

# The `soulutf8` package

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## Abstract

This package extends package `soul` and adds some support for UTF-8. Namely the input encodings `utf8.def` from package `inputenc` and package `ucs`'s `utf8x.def` are supported.

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

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# 1 Documentation

This package `soulutf8` does not have own options and does not define new user commands. Any option is passed to package `soul` [1] that is loaded first. Then some internal macros of `soul` are redefined to add support for UTF-8. The following input encodings are supported:

```
utf8    LATEX base    TDS:tex/latex/base/utf8.def [3]
utf8x   Package ucs    TDS:tex/latex/ucs/utf8x.def [2]
```

UTF-8 byte sequences are added as token group to a word, even if these UTF-8 characters are some kind of hyphen or space. As exception the following three Unicode characters are handled specially:

Slot	Name	Action
U+00A0	NO-BREAK SPACE	like ~
U+2013	EN DASH	--
U+2014	EM DASH	---

## 1.1 Patch

Also package `soulutf8` tries to patch package `soul` to improve its behaviour:

- A problem with additional levels of curly braces is fixed. As advantage more implicate kernings are detected. However, the result may be incompatible with the original behaviour of package `soul` because of these respected implicate kernings.
- $\varepsilon$ -T<sub>E</sub>X , especially `\unexpanded` is supported. This allows a better protection of token groups (`\mbox{...}`, `math`, ...).

## 1.2 Future

Currently package `soul` does not seem to be maintained. Nevertheless if there will be a new version that adds support for UTF-8, then this package may become obsolete.

## 2 Implementation

```
1 /*package
```

### 2.1 Reload check and package identification

Reload check, especially if the package is not used with L<sup>A</sup>T<sub>E</sub>X.

```
2 \begingroup\catcode61\catcode48\catcode32=10\relax%
3   \catcode13=5 % ^M
4   \endlinechar=13 %
5   \catcode35=6 % #
6   \catcode39=12 % ,
7   \catcode44=12 % ,
8   \catcode45=12 % -
9   \catcode46=12 % .
10  \catcode58=12 % :
11  \catcode64=11 % @
12  \catcode123=1 % {
13  \catcode125=2 % }
14  \expandafter\let\expandafter\x\csname ver@soulutf8.sty\endcsname
15  \ifx\x\relax % plain-TeX, first loading
16  \else
17    \def\empty{}%
18    \ifx\x\empty % LaTeX, first loading,
19      % variable is initialized, but \ProvidesPackage not yet seen
20    \else
21      \expandafter\ifx\csname PackageInfo\endcsname\relax
22        \def\x#1#2{%
23          \immediate\write-1{Package #1 Info: #2.}%
24        }%
25      \else
26        \def\x#1#2{\PackageInfo{#1}{#2, stopped}%
27        \fi
28        \x{soulutf8}{The package is already loaded}%
29        \aftergroup\endinput
30      \fi
31    \fi
32 \endgroup%
```

Package identification:

```
33 \begingroup\catcode61\catcode48\catcode32=10\relax%
34   \catcode13=5 % ^M
35   \endlinechar=13 %
36   \catcode35=6 % #
37   \catcode39=12 % ,
38   \catcode40=12 % (
39   \catcode41=12 % )
40   \catcode44=12 % ,
41   \catcode45=12 % -
42   \catcode46=12 % .
43   \catcode47=12 % /
44   \catcode58=12 % :
45   \catcode64=11 % @
46   \catcode91=12 % [
47   \catcode93=12 % ]
48   \catcode123=1 % {
49   \catcode125=2 % }
50   \expandafter\ifx\csname ProvidesPackage\endcsname\relax
51     \def\x#1#2#3[#4]{\endgroup
```

```

52      \immediate\write-1{Package: #3 #4}%
53      \xdef#1{#4}%
54    }%
55  \else
56    \def\x#1#2[#3]{\endgroup
57      #2[{#3}]%
58      \ifx#1\undefined
59        \xdef#1{#3}%
60      \fi
61      \ifx#1\relax
62        \xdef#1{#3}%
63      \fi
64    }%
65  \fi
66 \expandafter\x\csname ver@soulutf8.sty\endcsname
67 \ProvidesPackage{soulutf8}%
68 [2016/05/16 v1.1 Permit use of UTF-8 characters in soul (HO)]%

```

## 2.2 Catcodes

```

69 \begingroup\catcode61\catcode48\catcode32=10\relax%
70   \catcode13=5 % ^~M
71   \endlinechar=13 %
72   \catcode123=1 % {
73   \catcode125=2 % }
74   \catcode64=11 % @
75   \def\x{\endgroup
76     \expandafter\edef\csname SOuL@AtEnd\endcsname{%
77       \endlinechar=\the\endlinechar\relax
78       \catcode13=\the\catcode13\relax
79       \catcode32=\the\catcode32\relax
80       \catcode35=\the\catcode35\relax
81       \catcode61=\the\catcode61\relax
82       \catcode64=\the\catcode64\relax
83       \catcode123=\the\catcode123\relax
84       \catcode125=\the\catcode125\relax
85     }%
86   }%
87 \x\catcode61\catcode48\catcode32=10\relax%
88 \catcode13=5 % ^~M
89 \endlinechar=13 %
90 \catcode35=6 % #
91 \catcode64=11 % @
92 \catcode123=1 % {
93 \catcode125=2 % }
94 \def\TMP@EnsureCode#1#2{%
95   \edef\SOuL@AtEnd{%
96     \SOuL@AtEnd
97     \catcode#1=\the\catcode#1\relax
98   }%
99   \catcode#1=#2\relax
100 }%
101 \TMP@EnsureCode{10}{12}%
102 \TMP@EnsureCode{33}{12}%
103 \TMP@EnsureCode{34}{12}%
104 \TMP@EnsureCode{36}{3}%
105 \TMP@EnsureCode{39}{12}%
106 \TMP@EnsureCode{40}{12}%

```

```

107 \TMP@EnsureCode{41}{12}%
108 \TMP@EnsureCode{42}{12}%
109 \TMP@EnsureCode{43}{12}%
110 \TMP@EnsureCode{44}{12}%
111 \TMP@EnsureCode{45}{12}%
112 \TMP@EnsureCode{46}{12}%
113 \TMP@EnsureCode{47}{12}%
114 \TMP@EnsureCode{58}{12}%
115 \TMP@EnsureCode{60}{12}%
116 \TMP@EnsureCode{62}{12}%
117 \TMP@EnsureCode{91}{12}%
118 \TMP@EnsureCode{93}{12}%
119 \TMP@EnsureCode{94}{7}%
120 \TMP@EnsureCode{96}{12}%
121 \TMP@EnsureCode{126}\active %
122 \TMP@EnsureCode{128}{12}%
123 \TMP@EnsureCode{147}{12}%
124 \TMP@EnsureCode{148}{12}%
125 \TMP@EnsureCode{160}{12}%
126 \TMP@EnsureCode{194}{12}%
127 \TMP@EnsureCode{226}{12}%
128 \edef\Soul@AtEnd{\Soul@AtEnd\noexpand\endinput}

