The Treasure Chest

A package tour from CTAN — `soul.sty`

When the Treasure Chest is CTAN, there's so much to choose from. But even worse ... there are so many packages that keep being added! And how to even find out about them, if you don't keep up with notices posted to the newsgroups? This column is one way to try to bring some of these treasures to *TUGboat* readers, with a quick introduction to the package and some examples of what it can do.

This is the first such column; let me know what aspects are most useful and which ones less so, what additional facets should be examined, what other packages cover some of the same issues; which packages do *you* prefer.

1 Quick tour

Package: `soul.sty`

This is version 1.2, dated 11 Jan. 1999. Upon processing, the file `changes.tex` is generated, and describes the differences (the file is also inside the `.dtx` file[1]).

Explanation of the name: "[it] is only a combination of the two macro names `\so` (*space out*) and `\ul` (*underline*) — nothing poetic at all..."

Keywords: spacing out, letterspacing, underlining, striking out

Purpose:

`soul.sty` provides hyphenate-able letterspacing, underlining, and some variations on each. All features are based upon a common mechanism for typesetting text syllable-by-syllable, using TeX's excellent hyphenation algorithm to find the proper hyphenation points. As well, two examples are presented to show how to use the interface provided to address such issues as 'an-a-lyz-ing syl-la-bles'. Although the package is optimized for LaTeX 2ε, it works under plain TeX and LaTeX 2.09, and is compatible with other packages, too.

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Compatible with: plain, LaTeX (old and new).

Note: the documentation describes some restrictions when the `soul` package is not used with LaTeX 2ε.

Location on CTAN:

`/macros/latex/contrib/supported/soul`

Files to fetch: `soul.dtx` and `example.cfg`.[2]

How to install: Put files with your other class and style files on your system. Read the top portion of `soul.dtx` (or the file `soul.txt`) for instructions on processing the files (you will need LaTeX 2ε). Notice that the `soul.sty` package is not actually on CTAN; it uses the `.dtx` method of documentation, a wonderful feature in LaTeX 2ε. If you're unfamiliar with how this works, see footnote 1 for a general overview.

Files generated: `soul.ins`, `soul.dvi` (documentation), `soul.toc`, `soul.sty`, `changes.tex`, (as well as the usual `soul.aux` and `.log` files).

2 Documentation

The documentation is so extensive (26 pages long), with explanations, examples of basic use and variations, that little needs to be said here!

The opening pages are a pleasant introduction to the general notions of emphasis, however it is achieved, and the various opinions which exist on the suitability of their use. There is a pragmatism expressed here, offering the user the choice of options, leaving the reasons for such choices to the user.

The user portion of the documentation provides extensive examples and explanations for creating the various effects (underlining, overstriking, letterspacing).

Chapter 7 (pp. 14–25) provides a detailed explanation of the macros themselves, along with some additional points and tips, so do glance through it.

One nice addition from the author (in collaboration with Stefan Ulrich) is a sample configuration file, `example.cfg`, which shows how to select specific spacing values for different fonts automatically, and store them for local use. As well, the local file (call it `soul.cfg` and hooks exist to read it in automatically via `soul.sty`) can be used to store other changes to the package default settings, thus avoiding making changes in either the style file or inserting the customizations into individual source files.

2.1 Table of Contents

1. Introduction

[1] Documented source (`.dtx`) files are a combination of macros and documentation, an evolution of Frank Mittelbach's original DocStrip utility. There are usually two steps: run LaTeX over the `.dtx` file to get the documentation, and run LaTeX over its matching `.ins` file to generate the style files, which are extracted from the `.dtx` file (sometimes the `.ins` file is itself generated by the first step, which means you only have to pick up the one `.dtx` file — even more compact packaging).

[2] Note: CTAN also has the file `soul.txt` (description of package + processing instructions), and `soul.ins`, which can either be fetched, or generated by processing the `.dtx` file.

2. Typesetting rules
   (a) Theory ...
   (b) ... and Practice
3. Modes and options
   (a) LaTeX 2ε mode
   (b) Plain TeX mode
   (c) Command summary
4. Letterspacing
   (a) The macros
   (b) Some examples
   (c) Typesetting Fraktur
   (d) Dirty tricks
5. Underlining
   (a) Settings
   (b) Some examples
   (c) The `dvips` problem
6. How the package works
   (a) The kernel
   (b) The interface
   (c) Doing it yourself
   (d) Common restrictions
   (e) Known features (aka bugs)
7. The macros
   (a) The preamble
   (b) Common definitions
   (c) The letterspacing interface
   (d) The underlining interface
   (e) The ~~striking out~~ interface
   (f) The postamble
   (g) Additional hacks

3 Examples

The following examples, taken directly from the documentation (with a few modifications for *TUGboat*'s narrow columns), provide ample demonstration of the many useful features available in `soul.dtx`.

