end{flushleft}
2480   Whilst we're on the subject of numbers, let's try out some
2481   equations.
2482 \begin{equation}
2483 \tstidxmath{E}{E} = mc^2
2484 \end{equation}
2485   \@tstidx@ifamsmath
2486   {%
2487   Since this document is using \tstidxsty{amsmath}, let's try out
2488 the \tstidxenv{align} environment:
2489 \begin{align}
2490 \tstidxmath{f(x)}{f(\protect\vec{x})} &=
2491 \tstidxmathsym{alpha}{\protect\alpha}
2492 \tstidxmathsym{sum}{\protect\sum}_i^{\tstidxmath{n}{n}} x_i
2493 +\tstidxmathsym{beta}{\protect\beta} \sum_{i}^n x_i^2
2494 +\tstidxmathsym{gamma}{\protect\gamma}
2495 \end{align}
2496   If this document hadn't loaded the \tstidxsty{amsmath} package,
2497 we would have had to use the \tstidxenv{eqnarray} environment
2498 instead.
2499   }%
2500   {%
```

```
2501    This document doesn't load the \tstidxsty{amsmath} package, so
2502 let's try out the \tstidxenv{eqnarray} environment:
2503 \begin{eqnarray}
2504 \tstidxmath{f(x)}{f(\protect\vec{x})} &=&
2505  \tstidxmathsym{alpha}{\protect\alpha}
2506  \tstidxmathsym{sum}{\protect\sum}_i^{\tstidxmath{n}{n}} x_i
2507 +\tstidxmathsym{beta}{\protect\beta} \sum_{i}^n x_i^2
2508 +\tstidxmathsym{gamma}{\protect\gamma}
2509 \end{eqnarray}
2510    If you load the \tstidxsty{amsmath} package, we'll test the
2511    \tstidxenv{align} environment instead.
2512    }%
2513    Now I've been a bit fancy here and inserted
2514    \texttt{\tstidxmathsymprefix} in front of
2515    the sort key so I can get \tstidxapp{xindy} to create a special
2516 group for the maths symbols. Here's the code you can add to your
2517 \texttt{.xdy} file to implement it:
2518 \begin{flushleft}\ttfamily
2519 (define-letter-group \string"Maths\string"
2520    \string:prefixes (\string"\tstidxmathsymprefix\string")
2521    \string:before \string"Numbers\string")
2522 \end{flushleft}
2523  I've done something similar with the \tstidxword{marker}s where I've used
2524  \texttt{\tstidxindexmarkerprefix} as the \tstidxword{prefix}.%
2525 }

2526 \tstidxnewblock*{\@tidx@closerangepar}%
2527 {%
2528  This is the end of the \tstidxcloseword{range}
2529  \tstidxword{example} from \tstidxword{block}~\@tidx@openrangepar.
2530  There's not much else to say about this \tstidxword{block} really.
2531  It's quite boring, isn't it? However, you'll need it if you've
2532  included block~\@tidx@openrangepar. Unless you're testing for
2533  a mis-matched range, of course. That might be quite interesting,
2534  possibly, but I'm not going to \tstidxphrase{hold my breath}.%
2535 }

2536 \tstidxnewblock
2537 {%
2538  Now this is going to be hard to believe\tstidxdash in fact I'm
2539  totally \tstidxword{gobsmacked} and utterly \tstidxword{astounded}
2540  \tstidxdash but I've discovered that we're still missing some
2541  \tstidxphrase{letter groups}, and I've run out of anything
2542  \tstidxword{quaint} to say, so I'm going to have to
2543  \tstidxword{yatter} for a while longer, which will probably make
2544  you \tstidxword{yawn}. What shall we talk about? My \tstidxword{quirky}
2545  \tstidxword{badinage} is about to \tstidxword{expire}. How about a
2546  \tstidxword{story}? Here's one I made up for my friend
2547  \tstidxperson{Paulo}{Cereda} in \tstidxsym{TeX}{\TeX}.SE chat because he likes
2548  ducks and is the creator of \tstidxapp{arara}.
2549  So, are you sitting comfortably? Then let's \tstidxword{begin}. By the way,
```