```

## 2.3 Loading packages

Package soul uses `\documentclass` to detect L<sup>A</sup>T<sub>E</sub>X.

```
129 \ifx\documentclass\undefined
```

### 2.3.1 plain T<sub>E</sub>X

First we check, whether package soul is already loaded.

```
130 \expandafter\ifx\csname SOUL@\endcsname\relax
```

In case of plain T<sub>E</sub>X package soul defines some macros in a simple manner that will break the definitions of `miniltx.tex`, for example. Therefore these macros are first saved and restored afterwards.

```

131 \let\Soul@orgDeclareRobustCommand\DeclareRobustCommand
132 \let\Soul@orgnewcommand\newcommand
133 \let\Soul@orgDeclareOption\DeclareOption
134 \let\Soul@orgPackageError\PackageError
135 \def\Soul@restorelatecmds{%
136   \let\DeclareRobustCommand\Soul@orgDeclareRobustCommand
137   \let\newcommand\Soul@orgnewcommand
138   \let\DeclareOption\Soul@orgDeclareOption
139   \let\PackageError\Soul@orgPackageError
140 }%
141 \input soul.sty\relax
142 \Soul@restorelatecmds
143 \fi

```

`\SOUL@error` Package soul's use of `\PackageError` is replaced by `\@PackageError` of package `infwarerr`.

```

144 \input infwarerr.sty\relax
145 \let\Soul@orgSOUL@error\SOUL@error
146 \def\SOUL@error{%
147   \begingroup
148   \let\PackageError\@PackageError
149   \Soul@orgSOUL@error

```

```

150      \endgroup
151  }%
152  \input etexcmds.sty\relax

\@onellevel@sanitize Define LATEX's \@onellevel@sanitize if not already available.
153  \expandafter\ifx\csname @onellevel@sanitize\endcsname\relax
154    \def\@onellevel@sanitize#1{%
155      \edef#1{%
156        \expandafter\strip@prefix\meaning#1%
157      }%
158    }%
159
\strip@prefix
160  \def\strip@prefix#1>{}%
161
162  \fi
163 \else

```

### 2.3.2 L<sup>A</sup>T<sub>E</sub>X

```

164  \DeclareOption*{\PassOptionsToPackage{\CurrentOption}{soul}}%
165  \ProcessOptions\relax
166  \RequirePackage{soul}[2003/11/17]%
167  \RequirePackage{infwarerr}[2016/05/16]%
168  \RequirePackage{etexcmds}[2016/05/16]%
169  \fi

```

### 2.3.3 ε-T<sub>E</sub>X

In plain T<sub>E</sub>X command \+ is an *outer* macro. Therefore numbers are used to avoid problems.

```

170  \ifetex@unexpanded
171    \catcode33=14 % '!': comment
172    \catcode43=9 % '+': ignore
173  \else
174    \catcode33=9 % '!': ignore
175    \catcode43=14 % '+': comment
176  \fi

```

## 2.4 Macro for redefinitions

```

\Soul@redefine
175 \def\Soul@redefine#1{%
176   \begingroup
177     \def\Soul@cmd{\#1}%
178     \afterassignment\Soul@cmdcheck
179     \def\Soul@temp
180   }

\Soul@cmdcheck
181 \def\Soul@cmdcheck{%
182   \expandafter\ifx\Soul@cmd\Soul@temp
183   \else
184     \edef\Soul@temp*{\expandafter\string\Soul@cmd}%
185     \@PackageWarningNoLine{soulutf8}{%
186       Command \Soul@temp* has changed.\MessageBreak
187       Supported versions of package 'soul': 2003/11/17.\MessageBreak

```

```

188      Depending on the unknown changes the redefinition\MessageBreak
189      of \SOuL@temp* may not behave correctly%
190      }%
191      \fi
192  \expandafter\endgroup
193  \expandafter\def\SOuL@cmd
194 }

```

## 2.5 Redefinition of \SOUL@eval

\SOUL@eval Macro \SOUL@eval is redefined to add detection of the first byte of a UTF-8 sequence. Because \SOUL@eval is overwritten, a warning is issued, if the contents of \SOUL@eval is not as expected.

```
195 \SOuL@redefine\SOUL@eval{%
```

First the expected definition.

```

196  \def\SOUL@n*##1{\SOUL@scan}%
197  \if\noexpand\SOUL@@\SOUL@spc
198  \else
199      \SOUL@ignorespacesfalse
200  \fi
201  \ifnum\SOUL@minus=\thr@@
202      \SOUL@flushminus
203  \else\ifnum\SOUL@comma=\tw@
204      \SOUL@flushcomma
205  \else\ifnum\SOUL@apo=\tw@
206      \SOUL@flushapo
207  \else\ifnum\SOUL@grave=\tw@
208      \SOUL@flushgrave
209  \fi\fi\fi\fi
210  \ifx\SOUL@@-\else\SOUL@flushminus\fi
211  \ifx\SOUL@@,\else\SOUL@flushcomma\fi
212  \ifx\SOUL@@'\else\SOUL@flushapo\fi
213  \ifx\SOUL@@`'\else\SOUL@flushgrave\fi
214  \ifx\SOUL@@-%
215      \advance\SOUL@minus\@ne
216  \else\ifx\SOUL@@,%
217      \advance\SOUL@comma\@ne
218  \else\ifx\SOUL@@'%
219      \advance\SOUL@apo\@ne
220  \else\ifx\SOUL@@`%
221      \advance\SOUL@grave\@ne
222  \else
223      \SOUL@flushminus
224      \SOUL@flushcomma
225      \SOUL@flushapo
226      \SOUL@flushgrave
227  \ifx\SOUL@@\SOUL@stop
228      \def\SOUL@n*{%
229          \SOUL@doword
230          \SOUL@eventuallyexhyphen\@null
231      }%
232  \else\ifx\SOUL@@\par
233      \def\SOUL@n*\par{\par\leavevmode\SOUL@scan}%
234  \else\if\noexpand\SOUL@@\SOUL@spc
235      \SOUL@doword
236      \SOUL@eventuallyexhyphen\@null
237      \ifSOUL@ignorespaces

```

```

238      \else
239          \SOUL@everyspace{}%
240      \fi
241      \def\SOUL@n* {\SOUL@scan}%
242  \else\ifx\SOUL@@\%
243      \SOUL@doword
244      \SOUL@eventuallyexhyphen\null
245      \SOUL@everyspace{\unskip\nobreak\hfil\break}%
246      \SOUL@ignorespacestrue
247  \else\ifx\SOUL@@^%
248      \SOUL@doword
249      \SOUL@eventuallyexhyphen\null
250      \SOUL@everyspace{\nobreak}%
251  \else\ifx\SOUL@@\slash
252      \SOUL@doword
253      \SOUL@eventuallyexhyphen{/}%
254      \SOUL@exhyphen{/}%
255  \else\ifx\SOUL@@\mbox
256      \def\SOUL@n*{\SOUL@addprotect}%
257  \else\ifx\SOUL@@\hbox
258      \def\SOUL@n*{\SOUL@addprotect}%
259  \else\ifx\SOUL@@\soulomit
260      \def\SOUL@n*\soulomit##1{%
261          \SOUL@doword
262          {\spaceskip\SOUL@spaceskip##1}%
263          \SOUL@scan
264      }%
265  \else\ifx\SOUL@@\break
266      \SOUL@doword
267      \break
268  \else\ifx\SOUL@@\linebreak
269      \SOUL@doword
270      \SOUL@everyspace{\linebreak}%
271  \else\ifcat\bgroup\noexpand\SOUL@@
272      \def\SOUL@n*{\SOUL@addgroup{}}%
273  \else\ifcat$\noexpand\SOUL@@
274      \def\SOUL@n*{\SOUL@addmath}%
275  \else
276      \def\SOUL@n*{\SOUL@dotoken}%
277      \fi\fi\fi\fi\fi\fi\fi\fi\fi\fi
278  \fi\fi\fi\fi
279  \SOUL@n*%
280 }\%}