■ `\so{electrical␣industry}`
■ electrical industry

■ elec-
tri-
cal
in-
dus-
try

Ordinary text can be typed in as usual.

■ `\so{man\-u\-script}`
■ manuscript

■ man-
u-
script

`\-` *works as usual.*

■ `\so{le␣th{\'e}{\^a}tre}`
■ le théâtre

■ le
théâtre

Tokens that belong together have to be grouped; text inside groups is not spaced out. Grouped text must not contain hyphenation points.

■ `\so{just␣an␣{{\hbox{example}}}}`
■ just an example

■ just
an
example

To prevent material with *hyphenation points from being spaced out, you have to put it into an* `\hbox` *(*`\mbox`*) with two pairs of braces around it. However, it's better to end spacing out before words not to be broken and restart it afterwards.*

■ `\so{inside.}␣\&\␣\so{outside}.`
■ inside. & outside.

■ in-
side.
&
out-
side.

Punctuation marks are spaced out if they are put into the group.

■ `\so{{``}\<Pennsylvania\<{''}}`
■ “Pennsylvania”

■ “Penn-
syl-
va-
nia”

Spaceout skips may be removed by typing `\<`*. However, it is better to put the quotation marks outside of the argument.*

■ `\so{input\slash␣output}`
■ input/output

■ in-
put/
out-
put

`\slash`*,* `\hyphen`*,* `\endash`*, and* `\emdash` *allow hyphenation before and after the break point.*

■ `\so{unbreakable\~␣space}`
■ unbreakable space

■ un-
break-
able space

The `\~`*-command inhibits line breaks. A space ␣ is mandatory here to mark the word boundaries.*

■ `\so{1\<3␣December␣{{1995}}}`
■ 13 December 1995

■ 13
De-
cem-
ber
1995

Numbers should never be spaced out.

■ `\so{broken\\␣line}`
■ broken
line

■ bro-
ken
line

*\\ works as usual. Additional arguments (e.g., * or vertical space) are not accepted. Mind the space.*

■ `\so{\dots␣and␣{\hbox{-}}jet}`
■ ... and -jet

■ ... and
-jet

\hyphen must not be used for leading hyphens.

■ `\so{pretty␣awful{\break}␣test}`
■ pretty awful
test

■ pretty
aw-
ful
test

The braces keep TEX from discarding the space.

4 Applications and comments

For my own purposes, I will most likely find uses for the package in all three TEXs: plain TEX (for critical editions), and both old and new LATEXs (for most everything else). In the past, I've had to cobble together very unpresentable macros to deal with overstriking and underlining: both were needed in an article and then a book, to reproduce the creative writing process in Philip Larkin's notebooks. That is, an application which had nothing to do with typographic emphasis and everything to do with trying to reproduce hand-written notes via typesetting. This package would certainly have made the job easier!

What is perhaps not immediately obvious is that this package provides not just various forms of emphasis but emphasis **while retaining hyphenation**. Using `\underline` only works for one line of text, and it blocks the last word from being hyphenated. Devising simple strike-out macros (my case) similarly removes the word(s) inside the macro's argument from being considered for hyphenation.

This package gets over that hurdle, yielding essentially a two-for-one set of tools which many typesetters find they need at the last minute — as they turn the manuscript page, open the next file, and stare at several lines of underlined or over-struck text.

5 Follow-up

I'd like to invite users to fetch this package and see how it works out for them, and then send word on their application and results.

If you've been using other packages (perhaps because they're old and comfortable friends), give this one a try and then tell us how they compare. In particular, make a note of which TEX you're using; I myself am hanging on to a number of 'old' things because they work — or is it the other way around ... that I'm not using the new LATEX in all instances because I don't have suitable replacements or substitutes for the old and trusted friends?!

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Helpful hint for finding files on the CTAN archives via ftp

Don't know where to find the package you want? The following shows how to use the `quote site index` command, to quickly locate packages. Our example is for `soul`, the package just presented.

```
ftp> quote site index soul
200-index soul
200-NOTE. This index shows at most 20 lines. for a full list of files,
200-retrieve /tex-archive/FILES.byname
200-1998/12/08 |       3484 | macros/latex/contrib/supported/soul/example.cfg
200-1999/01/12 |      70239 | macros/latex/contrib/supported/soul/soul.dtx
200-1999/01/11 |        279 | macros/latex/contrib/supported/soul/soul.ins
200-1999/01/11 |       1437 | macros/latex/contrib/supported/soul/soul.txt
200  (end of 'index soul')
```