```
2550  before I \tstidxword{forget}, it's called
2551  \tstidxbook{Sir Quackalot and the Golden Arara} and is the
2552  first story in
2553  \tstidxartbook{The}{Adventures of Sir Quackalot}.
2554  It's a \tstidxword{tale} of \tstidxword{adventure} and
2555  \tstidxword{daring-do}. The \tstidxword{hero} of the
2556  \tstidxword{story} is \tstidxperson{Sir}{Quackalot}, in case you
2557  can't tell from the \tstidxword{title}.
2558  \tstidxphrase{Once upon a time}, a long time ago in
2559  \tstidxartphrase{a}{far away land}, there lived a
2560  \tstidxword{knight}. He was \tstidxword{handsome}, he was
2561  \tstidxword{bold}, he was \tstidxword{brave}.
2562  He was\tstidxdash a \tstidxword{duck}. His \tstidxword{name} was
2563  \tstidxperson{Sir}{Quackalot}.
2564  One day \tstidxperson{the}{Fairy Goose} appeared.
2565  \tstidxqt{Brave \tstidxword{knight},} she said. \tstidxqt{A terrible
2566  \tstidxword{plight} has fallen on
2567  the \tstidxword{land}. The evil \tstidxword{OgRe} has stolen
2568  \tstidxartphrase{the}{Golden Arara}. Only you can save it.}
2569  (That's a \tstidxword{reference} to
2570  \tstidxsym{TeX}{\TeX}'s \tstidxphrase{output routine}, if you missed it.)
2571  \tstidxqt{It will be a \tstidxword{perilous} \tstidxword{quest}, but find
2572  \tstidxartphrase{the}{Mighty Helm of Knuth} and
2573  \tstidxartphrase{the}{Legendary Sword} \tstidxword{xor} to aid you.} (Ask
2574  \tstidxperson{David}{Carlisle} about the \tstidxword{xor}
2575  \tstidxword{reference}.)%
2576 }

2577 \tstidxnewblock
2578 {%
2579 So \tstidxperson{Sir}{Quackalot} set out on his \tstidxword{quest}.
2580 (This is the \tstidxword{continuation} from
2581 the previous \tstidxword{block}, for any \tstidxword{newcomers}
2582 who have just turned up.) He soon arrived at
2583 \tstidxartphrase{the}{Bog of Eternal Glossaries} (that's a
2584 reference to my \tstidxsty{glossaries} package, and it's also a
2585 \tstidxword{nod} to \tstidxartplace{the}{Bog of Eternal Stench} in
2586 \tstidxfilm{Labyrinth}), in the
2587 \tstidxword{centre} (or \tstidxword{center} for those of you
2588 \tstidxphrase{across the pond}) of which was
2589 suspended \tstidxartphrase{the}{Mighty Helm of Knuth}, but
2590 \tstidxperson{Sir}{Quackalot} was learned in the \tstidxword{lore} of
2591 installing \tstidxapp{Perl} and was able to leap upon the
2592 \tstidxword{raft} \tstidxapp{makeglossaries} and steer his way through the
2593 \tstidxword{external} \tstidxphrase{indexing application}s and their many
2594 arguments.  (That's supposed to be a \tstidxword{pun}, but it's
2595 \tstidxphrase{bad form} to explain the \tstidxword{joke}, and it
2596 wasn't even particularly \tstidxword{witty}.
2597 Incidentally, \tstidxperson{Joseph}{Wright} makes a
2598 \tstidxword{cameo} at this point with the
```

```
2599 \tstidxword{exclamation} \tstidxqt{fetchez la vache!}\ but you'll have to
2600 ask \tstidxperson{Paulo}{Cereda} what
2601 that's all about. It wouldn't surprise me if it had something to
2602 do with \tstidxphrase{Monty Python}.)%
2603 }

2604 \tstidxnewblock
2605 {%
2606 Anyway, where were we? Oh, yes.  He (that's
2607 \tstidxperson{Sir}{Quackalot} we're talking about, if you've only
2608 just joined us) snatched up \tstidxartphrase{the}{Mighty Helm of Knuth} and
2609 escaped from the \tstidxword{perilous} \tstidxword{bog}. Soon he came to
2610 \tstidxartphrase{the}{Dread Vale of the Editors}, guarded
2611 at either end by the ever-quarrelling
2612 \tstidxword{leviathans} \tstidxapp{Emacs} and \tstidxapp{Vi}.
2613 As he approached the \tstidxword{vale}, Emacs uttered the
2614 \tstidxphrase{magic incantation} that
2615 sent forth \tstidxartphrase{the}{butterflies of chaos}.
2616 (I know \tstidxqt{\tstidxword{doom}} is more appropriate but,
2617 as is \tstidxphrase{common knowledge}, \tstidxword{chaos} is a
2618 \tstidxword{butterfly} \tstidxword{motif}.)%
2619 }

2620 \tstidxnewblock
2621 {%
2622 But \tstidxperson{Sir}{Quackalot} was protected by
2623 \tstidxartphrase{the}{Mighty Helm of Knuth} and
2624 raced past into the \tstidxword{vale}, where he found
2625 \tstidxartphrase{the}{Legendary Sword} \tstidxword{xor} in
2626 the centre of the great \tstidxsty{longtable}. (Ooh, I've started a
2627 \tstidxword{sentence} with a \tstidxword{conjunction}.
2628 How \tstidxword{naughty} is that?)
2629 With a great \tstidxword{leap} and a \tstidxword{bound},
2630 \tstidxperson{Sir}{Quackalot} plucked out the \tstidxword{sword} and
2631 headed for the far end of the \tstidxword{vale}.
2632 Up pounced \tstidxapp{Vi} and belched forth a \tstidxword{myriad}
2633 of \tstidxword{clones} that bore down on
2634 \tstidxperson{Sir}{Quackalot}.  But, brandishing the \tstidxword{sword}
2635 \tstidxword{xor}, \tstidxperson{Sir}{Quackalot} sliced them down.
2636 (There's some \tstidxword{repetition} there, but hopefully no one's
2637 noticed. There's even more coming up in the next
2638 \tstidxword{block}.)%
2639 }