```

Now the redefined version follows.

```

281  \def\SOUL@n*##1{\SOUL@scan}%
282  \if\noexpand\SOUL@@\SOUL@spc
283  \else
284      \SOUL@ignorespacesfalse
285  \fi
286  \ifnum\SOUL@minus=\thr@@
287      \SOUL@flushminus
288  \else\ifnum\SOUL@comma=\tw@%
289      \SOUL@flushcomma
290  \else\ifnum\SOUL@apo=\tw@%
291      \SOUL@flushapo
292  \else\ifnum\SOUL@grave=\tw@%
293      \SOUL@flushgrave
294  \fi\fi\fi\fi

```

```

295  \ifx\SOUL@@-\else\SOUL@flushminus\fi
296  \ifx\SOUL@@,\else\SOUL@flushcomma\fi
297  \ifx\SOUL@@'\else\SOUL@flushapo\fi
298  \ifx\SOUL@@`\'\else\SOUL@flushgrave\fi
299  \ifx\SOUL@@-%
300      \advance\SOUL@minus\@ne
301  \else\ifx\SOUL@@,%
302      \advance\SOUL@comma\@ne
303  \else\ifx\SOUL@@'%
304      \advance\SOUL@apo\@ne
305  \else\ifx\SOUL@@`%
306      \advance\SOUL@grave\@ne
307  \else
308      \SOUL@flushminus
309      \SOUL@flushcomma
310      \SOUL@flushapo
311      \SOUL@flushgrave
312      \ifx\SOUL@@\SOUL@stop
313          \def\SOUL@n*{%
314              \SOUL@doword
315              \SOUL@eventuallyexhyphen\null
316          }%
317      \else\ifx\SOUL@@\par
318          \def\SOUL@n*\par{\par\leavevmode\SOUL@scan}%
319      \else\if\noexpand\SOUL@@\SOUL@spc
320          \SOUL@doword
321          \SOUL@eventuallyexhyphen\null
322          \ifSOUL@ignorespaces
323          \else
324              \SOUL@everyspace{}%
325          \fi
326          \def\SOUL@n* {\SOUL@scan}%
327      \else\ifx\SOUL@@\%
328          \SOUL@doword
329          \SOUL@eventuallyexhyphen\null
330          \SOUL@everyspace{\unskip\nobreak\hfil\break}%
331          \SOUL@ignorespacestrue
332      \else\ifx\SOUL@@~%
333          \SOUL@doword
334          \SOUL@eventuallyexhyphen\null
335          \SOUL@everyspace{\nobreak}%
336      \else\ifx\SOUL@@\slash
337          \SOUL@doword
338          \SOUL@eventuallyexhyphen{/}%
339          \SOUL@exhyphen{/}%
340      \else\ifx\SOUL@@\mbox
341          \def\SOUL@n*{\SOUL@addprotect}%
342      \else\ifx\SOUL@@\hbox
343          \def\SOUL@n*{\SOUL@addprotect}%
344      \else\ifx\SOUL@@\soulomit
345          \def\SOUL@n*{\soulomit##1}%
346          \SOUL@doword
347          {\spaceskip\SOUL@spaceskip##1}%
348          \SOUL@scan
349      }%
350      \else\ifx\SOUL@@\break
351          \SOUL@doword
352          \break

```

```

353   \else\ifx\SOUL@@\linebreak
354     \SOUL@doword
355     \SOUL@everyspace{\linebreak}%
356   \else\ifcat\bgroup\noexpand\SOUL@@
357     \def\SOUL@n*{\SOUL@addgroup{}}%
358   \else\ifcat$\noexpand\SOUL@@
359     \def\SOUL@n*{\SOUL@addmath}%
360   \else

```

The current token is examined to detect the start of a UTF-8 sequence.

```

361   \SOuL@analyzeutfviii
362   \ifcase\SOuL@octets
363     \SOuL@analyzeutfviiix
364   \fi
365   \ifcase\SOuL@octets
366     \def\SOUL@n*{\SOUL@dotoken}%
367   \or % 1
368   \or % 2
369     \def\SOUL@n*{\SOuL@addtwooctets}%
370   \or % 3
371     \def\SOUL@n*{\SOuL@addthreeoctets}%
372   \or % 4
373     \def\SOUL@n*{\SOuL@addfouroctets}%
374   \fi
375   \fi\fi\fi\fi\fi\fi\fi\fi\fi\fi\fi\fi\fi\fi\fi\fi\fi\fi
376 \fi\fi\fi\fi
377 \SOUL@n*%
378 }

```

## 2.6 UTF-8 analysis

### 2.6.1 Help strings

```

379 \def\SOuL@defsanitizedstring#1#2{%
380   \expandafter\def\csname SOuL@string#1\endcsname{#2}%
381   \expandafter\onelevel@sanitize\csname SOuL@string#1\endcsname
382 }
383 \SOuL@defsanitizedstring{UTFviii}{UTFviii@}
384 \SOuL@defsanitizedstring{octets}{@octets}
385 \SOuL@defsanitizedstring{two}{two}
386 \SOuL@defsanitizedstring{three}{three}
387 \SOuL@defsanitizedstring{four}{four}
388 \SOuL@defsanitizedstring{macrocolon}{macro:}
389 \SOuL@defsanitizedstring{csnameu}{csname u8-}
390 \SOuL@defsanitizedstring{undeferr}{utf@viii@undeferr}
391 \def\SOuL@stringendash{{\^e2}{\^80}{\^93}}
392 \def\SOuL@stringemdash{{\^e2}{\^80}{\^94}}
393 \def\SOuL@stringnobreakspace{{\c{c}}{\^2}{\^a}{\^0}}
394 \edef\SOuL@charhash{\string #}
395 \edef\SOuL@chartwo{\string 2}
396 \edef\SOuL@charthree{\string 3}
397 \def\SOuL@empty{}

