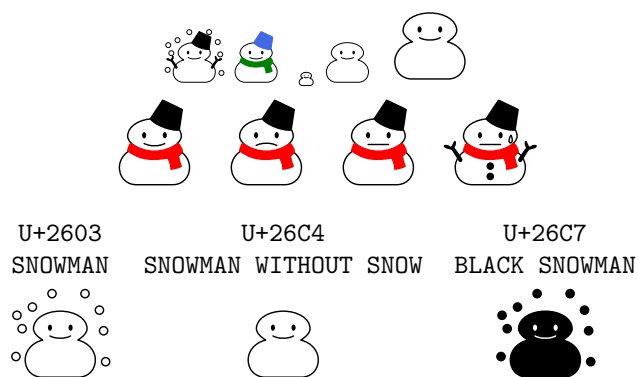


The `scsnowman` package v1.0

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The \LaTeX package `scsnowman` provides a command `\scsnowman`, which can display many variants of snowman. This package utilizes `TikZ` for drawing snowman.



The package is maintained on GitHub:

- <https://github.com/aminophen/scsnowman>

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1 The History of Snowman in Unicode

In October 1991, the first volume of the Unicode standard was published. Since then, there was a code point assigned to a character “snowman”; U+2603.

U+2603 SNOWMAN
= snowy weather

It seems that the shape of its reference glyph in Unicode 1.0.0 was taken from “Ryumin”, which was developed by Morisawa (a famous font vendor in Japan). A few years later, the reference glyph has sometimes been changed to another; however, there had been only one “snowman” in Unicode until 2009.

In October 2009, Unicode 5.2 was published. In this volume, two “snowman” code points were added; U+26C4 and U+26C7.

U+26C4 SNOWMAN WITHOUT SNOW
= light snow
U+26C7 BLACK SNOWMAN
= heavy snow

According to the code chart, the origin of these two characters is ARIB STD-B24 (Data Coding and Transmission Specification for Digital Broadcasting;¹), which was established by Association of Radio Industries and Business in Japan. Since then, it can be said that the old code point U+2603 has been given an implicit meaning of “SNOWMAN WITH SNOW”. The reference glyphs were also changed at that time.

2 Variation of Snowman among Actual Fonts

Since the shapes of the reference glyphs used in the Unicode code charts are not prescriptive, the actual fonts have a wide variety of glyph designs. However, when it comes to snowman, the variation between fonts is enormous. This variation is very interesting, however, on the other hand, problematic.

Table 1 shows the variety of “snowman” in actual fonts. The snowman in “IPA Mincho (IPA 明朝)” from Information-technology Promotion Agency is very similar to the one in “Ryumin (リユウミン)” from Morisawa. However, in “MS Mincho (MS 明朝)” from Microsoft, the snowman wears a black hat instead of white one. In “Kozuka Mincho (小塚明朝)” from Adobe Systems Inc., he/she wears a muffler instead of a hat. Moreover, it doesn’t snow in “Hiragino Mincho (ヒラギノ明朝)” from SCREEN Graphic and Precision Solutions Co., Ltd. It is natural that some fonts developed before 2009 have a “snowman without snow” glyph in the code point U+2603, however, it can be a problem when we have to transfer the exact information to others.

¹http://www.arib.or.jp/tyosakenkyu/kikaku_hoso/hoso_std-b024.html; Abstract in PDF format (both Japanese and English) are available.

Table 1: The variety of “snowman” in actual fonts

	U+2603	U+26C4	U+26C7
IPAex 明朝			
MS 明朝			
小塚明朝 Pr6N Regular			
ヒラギノ明朝 ProN W3			
VL ゴシック			

3 Introduction to scsnowman Package

The L^AT_EX package `scsnowman` provides a command `\scsnowman`, which can display many variants of snowman. This package depends on TikZ package for drawing snowman images.

To use this package, load it in preamble:

```
\usepackage{scsnowman}
```

In the main document, use `\scsnowman` command to print snowman: ☺. By default, the snowman is “plain” style, without any decoration such as snow, a hat or a muffler.

4 Command Options

You can customize the style of snowman using the optional argument. The syntax is

```
\scsnowman[⟨key-value list⟩]
```

Following *keys* take a *value* which specifies color. When the *value* is omitted, the default color, black or white, will be used:

`body`, `eyes`, `mouth`, `sweat`, `hat`, `arms`, `muffler`, `buttons`, `snow`


Other *keys* require one specific *value*:

`mouthshape`, `scale`

The key `mouthshape` takes one of the followings: `smile`, `tight` or `frown`. The key `scale` takes a scale factor.

Here is some examples:

```
\scsnowman[scale=2,body,hat=red,muffler=blue]
\scsnowman[scale=3,hat,snow,arms,buttons]
\scsnowman[scale=3,mouthshape=tight,muffler=red]
\scsnowman[scale=3,mouthshape=frown,hat=green]
```



5 Changing the Default

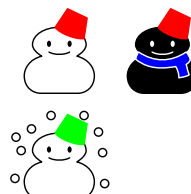
The package default is the “plain” style snowman. This default can be changed by using `\scsnowmandefault` command. The syntax is

```
\scsnowmandefault{⟨key-value list⟩}
```

The available *keys* are the same as those in `\scsnowman`.

Here is some examples:

```
\scsnowmandefault{scale=3,hat=red}
\scsnowman
\scsnowman[body,hat=red,muffler=blue]
\scsnowman[hat=green,snow]
```



Version History

This is the summary of changes. For more detail, see GitHub repository.

Version 0.1	2015-12-13	First public version on GitHub
Version 0.8	2016-08-08	Second public version on GitHub: new variants buttons , mouthshape , sweat are added
Version 1.0	2016-12-22	First CTAN release

References

- [1] 雪だるまの親子関係– Mac OS X の文字コード問題に関するメモ
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- [3] いろいろなゆきだるま– TeX Alchemist Online
- [4] 「 $\mathrm{T_E}X$ でゆきだるま」をもっとたくさん– Acetaminophen’s diary
- [5] Unicode の例の雪だるまは多分アレ– マクロツイーター
- [6] $\mathrm{T_E}X$ でゆきだるまを “もっともっと” たくさん– Acetaminophen’s diary
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