2640 \tstidxnewblock*{\@tidx@close@testidxsty}%
2641 {%
2642 \tstidxperson{Sir}{Quackalot} escaped from
2643 \tstidxartphrase{the}{Dread Vale of the Editors} and set off
2644 up the path that led to the evil \tstidxword{OgRe}'s \tstidxword{lair}.
2645 As \tstidxperson{Sir}{Quackalot} approached, there was a fearful
2646 \tstidxword{roar}, and the \tstidxword{OgRe} pounced on \tstidxperson{Sir}{Quackalot}.
```

```
2647 The brave \tstidxword{knight} raised his powerful \tstidxword{sword}
2648 \tstidxword{xor} and brought it down on the \tstidxword{OgRe}, destroying him.
2649 \tstidxperson{Sir}{Quackalot} rescued \tstidxartphrase{the}{Golden Arara}
2650 and the \tstidxword{land} was once more restored to \tstidxword{peace} and
2651 \tstidxword{harmony} and
2652 \tstidxword{paragraph}s were able to \tstidxword{span}
2653 \tstidxphrase{page break}s without \tstidxword{fear}.
2654 \tstidxartphrase{The}{End}. Don't miss the next \tstidxword{thrilling}
2655 \tstidxword{adventure} \tstidxbook{Sir Quackalot and the Hyper Lake of Doom}
2656 where our \tstidxphrase{intrepid hero}%
2657 \tstindexsubsee{hero}{intrepid}{see}{intrepid hero} meets a \tstidxword{quixotic}
2658 \tstidxword{seal} with a \tstidxword{zither} (a \tstidxword{zealous}
2659 \tstidxword{fan} of \tstidxartfilm{The}{Third Man}), a \tstidxword{youthful}
2660 \tstidxphrase{sea lion} with a \tstidxword{magic}
2661 \tstidxword{yo-yo}, and a \tstidxword{wily} \tstidxword{wombat}
2662 \tstidxword{warrior} with a \tstidxword{laser-guided}
2663 \tstidxphrase{sealant gun}. Can they defeat the
2664 \tstidxword{villainous}, \tstidxword{zany} \tstidxword{zoologist}
2665 sailing a \tstidxword{xebec} bearing canisters of
2666 \tstidxword{xenon}, \tstidxword{xylem} and \tstidxword{xylene}?
2667 Oh, \tstidxword{zounds}! He's wearing a \tstidxphrase{zoot suit}
2668 and smoking a \tstidxword{zucchini} whilst playing a \tstidxword{xylophone}.
2669 As one \tstidxphrase{anonymous reviewer} said,
2670 it's as \tstidxword{exhilarating} as watching a \tstidxword{yuppie}
2671 eating a \tstidxphrase{yule log} soaked in \tstidxphrase{yoghurt}.
2672 Hmm, \tstidxword{yummy}\tstidxdash or \tstidxword{yuck}, depending
2673 on your tastes.%
2674 }

2675 \tstidxnewblock
2676 {%
2677 Oh, did I tell you about the \tstidxphrase{vice-president} who was
2678 a \tstidxword{Viking} in a \tstidxword{vignette}? No? Well, I can't
2679 quite remember the \tstidxword{story} myself, but it had something
2680 to do with a \tstidxphrase{vice admiral} with a
2681 \tstidxphrase{Victoria plum} and a \tstidxphrase{viceroy} with
2682 a \tstidxphrase{Victoria sponge}, or was it
2683 \tstidxphrase{vice versa}? The \tstidxphrase{vice chancellor}
2684 preferred \tstidxword{vichyssoise}.
2685 For \tstidxphrase{letter ordering} use the \tstidxappopt{makeindex}{-l} option
2686 with \tstidxapp{makeindex} or the \texttt{ord/letorder} module
2687 with \tstidxapp{xindy} (\tstidxappopt{xindy}{-M ord/letorder}).
2688 If you omit this, the default
2689 \tstidxphrase{word ordering} is used. The ordering in the
2690 \tstidxbook{Compact Oxford English Dictionary} (third edition,
2691 revised) for these words are: vice admiral, vice chancellor, vice-president,
2692 \tstidxword{viceregal}, viceroy, vice versa. Quick
2693 \tstidxword{quizz}. Can you get \tstidxapp{makeindex} or
2694 \tstidxapp{xindy} to reproduce that order?%
2695 }
```

```
2696 \tstidxnewblock*{\@tidx@close@testidxsty}%
2697 {%
2698 This is the final \tstidxword{block} of dummy text
2699 provided by the \tstidxclosesty{testidx} package. This block
2700 contains the close of a \tstidxword{range} that was started in block~1.
2701 Fun, wasn't it?%
2702 }
```

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.