```

### 2.6.2 Support for utf8.def

```
\SOuL@analyzeutfviii
398 \begingroup
399   \edef\x{\endgroup
400     \def\noexpand\SOuL@analyzeutfviii{%
```

```

401      \noexpand\expandafter\noexpand\S0uL@checkutfviii
402      \noexpand\meaning\noexpand\S0UL@@
403      \S0uL@stringUTFviii\S0uL@stringoctets
404      \noexpand\@nil
405  }%
406  \def\noexpand\S0uL@checkutfviii
407  ##1\S0uL@stringUTFviii##2\S0uL@stringoctets##3\noexpand\@nil
408 }%
409 \x{%
410   \def\S0uL@temp{\#2}%
411   \chardef\S0uL@octets=%
412   \ifx\S0uL@temp\S0uL@stringtwo
413     \tw@
414   \else\ifx\S0uL@temp\S0uL@stringthree
415     \thr@@
416   \else\ifx\S0uL@temp\S0uL@stringfour
417     4 %
418   \else
419     \z@
420   \fi\fi\fi
421 }

```

### 2.6.3 Support for utf8x.def

```

\S0uL@analyzeutfviiix
422 \begingroup
423   \edef\x{\endgroup
424   \def\noexpand\S0uL@analyzeutfviiix{%
425     \noexpand\expandafter\noexpand\S0uL@checkutfviiix
426     \noexpand\meaning\noexpand\S0UL@@
427     \S0uL@stringmacrocolon\S0uL@charhash1{}{}{}{}%
428     \S0uL@stringcsnameu\S0uL@stringundeferr
429     \noexpand\@nil
430   }%
431
\S0uL@checkutfviiix
432   \def\noexpand\S0uL@checkutfviiix
433   ##1\S0uL@stringmacrocolon\S0uL@charhash1##2##3##4##5##6%
434   \S0uL@stringcsnameu##7\S0uL@stringundeferr##8\noexpand\@nil
435 }%
436 \x{%
437   \def\S0uL@temp{\#7}%
438   \ifx\S0uL@temp\S0uL@empty
439     \chardef\S0uL@octets=\z@
440   \else
441     \def\S0uL@temp{\#5}%
442     \ifx\S0uL@temp\S0uL@charthree
443       \chardef\S0uL@octets=4 %
444     \else
445       \def\S0uL@temp{\#3}%
446       \ifx\S0uL@temp\S0uL@chartwo
447         \chardef\S0uL@octets=\thr@@
448       \else
449         \chardef\S0uL@octets=\tw@
450       \fi
451     \fi
452 }

```

## 2.7 Actions for UTF-8 sequences

```

\SOuL@addtwooctets
453 \def\SOuL@addtwooctets#1#2{%
454   \def\SOuL@temp{#1#2}%
455   @onelvel@sanitize\SOuL@temp
456   \ifx\SOuL@temp\SOuL@stringnobreakspace
457     \SOUL@doword
458     \SOUL@eventuallyexhyphen\null
459     \SOUL@everyspace{\nobreak}%
460     \let\SOuL@next\SOUL@scan
461   \else
462     \def\SOuL@next{%
463 !       \SOUL@addtoken{{\noexpand#1\noexpand#2}}%
464 +       \SOUL@addtoken{{\etex@unexpanded{#1#2}}}%
465     }%
466   \fi
467   \SOuL@next
468 }

\SOuL@addthreeoctets
469 \def\SOuL@addthreeoctets#1#2#3{%
470   \def\SOuL@temp{#1#2#3}%
471   @onelvel@sanitize\SOuL@temp
472   \ifx\SOuL@temp\SOuL@stringendash
473     \SOUL@doword
474     \SOUL@eventuallyexhyphen{-}%
475     \SOUL@exhyphen{--}%
476     \let\SOuL@next\SOUL@scan
477   \else
478     \ifx\SOuL@temp\SOuL@stringemdash
479       \SOUL@doword
480       \SOUL@eventuallyexhyphen{-}%
481       \SOUL@exhyphen{---}%
482       \let\SOuL@next\SOUL@scan
483   \else
484     \def\SOuL@next{%
485 !       \SOUL@addtoken{{\noexpand#1\noexpand#2\noexpand#3}}%
486 +       \SOUL@addtoken{{\etex@unexpanded{#1#2#3}}}%
487     }%
488   \fi
489   \fi
490   \SOuL@next
491 }

\SOuL@addfouroctets
492 \def\SOuL@addfouroctets#1#2#3#4{%
493 ! \SOUL@addtoken{{\noexpand#1\noexpand#2\noexpand#3\noexpand#4}}%
494 + \SOUL@addtoken{{\etex@unexpanded{#1#2#3#4}}}%
495 }

```

### 2.7.1 Redefinition of \SOUL@splittoken

- \SOUL@splittoken Macro \SOUL@splittoken separates the first token or token group from a word and redefines the word to contain the remaining tokens. However if the remaining tokens are a token group, then the curly braces will be removed and the token group is splitted by the next call of \SOUL@splittoken. The redefinition avoids the removal of curly braces around the remaining tokens.

```

496 \SOuL@redefine\SOUL@splittoken#1#2\SOUL@stop{%
497   \global\SOUL@token={#1}%
498   \global\SOUL@word={#2}%
499 }#1{%
500   \global\SOUL@token={#1}%
501   \SOuL@remainingtoken\relax
502 }

\SOuL@remainingtoken
503 \def\SOuL@remainingtoken#1\SOUL@stop{%
504   \global\SOUL@word=\expandafter{\@gobble#1}%
505 }

```

## 2.8 Patches

The fixed `\SOUL@splittoken` allows to remove the double sets of curly braces in other macros of package `soul`. The benefit is that implicite kernings are more often detected and fixes a bug in package `soul`. The disadvantage is incompatibility. The width of the resulting strings may change.

```

\SOUL@flushcomma
506 \SOuL@redefine\SOUL@flushcomma{%
507   \ifcase\SOUL@comma
508   \or
509     \edef\x{\SOUL@word={\the\SOUL@word,}}\x
510   \or
511     \edef\x{\SOUL@word={\the\SOUL@word{,,}}}\x
512   \fi
513   \SOUL@comma\z@
514 }{%
515   \ifcase\SOUL@comma
516   \or
517     \edef\x{\SOUL@word={\the\SOUL@word,}}\x
518   \or
519     \edef\x{\SOUL@word={\the\SOUL@word{,,}}}\x
520   \fi
521   \SOUL@comma\z@
522 }

```

```

\SOUL@flushapo
523 \SOuL@redefine\SOUL@flushapo{%
524   \ifcase\SOUL@apo
525   \or
526     \edef\x{\SOUL@word={\the\SOUL@word'}}\x
527   \or
528     \edef\x{\SOUL@word={\the\SOUL@word{,,}}}\x
529   \fi
530   \SOUL@apo\z@
531 }{%
532   \ifcase\SOUL@apo
533   \or
534     \edef\x{\SOUL@word={\the\SOUL@word'}}\x
535   \or
536     \edef\x{\SOUL@word={\the\SOUL@word{,,}}}\x
537   \fi
538   \SOUL@apo\z@
539 }

```

```

\SOUL@flushgrave
540 \SOUL@redefine\SOUL@flushgrave{%
541   \ifcase\SOUL@grave
542   \or
543     \edef\x{\SOUL@word={\the\SOUL@word'}}\x
544   \or
545     \edef\x{\SOUL@word={\the\SOUL@word{{' }}}}\x
546   \fi
547   \SOUL@grave\z@
548 }%
549 \ifcase\SOUL@grave
550 \or
551   \edef\x{\SOUL@word={\the\SOUL@word'}}\x
552 \or
553   \edef\x{\SOUL@word={\the\SOUL@word{{' }}}}\x
554 \fi
555 \SOUL@grave\z@
556 }

\SOUL@addgroup
557 \SOUL@redefine\SOUL@addgroup#1#2{%
558   {%
559     \let\protect\noexpand
560     \edef\x{%
561       \global\SOUL@word={%
562         \the\SOUL@word
563         {{\noexpand#1#2}}%}
564     }%
565   }%
566   \x
567 }%
568 \SOUL@scan
569 }#1#2{%
570   \begin{group}
571     \let\protect\noexpand
572     \edef\x{\endgroup
573       \SOUL@word={%
574         \the\SOUL@word
575       {{\noexpand#1{#2}}}%}
576     +   {{\etex@unexpanded{#1{#2}}}}%
577     }%
578   }%
579   \x
580 \SOUL@scan
581 }

\SOUL@addmath
582 \SOUL@redefine\SOUL@addmath$#1${%
583   {%
584     \let\protect\noexpand
585     \edef\x{%
586       \global\SOUL@word={%
587         \the\SOUL@word
588         {{\hbox{$#1$}}}}%
589     }%
590   }%
591   \x
592 }%

```

```

593   \SOUL@scan
594 }$#1${%
595   \begingroup
596     \let\protect\noexpand
597     \edef\x{\endgroup
598       \SOUL@word={%
599         \the\SOUL@word
600       {\hbox{$#1$}}%
601 +       {\etex@unexpanded{\hbox{$#1$}}}}%
602     }%
603   }%
604   \x
605   \SOUL@scan
606 }

\SOUL@addprotect
607 \SOUL@redefine\SOUL@addprotect#1#2{%
608   {%
609     \let\protect\noexpand
610     \edef\x{%
611       \global\SOUL@word={%
612         \the\SOUL@word
613       {\hbox{#2}}}}%
614     }%
615   }%
616   \x
617 }%
618   \SOUL@scan
619 }#1#2{%
620   \begingroup
621     \let\protect\noexpand
622     \edef\x{\endgroup
623       \SOUL@word={%
624         \the\SOUL@word
625       {\hbox{#2}}}}%
626 +       {\etex@unexpanded{\hbox{#2}}}}%
627     }%
628   }%
629   \x
630   \SOUL@scan
631 }

\SOUL@addtoken
632 + \SOUL@redefine\SOUL@addtoken#1{%
633 +   \edef\x{%
634 +     \SOUL@word={%
635 +       \the\SOUL@word
636 +       \noexpand#1%
637 +     }%
638 +   }%
639 +   \x
640 +   \SOUL@scan
641 + }#1{%
642 +   \edef\x{%
643 +     \SOUL@word={%
644 +       \the\SOUL@word
645 +       \etex@unexpanded{#1}}%
646 +   }%

```

```

647 +    }%
648 +    \x
649 +    \SOUL@scan
650 + }%

651 \SOUL@AtEnd%
652 </package>

```

### 3 Test

#### 3.1 Catcode checks for loading

```

653 /*test1*/
654 \catcode`{=1 %
655 \catcode`}=2 %
656 \catcode`\#=6 %
657 \catcode`\@=11 %
658 \expandafter\ifx\csname count@\endcsname\relax
659   \countdef\count@=255 %
660 \fi
661 \expandafter\ifx\csname @gobble\endcsname\relax
662   \long\def\@gobble#1{}%
663 \fi
664 \expandafter\ifx\csname @firstofone\endcsname\relax
665   \long\def\@firstofone#1{#1}%
666 \fi
667 \expandafter\ifx\csname loop\endcsname\relax
668   \expandafter\@firstofone
669 \else
670   \expandafter\@gobble
671 \fi
672 }%
673 \def\loop#1\repeat{%
674   \def\body{#1}%
675   \iterate
676 }%
677 \def\iterate{%
678   \body
679   \let\next\iterate
680 \else
681   \let\next\relax
682 \fi
683 \next
684 }%
685 \let\repeat=\fi
686 }%
687 \def\RestoreCatcodes{}
688 \count@=0 %
689 \loop
690   \edef\RestoreCatcodes{%
691     \RestoreCatcodes
692     \catcode`\the\count@=\the\catcode\count@\relax
693   }%
694 \ifnum\count@<255 %
695   \advance\count@ 1 %
696 \repeat
697

```

```

698 \def\RangeCatcodeInvalid#1#2{%
699   \count@=#1\relax
700   \loop
701     \catcode\count@=15 %
702   \ifnum\count@<#2\relax
703     \advance\count@ 1 %
704   \repeat
705 }
706 \def\RangeCatcodeCheck#1#2#3{%
707   \count@=#1\relax
708   \loop
709     \ifnum#3=\catcode\count@
710     \else
711       \errmessage{%
712         Character \the\count@\space
713         with wrong catcode \the\catcode\count@\space
714         instead of \number#3%
715       }%
716     \fi
717   \ifnum\count@<#2\relax
718     \advance\count@ 1 %
719   \repeat
720 }
721 \def\space{ }
722 \expandafter\ifx\csname LoadCommand\endcsname\relax
723   \def\LoadCommand{\input soulutf8.sty\relax}%
724 \fi
725 \def\Test{%
726   \RangeCatcodeInvalid{0}{47}%
727   \RangeCatcodeInvalid{58}{64}%
728   \RangeCatcodeInvalid{91}{96}%
729   \RangeCatcodeInvalid{123}{255}%
730   \catcode`\@=12 %
731   \catcode`\\=0 %
732   \catcode`\%=14 %
733   \LoadCommand
734   \RangeCatcodeCheck{0}{36}{15}%
735   \RangeCatcodeCheck{37}{37}{14}%
736   \RangeCatcodeCheck{38}{47}{15}%
737   \RangeCatcodeCheck{48}{57}{12}%
738   \RangeCatcodeCheck{58}{63}{15}%
739   \RangeCatcodeCheck{64}{64}{12}%
740   \RangeCatcodeCheck{65}{90}{11}%
741   \RangeCatcodeCheck{91}{91}{15}%
742   \RangeCatcodeCheck{92}{92}{0}%
743   \RangeCatcodeCheck{93}{96}{15}%
744   \RangeCatcodeCheck{97}{122}{11}%
745   \RangeCatcodeCheck{123}{255}{15}%
746   \RestoreCatcodes
747 }
748 \Test
749 \csname @@end\endcsname
750 \end
751 </test1>

```

### 3.2 L<sup>A</sup>T<sub>E</sub>X tests

```
752 (*test2 | test3 | test4 | test5)
```

```

753 <noetex> \let\SavedUnexpanded\unexpanded
754 <noetex> \let\unexpanded\UNDEFINED
755 \NeedsTeXFormat{LaTeX2e}
756 \documentclass{article}
757 \usepackage[T1]{fontenc}
758 \usepackage{lmodern}
759 \usepackage{textcomp}
760 \usepackage[ngerman]{babel}
761 \expandafter\def\csname ver@hypdestopt.sty\endcsname{}
762 \usepackage[unicode]{hyperref}
763 \usepackage{bookmark}
764 \usepackage{color}
765 \usepackage{soul}[2003/11/17]
766 \makeatletter
767 \newcommand*{\@ifDefined}[1]{%
768   \@ifundefined{#1}{%
769     \@latex@error{%
770       \expandafter\noexpand\csname#1\endcsname undefined%
771     }\@ehc
772   }%
773 }
774 \newcommand*{\SaveOrg}[1]{%
775   \@ifdefinable{ORG@SOUL@#1}{%
776     \@ifDefined{SOUL@#1}{%
777       \expandafter\let\csname ORG@SOUL@#1\expandafter\endcsname
778         \csname SOUL@#1\endcsname
779     }%
780   }%
781 }
782 \newcommand*{\RestoreOrg}[1]{%
783   \@ifDefined{ORG@SOUL@#1}{%
784     \@ifDefined{SOUL@#1}{%
785       \expandafter\let\csname SOUL@#1\expandafter\endcsname
786         \csname ORG@SOUL@#1\endcsname
787     }%
788   }%
789 }
790 \makeatother
791 \SaveOrg{eval}
792 \SaveOrg{splittoken}
793 \SaveOrg{flushcomma}
794 \SaveOrg{flushapo}
795 \SaveOrg{grave}
796 \SaveOrg{addgroup}
797 \SaveOrg{addmath}
798 \SaveOrg{addprotect}
799 \SaveOrg{addtoken}
800 \usepackage{soulutf8}[2016/05/16]
801 <noetex> \let\unexpanded\SavedUnexpanded

```

Input encoding utf8.

```

802 {*utf8}
803 \usepackage[utf8]{inputenc}
804 \DeclareUnicodeCharacter{00A0}{\nobreakspace}
805 
```

Input encoding utf8x. Package ucs has a nasty bug, that it redefines \show.

```

806 {*utf8x}
807 \let\origshow\show

```

```

808 \usepackage[utf8x]{inputenc}
809 \AtBeginDocument{%
810   \let\show\origshow
811 }
812 
```

### 3.2.1 Driver definitions

```
813 \makeatletter
```

\an The definition for \an is taken from the documentation of package soul.

```

814 \DeclareRobustCommand*\an{%
815   \def\SOUL@preamble{$^{\text{\tiny P}}$}%
816   \def\SOUL@everyspace##1{##1\texttt{\char`\\ }\linebreak[2]}%
817   \def\SOUL@postamble{$^{\text{\tiny E}}$}%
818   \def\SOUL@everyhyphen{$^{\text{\tiny -}}$\linebreak[1]}%
819   \def\SOUL@everyexhyphen##1{##1$^{\text{\tiny =}}$}%
820   \def\SOUL@everysyllable{$^{\text{\tiny S}}$}%
821   \def\SOUL@everytoken{\the\SOUL@token$^{\text{\tiny T}}$}%
822   \def\SOUL@everylowerthan{$^{\text{\tiny L}}$}%
823   \SOUL@
824 }
```

\sy The definition for \sy is taken from the documentation of package soul.

```

825 \DeclareRobustCommand*\sy{%
826   \SOUL@setup
827   \def\SOUL@preamble{%
828     \lefthyphenmin=\z@
829     \righthphenmin=\z@
830   }%
831   \def\SOUL@everyspace##1{##1\space}%
832   \def\SOUL@everysyllable{\the\SOUL@syllable}%
833   \def\SOUL@everyhyphen{%
834     \discretionary{%
835       \SOUL@setkern\SOUL@hyphkern
836       \SOUL@sethyphenchar
837     }{}{%
838       \hbox{\kern1pt\cdotp}%
839     }%
840   }%
841   \def\SOUL@everyexhyphen##1{%
842     \SOUL@setkern\SOUL@hyphkern
843     \hbox{##1}%
844     \discretionary{}{}{%
845       \SOUL@setkern\SOUL@charkern
846     }%
847   }%
848   \SOUL@
849 }
```

\soulH

```

850 \DeclareRobustCommand*\soulH{%
851   \def\SOUL@preamble{%
852     \gdef\SOULH{}%
853     \soulHadd{[]}}%
854 }%
855 \def\SOUL@everyspace##1{%
856   \soulHadd{Sp}}%
857 }%
```

```

858 \def\SOUL@postamble{%
859   \soulHadd{}}
860 }
861 \def\SOUL@everyhyphen{%
862   \soulHadd{Hy}}
863 }
864 \def\SOUL@everyexhyphen##1{%
865   \soulHadd{Exhy}}
866 }
867 \def\SOUL@everysyllable{%
868   \soulHadd{Sy}}
869 }
870 \def\SOUL@everytoken{%
871   \soulHadd{T}}
872 }
873 \def\SOUL@everylowerthan{%
874   \soulHadd{<}}
875 }
876 \SOUL@
877 }
878 \newcommand*{\soulHadd}[1]{%
879   #1%
880   \expandafter\gdef\expandafter\soulHstring\expandafter{%
881     \soulHstring
882     #1%
883   }%
884 }

```

### 3.2.2 Test macros

```

885 \usepackage{qstest}
886 \IncludeTests{*}
887 \LogTests{log}{*}{*}

888 \newsavebox\boxA
889 \newsavebox\boxB
890 \newsavebox\boxC

\TestDriver
891 \newcommand*{\TestDriver}[4]{%
892   \subsection{Driver #1}%
893   \PackageInfo{soulutf8-test}{* Driver #1}%
894   \expandafter\let\expandafter\testdriver\csname #1\endcsname
895   \def\teststringA{#3}%
896   \def\teststringB{#4}%
897   \begin{qstest}{string-#2-driver-#1}{string,#2,driver,#1}%
898     \PackageInfo{soulutf8-test}{* Version: soulutf8}%
899     \global\let\soulHstring\empty
900     \setbox0=\hbox{\expandafter\testdriver\expandafter{\teststringA}}%
901     \let\HstringA\soulHstring
902     \SetTestVBox{\boxA}{\teststringA}%
903     %
904     \PackageInfo{soulutf8-test}{* Version: soul + patch}%
905     \global\let\soulHstring\empty
906     \RestoreOrg{eval}%
907     \setbox2=\hbox{\expandafter\testdriver\expandafter{\teststringB}}%
908     \let\HstringB\soulHstring
909     \SetTestVBox{\boxB}{\teststringB}%
910     %

```

```

911  \c@PackageInfo{soulutf8-test}{* Version: original soul}%
912  \global\let\soulHstring@\empty
913  \RestoreOrg{splittoken}%
914  \RestoreOrg{flushcomma}%
915  \RestoreOrg{flushapo}%
916  \RestoreOrg{grave}%
917  \RestoreOrg{addgroup}%
918  \RestoreOrg{addmath}%
919  \RestoreOrg{addprotect}%
920  \RestoreOrg{addtoken}%
921  \setbox4=\hbox{\expandafter\testdriver\expandafter{\teststringB}}%
922  \let\HstringC\soulHstring
923  \SetTestVBox{\boxC}{\teststringB}%
924  %
925  \TestInfo{0}{soulutf8}%
926  \TestInfo{2}{soul + patch}%
927  \TestInfo{4}{original soul}%
928  \TestInfoVBox
929  \showboxdepth=\maxdimen
930  \showboxbreadth=\maxdimen
931  \tracingonline=\@ne
932  \Expect*{\HstringA}{\HstringB}%
933  \Expect*{\HstringA}{\HstringC}%
934  \Expect*{\the\wd0}{\the\wd2}%
935  \ifdim\wd0=\wd2 %
936  \else
937      \showbox0 %
938      \showbox2 %
939  \fi
940  \Expect*{\the\ht0}{\the\ht2}%
941  \Expect*{\the\dp0}{\the\dp2}%
942  \Expect*{\the\wd\boxB}{\the\wd\boxA}%
943  \Expect*{\the\wd\boxC}{\the\wd\boxA}%
944  \Expect*{\the\ht\boxB}{\the\ht\boxA}%
945  \ifdim\ht\boxB=\ht\boxA
946  \else
947      \showbox\boxA
948      \showbox\boxB
949  \fi
950  \Expect*{\the\ht\boxC}{\the\ht\boxA}%
951  \Expect*{\the\dp\boxB}{\the\dp\boxA}%
952  \Expect*{\the\dp\boxC}{\the\dp\boxA}%
953  \end{qstest}%
954 }

\SetTestVBox
955 \newcommand*{\SetTestVBox}[2]{%
956   \setbox#1=\vbox{%
957     \hsize=0pt\relax
958     \hfuzz=100mm\relax
959     \expandafter\testdriver\expandafter{\#2}%
960   }%
961 }

\TestInfo
962 \newcommand*{\TestInfo}[2]{%
963   \par
964   \noindent

```

```

965  \copy#1\relax
966  \hfill
967  \begingroup
968  \small
969  \ifdim\wd0=\wd2\relax
970  \ifdim\wd0=\wd4\relax
971  \else
972  \ifnum#1=2 %
973  \raisebox{.5\baselineskip}[0pt][0pt]{%
974  \llap{$\phantom{\rule{.5\baselineskip}{0pt}}$}%
975  \rlap{width = \the\wd#1\relax\space$\{}%
976  \phantom{width = 999.99999pt}\%
977  \qquad
978  }%
979  \else
980  \ifnum#1=4 %
981  \rlap{width = \the\wd#1}%
982  \phantom{width = 999.99999pt}\%
983  \qquad
984  \fi
985  \fi
986  \fi
987  \else
988  \begingroup
989  \bfseries
990  \rlap{width = \the\wd#1}%
991  \phantom{width = 999.99999pt}\%
992  \endgroup
993  \qquad
994  \fi
995  \rlap{(#2)}%
996  \phantom{(original soul)}%
997 \endgroup
998 \par
999 }

\TestInfoVBox
1000 \newcommand*\TestInfoVBox}{%
1001  \par
1002  \noindent
1003  \mbox{\vrule\relax\space\copy\boxA}%
1004  \ifdim\ht\boxA=\ht\boxB
1005  \else
1006  \hfill
1007  \begingroup
1008  \small
1009  \rlap{(soulutf8)}%
1010  \phantom{(soulutf8)}%
1011  \endgroup
1012  \par
1013  \noindent
1014  \mbox{\vrule\relax\space\copy\boxB}%
1015  \hfill
1016  \begingroup
1017  \small
1018  \rlap{(soul)}%
1019  \phantom{(soulutf8)}%
1020  \endgroup

```

```

1021   \fi
1022   \par
1023 }

\Test
1024 \makeatletter
1025 \newcommand*\{\Test}[3]{%
1026   \clearpage
1027   \begingroup
1028     \def\linebreak{\textbackslash linebreak }%
1029     \def\\{\textbackslash textbackslash}%
1030     \def\soulomit##1{%
1031       \textbackslash soulomit\textbraceleft##1\textbraceright
1032     }%
1033     \def\mbox##1{%
1034       \textbackslash mbox\textbraceleft##1\textbraceright
1035     }%
1036     \def\abc{\textbackslash abc }%
1037     \def\texttt##1{%
1038       \textbackslash texttt\textbraceleft##1\textbraceright
1039     }%
1040     \def\c##1{%
1041       \textbackslash c\textbraceleft##1\textbraceright
1042     }%
1043 (*utf8x)
1044   \count@=128 %
1045   \loop
1046   \ifnum\count@<256 %
1047     \lccode`~=`\count@
1048     \lowercase{%
1049       \def~{\noexpand~}%
1050     }%
1051     \advance\count@\@ne
1052   \repeat
1053 (/utf8x)
1054   \csname protected@edef\endcsname\x{\endgroup
1055   \noexpand\section{String #1: #2}%
1056 }%
1057 \x
1058 \TestDriver{so}{#1}{#2}{#3}%
1059 \TestDriver{caps}{#1}{#2}{#3}%
1060 \TestDriver{ul}{#1}{#2}{#3}%
1061 \TestDriver{st}{#1}{#2}{#3}%
1062 \TestDriver{hl}{#1}{#2}{#3}%
1063 \TestDriver{an}{#1}{#2}{#3}%
1064 \TestDriver{sy}{#1}{#2}{#3}%
1065 \TestDriver{soulH}{#1}{#2}{#3}%
1066 }
1067 \makeatother

```

### 3.2.3 Testing

```

1068 \begin{document}
1069   \Test A{}{%
1070   \Test B{Hello World}{Hello World}%
1071   \Test C{%
1072     Umlauts: ^c3^^84^^c3^^96^^c3^^9c^^c3^^a4^^c3^^b6^^c3^^bc^^c3^^9f%
1073   }{%

```

```

1074     Umlauts: \"A\"O\"U\"a\"o\"u\ss
1075   }%
1076   \Test D{Euro: ^^e2^^82^^ac}{Euro: \texteuro}%
1077   \Test E{Stra^^c3^^9fe}{Stra\ss e}%
1078   \Test F{R^^c3^^b6mer}{R\"omerm}%
1079   \Test G{A^^e2^^80^^93B^^e2^^80^^94C}{A--B---C}%
1080   \Test H{X^^c2^^a0Y}{X~Y}%
1081   \Test I{A^^c5^^a4}{A\v T}%
1082   \Test J{A,B,,C,,,D,,,E}{A,B,,C,,,D,,,E}%
1083   \Test K{A'B'C'D'E}{A'B'C'D'E}%
1084   \Test L{A'B'C'D'E}{A'B'C'D'E}%
1085   \Test M{A$x$B}{A$x$B}%
1086   \Test N{A\mbox{abc}B}{A\mbox{abc}B}%
1087   \Test O{,TA'}{,TA'}%
1088   \Test P{{!`}Hola{{!'}}}{!`Hola!`}%
1089   \Test Q{re-sent\slash x}{re-sent\slash x}%
1090   \Test R{new\\line}{new\\line}%
1091   \Test S{foo\\linebreak bar}{foo\\linebreak bar}%
1092   \Test T{Virchow{sche}}{Virchow{sche}}%
1093   \Test U{A\soulomit{foo}B}{A\soulomit{foo}B}%
1094   \Test V{A\texttt{xyz}B}{A\texttt{xyz}B}%
1095   \Test W{ffi}{ffi}%
1096   \Test X{f{}f{}i}{f{}f{}i}%
1097   \Test Y{f\mbox{}f\mbox{}i}{f\mbox{}f\mbox{}i}%
1098   \Test Z{\c{"a}}{\c{"a}}%
1099 (*test2 | test3)
1100   \let\abcx\UNDEFINED
1101   \def\abcf{%
1102     \begin{group}
1103       \def\abcx{x}%
1104       \abcx
1105     \end{group}
1106   }%
1107   \Test{AA}{[{x\abcc x}]}{[{xxx}]}%
1108 
1109 \end{document}
1110 

```

## 4 Installation

### 4.1 Download

**Package.** This package is available on CTAN<sup>1</sup>:

<CTAN:macros/latex/contrib/oberdiek/soulutf8.dtx> The source file.

<CTAN:macros/latex/contrib/oberdiek/soulutf8.pdf> Documentation.

**Bundle.** All the packages of the bundle ‘oberdiek’ are also available in a TDS compliant ZIP archive. There the packages are already unpacked and the documentation files are generated. The files and directories obey the TDS standard.

<CTAN:install/macros/latex/contrib/oberdiek.tds.zip>

*TDS* refers to the standard “A Directory Structure for TeX Files” (<CTAN:tds/tds.pdf>). Directories with `texmf` in their name are usually organized this way.

---

<sup>1</sup><http://ctan.org/pkg/soulutf8>

## 4.2 Bundle installation

**Unpacking.** Unpack the `oberdiek.tds.zip` in the TDS tree (also known as `texmf` tree) of your choice. Example (linux):

```
unzip oberdiek.tds.zip -d ~/texmf
```

**Script installation.** Check the directory `TDSScripts/oberdiek/` for scripts that need further installation steps. Package `attachfile2` comes with the Perl script `pdfatfi.pl` that should be installed in such a way that it can be called as `pdfatfi`. Example (linux):

```
chmod +x scripts/oberdiek/pdfatfi.pl
cp scripts/oberdiek/pdfatfi.pl /usr/local/bin/
```

## 4.3 Package installation

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

```
tex soulutf8.dtx
```

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

```
soulutf8.sty           → tex/generic/oberdiek/soulutf8.sty
soulutf8.pdf          → doc/latex/oberdiek/soulutf8.pdf
test/soulutf8-test1.tex → doc/latex/oberdiek/test/soulutf8-test1.tex
test/soulutf8-test2.tex → doc/latex/oberdiek/test/soulutf8-test2.tex
test/soulutf8-test3.tex → doc/latex/oberdiek/test/soulutf8-test3.tex
test/soulutf8-test4.tex → doc/latex/oberdiek/test/soulutf8-test4.tex
test/soulutf8-test5.tex → doc/latex/oberdiek/test/soulutf8-test5.tex
soulutf8.dtx          → source/latex/oberdiek/soulutf8.dtx
```

If you have a `docstrip.cfg` that configures and enables `docstrip`'s TDS installing feature, then some files can already be in the right place, see the documentation of `docstrip`.

## 4.4 Refresh file name databases

If your `TEX` distribution (`teTEX`, `mikTEX`, ...) relies on file name databases, you must refresh these. For example, `teTEX` users run `texhash` or `mktexlsr`.

## 4.5 Some details for the interested

**Attached source.** The PDF documentation on CTAN also includes the `.dtx` source file. It can be extracted by AcrobatReader 6 or higher. Another option is `pdftk`, e.g. unpack the file into the current directory:

```
pdftk soulutf8.pdf unpack_files output .
```

**Unpacking with L<sub>A</sub>T<sub>E</sub>X.** The `.dtx` chooses its action depending on the format:

**plain T<sub>E</sub>X:** Run `docstrip` and extract the files.

**L<sub>A</sub>T<sub>E</sub>X:** Generate the documentation.

If you insist on using L<sup>A</sup>T<sub>E</sub>X for docstrip (really, docstrip does not need L<sup>A</sup>T<sub>E</sub>X), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{soulutf8.dtx}
```

Do not forget to quote the argument according to the demands of your shell.

**Generating the documentation.** You can use both the .dtx or the .drv to generate the documentation. The process can be configured by the configuration file `ltxdoc.cfg`. For instance, put this line into this file, if you want to have A4 as paper format:

```
\PassOptionsToClass{a4paper}{article}
```

An example follows how to generate the documentation with pdfL<sup>A</sup>T<sub>E</sub>X:

```
pdflatex soulutf8.dtx
makeindex -s gind.ist soulutf8.idx
pdflatex soulutf8.dtx
makeindex -s gind.ist soulutf8.idx
pdflatex soulutf8.dtx
```

## 5 Catalogue

The following XML file can be used as source for the [TEX Catalogue](#). The elements `caption` and `description` are imported from the original XML file from the Catalogue. The name of the XML file in the Catalogue is `soulutf8.xml`.

```
1111 <catalogue>
1112 <?xml version='1.0' encoding='us-ascii'?>
1113 <!DOCTYPE entry SYSTEM 'catalogue.dtd'>
1114 <entry datestamp='$Date$' modifier='$Author$' id='soulutf8'>
1115   <name>soulutf8</name>
1116   <caption>Permit use of UTF-8 characters in soul.</caption>
1117   <authorref id='auth:oberdiek' />
1118   <copyright owner='Heiko Oberdiek' year='2007' />
1119   <license type='lpl1.3' />
1120   <version number='1.1' />
1121   <description>
1122     This package extends package <xref refid='soul'>soul</xref> and adds
1123     some support for UTF-8. Namely the input encodings in
1124     &#x2018;<tt>utf8.def</tt>&#x2019; from package
1125     <xref refid='inputenc'>inputenc</xref> and
1126     &#x2018;<tt>utf8x.def</tt>&#x2019; from package
1127     <xref refid='unicode'>ucs</xref> are supported.
1128   <p/>
1129   The package is part of the <xref refid='oberdiek'>oberdiek</xref>
1130   bundle.
1131   </description>
1132   <documentation details='Package documentation'
1133     href='ctan:/macros/latex/contrib/oberdiek/soulutf8.pdf' />
1134   <ctan file='true' path=''/macros/latex/contrib/oberdiek/soulutf8.dtx' />
1135   <miktex location='oberdiek' />
1136   <texlive location='oberdiek' />
1137   <install path=''/macros/latex/contrib/oberdiek/oberdiek.tds.zip' />
1138 </entry>
1139 </catalogue>
```

## 6 References

- [1] Melchior Franz: *The soul package*; 2003/11/17;  
[CTAN:macros/latex/contrib/soul/](#).
- [2] Dominique P. G. Unruh: *ucs.sty – Unicode Support*; 2004/10/17;  
[CTAN:macros/latex/contrib/unicode/](#).
- [3] Frank Mittelbach, Chris Rowley: *Providing some UTF-8 support via inputenc*; 2006/03/30;  
[CTAN:macros/latex/base/utf8ienc.dtx](#).

## 7 History

[2007/09/09 v1.0]

- First version.

[2016/05/16 v1.1]

- Documentation updates.

## 8 Index

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